

Resettlement Plan

Document Stage: Updated
Project Number: 51308-001
August 2021

India: Chennai-Kanyakumari Industrial Corridor: Power Transmission Improvement Project – Compensation Plan

Prepared by Tamil Nadu Transmission Corporation Limited (TANTRANSCO) Government of Tamil Nadu for Asian Development Bank. This is an updated version of the draft originally posted in May 2019 available on <https://www.adb.org/projects/documents/ind-51308-001-rp>.

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Power Transmission Improvement Project
Compensation Plan

Prepared By:

Tamil Nadu Transmission Corporation Limited (TANTRANSCO)
Government of Tamil Nadu
For the Asian Development Bank

CURRENCY EQUIVALENTS

(as of 05May 2021)

Currency unit	–	Indian Rupees (INR)
INR1.00	=	\$ 0.014
\$1.00	=	INR 73.77

ABBREVIATIONS

ADB	-	Asian Development Bank
AH	-	Affected Household
AP	-	Affected Person
CKIC	-	Chennai Kanyakumari Industrial Corridor
CP	-	Compensation Plan
FGD	-	Focus Group Discussion
GIS	-	Geographic Information System
GCC	-	General Construction Circle
GRM	-	Grievance Redress Mechanism
GRC	-	Grievance Redress Committee
ha	-	hectare
IP	-	Indigenous Peoples
km	-	kilometre
kV	-	kilovolt
MED	-	Madras Electricity Department
MoP	-	Ministry of Power
MPH	-	main power house
PIU	-	Project Implementation Unit
RFTCTLARR	-	"The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act
RoW	-	Right-of-Way
SPS	-	Safeguard Policy Statement, 2009
SS	-	Substation
TANTRANSCO	-	Tamil Nadu Transmission Corporation Limited
TASF	-	Technical Assistance Special Funds
TNSEB	-	Tamil Nadu State Electricity Board
TL	-	Transmission line
TRTA	-	Transaction Technical Assistance

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EXECUTIVE SUMMARY

I. The updated Compensation Plan (CP) contains all the basic elements of a Resettlement Plan (RP) as per Asian Development Bank (ADB) Safeguard Policy Statement (SPS), 2009. The updated Compensation Plan has been prepared for the ADB financed power transmission improvement under the Chennai Kanyakumari Industrial Corridor (CKIC), the “Project”. The Project is categorized as ‘B’ for Involuntary Resettlement (IR) and “C” for Indigenous Peoples impacts, as per ADB’s SPS, 2009. The executing agency (EA) and implementing agency (IA) is Tamil Nadu Transmission Corporation Limited (TANTRANSCO). The Compensation Plan is guided by national laws, state laws and regulations, and SPS, 2009 of ADB. The draft Compensation Plan has been updated based on the final route alignment of the transmission lines and other field data/information collected by the contractors such as major crossing details of transmission lines, location and coordinate details of towers, impact of towers and lines on land, crops and trees etc.

II. The project finances the construction of various transmission assets in the state of Tamil Nadu. The assets comprise two new substations, new transmission lines of voltage ranging from 110 kV to 765 kV, and addition of bays at one associated substation. Subprojects covered under the financing are (i) new Virudhunagar (2x1500MVA) substation, (ii) new Ottapidaram (2x500MVA) + (2x200MVA) substation, (iii) 765 kV double circuit line Virudhunagar - Coimbatore, (iv) 400 kV double circuit line Virudhunagar – Kayathar (v) 400 kV double circuit line Kamuthi –Ottapidaram (vi) 400 kV double circuit line Udangudi–Ottapidaram (vii) 230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS, (viii) 230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram, (ix) 110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS, (x) 110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS, (xi) 110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS, (xii) 400 kV bays at Kamuthi substation. The final alignment of transmission lines shows that all the lines except three are subjected to very marginal changes. There are three transmission lines which have undergone some alignment shift from Anna University suggested route. In these three lines social assessments were carried out by the respective contractors in 2021. The social assessment reports are given in Annexure 6 and it included the findings of public consultations and gender consultations.

III. The project does not require any private land acquisition for construction of transmission lines under the ADB financing components. The impacts are categorized into two types, impacts from the tower bases and impacts due to the transmission lines along the right-of-way (RoW). The impacts due to tower base will occur in terms of restriction of land use within four legs of tower footings but not necessarily complete loss of land under the towers. The land under towers can be continuously used for crop cultivation after the construction. Temporary impacts are foreseen in terms of diminution of land value and loss of crops/trees along the RoW during the stringing of transmission lines and will not lead to any land use restriction. The final line alignment was carefully selected to avoid all structures and sensitive areas. The final alignment of transmission lines shows that no impacts on structures are anticipated. A summary of project impacts is presented in Table E-1.

Table E-1: Summary Impacts

#	Impacts	Quantity
1	Total number of towers on private crop land and area (ha) affected by the tower	1,383 towers 205.17 ha
2	Total number of towers on private waste land and area (ha) affected by the tower	155 towers 23.55 ha
3	Total number of towers on government land and area (ha) affected by the tower	85 towers 11.77 ha
4	Total Private Crop Land Area under Right of Way (ha)	2324.07 ha

#	Impacts	Quantity
5	Total Private Waste Land Area under Right of Way (ha)	316.37 ha
6	Total Government Land under Right of Way (ha)	177.15 ha
7	Total number of affected trees in Right of Way	50,980
8	Total numbers of structures	0
9	Total estimated number of affected households and affected Persons due to tower footings	1538 affected households
		6307 affected persons
10	Total estimated number of affected households and affected persons under the RoW	3106 affected households
		12736 affected persons
11	Grand total of affected households and affected persons (tower footings and RoW)	4644 affected households
		19043 affected persons

IV. Public consultations with the local people and communities were conducted for the updating of the Compensation Plan. Public consultations were carried out along the final alignments of transmission lines by the respective contractors between January and March 2021 to disseminate information about the project risks and benefits, to seek the views and opinions of the community regarding the project, proposed alignments and any implementation concerns. These activities were conducted at 74 locations having a total of 479 participants. The participants included the project affected people and other villagers. Although most of the people do not object to the project, they had several implementation concerns related to the impact of towers on loss of crop land, damage of standing crops and top soil during construction activities. The other important issues mentioned by some of the participants included delay in payment of compensation, amount of compensation, safety concerns of transmission lines in the event of lightning or heavy rain etc. Some of the affected people felt that the MED form used for assessment and valuation of affected land and other assets should be in local language along with English language. On the damage of standing crops, the participants during the consultation were informed that respective contractors would take the views of affected persons into account and construction activity would take place in a time other than the crop season to avoid or minimize the damage on standing crops. The other concerns were noted which would be addressed by the contractor in due course of implementation. Consultations will continue to be carried out throughout the implementation.

V. A grievance redress mechanism (GRM) was established by TANTRANSCO in June 2020. For the smooth operation of the GRM an operational guideline has been prepared in consultation with TANTRANSCO which describes the procedures and mechanism of functioning of GRM. The GRM consists of GRCs at two levels. The first level is handled by a GRC established at the General Construction Circle (GCC) level. The second level GRC is established at the project level and is headed by the Chief Engineer (Trichy). Grievances should be initially and informally handled at the site-level. If grievances cannot be resolved informally at site-level, the formal first level of GRM (GCC level) will be triggered. If the aggrieved party is unsatisfied with the decision at the GCC level then project level GRC will address the unresolved complaint. During the grievance redressal, the affected people can invite an elected representative of concerned village panchayat/urban ward.

VI. The updated compensation Plan is based on national policies and laws, and ADB's Safeguard Policy Statement of 2009. The relevant national laws applicable to this project are (i) The Electricity Act, 2003 (ii) The Indian Telegraph Act, 1885, (iii) Ministry of Power's (MoP) guideline, and (iv) Government of Tamil Nadu order (G.O. (Ms) No. 86). The national act, "The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (RFCTLARR) is not applicable to this project because there is no compulsory land acquisition.

VII. Lack of legal documents of their customary rights of occupancy or land titles shall not affect

eligibility for compensation. In the instant case, there is no involuntary land acquisition is involved, only temporary damage will occur during construction of transmission line for which compensation is paid as per relevant norms. Compensation towards temporary damages to all eligible APs will be paid as per the Entitlement Matrix. People having no land rights such as informal settlers will only be eligible for compensation for non-land assets such as loss of crops and trees if grown by them. Entitlement Matrix for the Project is given in Table 7.1.

VIII. The updated compensation cost estimate for implementation of the Compensation Plan (CP) for the project includes eligible compensation for land restriction for tower base, diminution of land value for stringing within the corridor area (RoW), loss of trees and crops in the RoW, support cost for implementation of Compensation Plan and a 10% contingency. Budget provision for compensation for tower base (@100% of the assessed land value) and RoW corridor (20% of the assessed land value) has been made as per provisions of G.O. (Ms) No. 86. The total indicative cost is estimated to be INR 3223.97 million equivalent to INR 322.40 crores. The assessment of affected land, tree and crops and valuation is done by TANTRANSCO official, along with district revenue department and agriculture/horticulture department official. TANTRANSCO field officials undertake consultation with the affected people and an agreed value of compensation is determined with the consent of affected people. The contractor provides the agreed compensation amount in cheque to the affected people on behalf of TANTRANSCO. After the payment of compensation, the contractor gets the amount reimbursed from TANTRANSCO. The amount of compensation paid for affected land, tree and crops is updated periodically and are mentioned in the social safeguard monitoring reports.

IX. TANTRANSCO is both the executing agency (EA) and Implementing Agency (IA) of ADB-financed project. TANTRANSCO has Project Management Unit (PMU) and Project Implementation Units (PIU) for the implementation of the project. At project level there are General Construction Circle (GCC) Madurai and GCC Coimbatore, who have formed PIUs for implementation of the project. The PIUs are headed by Chief Engineer Transmission project-II, Trichy. TANTRANSCO is ultimately responsible for safeguards supervision and ensuring compliance with the loan covenants related to safeguards. The main responsibilities for supervision and monitoring of safeguards aspects (social, environment, health and safety) lies with the GCC, Madurai and Coimbatore. TANTRANSCO is assisted by the safeguard consultants (Social safeguard, Environment, Health & Safety) under the Transaction Technical Assistance (TRTA) and works closely with the district revenue and other officials for assessment and valuation of affected land and assets.

X. This is a linear project and the work of tower foundation, erection and stringing is being implemented in stages. All land required for tower footings is provided free of encumbrances to the contractor prior to handing over of project sites and the start of civil works. Before the stringing of lines RoW is cleared for laying of lines in a phased manner. A stage and section wise approach are adopted for payment of compensation to affected people considering that the total length of all transmission lines is around 527 km. Monitoring is the responsibility of TANTRANSCO through GCC-Madurai/Coimbatore and the TRTA consultants with input from the contractors. GCC-Madurai/Coimbatore through its contractor and TRTA consultants is responsible for updating of Compensation Plan, preparation of semi-annual monitoring reports and submission to TANTRANSCO HQ for endorsement. Upon review and approval by ADB, semi-annual Monitoring reports and updated Compensation Plan will be disclosed on the ADB website.

1. INTRODUCTION AND PROJECT DESCRIPTION

1.1 Overview and Background

1. This is a Compensation Plan (CP) which contains all the basic elements of a Resettlement Plan (RP) as per Asian Development Bank's (ADB) Safeguard Policy Statement (SPS), 2009. The Compensation Plan has been updated for the power transmission improvement under the Chennai Kanyakumari Industrial Corridor (CKIC), the "Project". The Project is categorized as 'B' for Involuntary Resettlement (IR) and "C" for Indigenous Peoples impacts, as per ADB's SPS, 2009. Tamil Nadu Transmission Corporation Limited (TANTRANSCO) is the executing agency (EA) of the Project. The Compensation Plan is guided by national laws, state laws and regulations, Ministry of Power's Guidelines on compensation (MoP Guidelines, 2015) and SPS, 2009 of ADB.

2. The proposed project consists of: (i) establishment of 765 kV transmission link from the southern section of CKIC (Madurai) to load centers in North (Chennai) and North Western (i.e. Coimbatore) regions of Tamil Nadu; (ii) establishment of 400 kV pooling substation in southern region of CKIC (i.e. Thoothukudi) for collecting power generated from proposed upcoming power plants; and (iii) Institutional capacity building of TANTRANSCO for improved financial management and enhanced gender sensitive workplace.

3. The project's impact is aligned to enhance the industrial development and renewable energy generation in Tamil Nadu. The project's outcome is to improve power supply to industrial demand centres in Chennai-Kanyakumari Industrial Corridor. The Project's output is (i) A transmission link from the energy hub in southern CKIC to load centers in northern CKIC established, (ii) A pooling substation for renewable energy established in southern CKIC and (iii) Enhanced capacity for improved financial management and gender sensitive workplace. The proposed project will improve operational efficiency and quality of power, reliability of the system and at the same time will reduce losses due to interconnection with TNEB network and hence virtual up-gradation to higher voltage level and better voltage profile. Evacuation of power to both the local areas and regions outside the state will boost overall economic development of the state due to extra revenues generated by power sold outside the state because of availability of additional power evacuation infrastructure.

4. ADB has committed a regular loan of \$451.0 million to TANTRANSCO from ADB's ordinary capital resources to help finance the project. The loan was approved on 04 November 2019. The loan agreement was signed on 28 November 2019 and became effective on 17 January 2020.

1.2 Project Components

5. The project originally proposed to finance the construction of various transmission assets in the state of Tamil Nadu. The assets comprise two new substations, new transmission lines of voltage ranging from 110 kV to 765 kV, and addition of bays at three associated substations. Following the change in strategy by TANTRANSCO, addition of 400 kV bays at Kayathar and Vijayapuri substation was dropped. The 765 kV double circuit (DC) line from Virudhunagar to Coimbatore is comprised of three sections, i.e., Reach 1, Reach 2 and Reach 3. For each Reach a separate contract has been awarded.

6. For new transmission lines, the preliminary route alignments were prepared through satellite survey data by Anna University, Tamil Nadu. Based on the GIS survey data, three

alternative routes were proposed for each transmission line (Route A, Route B and Route C). The best route for each transmission line was suggested by Anna University in consultation with the field team of TANTRANSCO and taking into consideration various factors such as avoiding habitat area, avoiding crop land, avoiding forest area, avoiding settlements etc. Detailed survey was undertaken along the Anna University suggested line by the respective contractors to finalise the actual route alignment based on the field condition. The revised alignment of each transmission line was sent to TANTRANSCO for review. During the review TANTRANSCO field officials undertook the ground verification. Based on the review TANTRANSCO approved the revised alignment of transmission lines. Details on subprojects components covered under ADB financing, original route length and revised approved route length of transmission lines are provided in Table 1.1.

Table 1.1: List of Subprojects in CKIC power sector project in Tamil Nadu

No.	Sub-Projects	Details (Status as per preliminary alignment)	Details (status as per final alignment)
S	Substation	Operating voltages (kV)	
S1	Virudhunagar (2x1500MVA)	765/400	765/400
S2	Ottapidaram (2x500MVA) + (2x200MVA)	400/230/110	400/230/110
T1.	Transmission lines associated with Virudhunagar substation	Original Route Length (km)	Revised & approved Route Length (km)
1.1 A	765 kV DC line Virudhunagar – Coimbatore, Reach 1	85.0	86.9
1.1 B	765 kV DC line Virudhunagar – Coimbatore, Reach 2	85.0	94.54
1.1 C	765 kV DC line Virudhunagar – Coimbatore, Reach 3	68.0	71.4
1.2	400 kV DC line Virudhunagar - Kayathar	72.0	70.2
1.3	400 kV double circuit line in and out at Virudhunagar for Kamuthi to Thappagundu (proposed) line	5.1	Dropped
T2.	Transmission lines associated with Ottapidaram substation	Approx. Route Length (km)	
2.1	400 kV DC line Kamuthi – Ottapidaram	71.0	71.6
2.2	400 kV DC line Udangudi – Ottapidaram	70.0	67.9
2.3 A	230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS	10.70	10.88
2.3 B	230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram	5.89	6.23
2.3 C	110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS	8.27	8.95
2.3 D	110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS	34.33	34.41
2.3 E	110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS	3.24	3.31
S3	New bays at associated substations	Quantity (Numbers)	
3.1	400 kV bays at Kamuthi substation	2	2
3.2	400 kV bays at Kayathar substation	2	Dropped
3.3	110 kVbay provisions at Vijayapuri substation	1	Dropped

1.3 Subproject Locations

7. The connectivity of the proposed two substations and new transmission lines of 765 kV, 400 kV (including 400 kV line-in line-out sections), 230 kV and 110 kV lines is shown in Figure 1.1. The subprojects are in different districts of the Tamil Nadu State listed in Table 1.2. The subprojects are situated in six districts of Tamil Nadu such as (i) Virudhunagar, (ii), Madurai, (iii), Dindigul, (iv) Thiruppur, (v) Thoothukkudi, and (vi) Ramanathapuram.

Table 1.2: Different locations of proposed subprojects

No	Sub-Project	District
S	Substation	
S1	Virudhunagar (2x1500MVA)	Virudhunagar
S2	Ottapidaram (2x500MVA) + (2x200MVA)	Thoothukudi
T1	Transmission lines associated with Virudhunagar substation	
1.1	765 kV double circuit line Virudhunagar - Coimbatore	Viridhunagar, Madurai, Dindigul, Thiruppur
1.2	400 kV double circuit line Virudhunagar - Kayathar	Thoothukudi
T2	Transmission lines associated with Ottapidaram substation	
2.1	400 kV DC line Kamuthi – Ottapidaram	Thoothukudi, Ramanthapuram
2.2	400 kV DC line Udangudi – Ottapidaram	Thoothukudi
2.3 A	230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS	Thoothukudi
2.3 B	230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram	Thoothukudi
2.3 C	110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS	Thoothukudi
2.3 D	110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS	Thoothukudi
2.3 E	110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS	Thoothukudi
S3	New bays at associated substations	
S3.1	400 kV bays at Kamuthi substation	Ramanthapuram



Figure 1.1: Geographic locations of key assets to be built under the project

1.4 Description of Subprojects

8. Details on each subprojects and salient features are described in the following section.

1.4.1. New Substations

- **Subproject S1 - 765/400 kV Virudhunagar AIS SS (2x1500MVA)**

9. The work involves design, detailed engineering, fabrication, supply, erection, testing and commissioning of 765/400 kV SS at Virudhunagar. This is a dry land. Land ownership and the results of due diligence are presented in Chapter 2. The land is surrounded by two nearby villages such as Valayapatti which is 2 kilometres on the west and Manarkottai which is 1.5 kilometers on the east and there is no habitat near the substation land. Salient Features of the site are provided in Table 1.3 and the approved layout is provided in Figure 1. 2.

Table 1.3: S1-765/400 kV Virudhunagar (2x1500MVA)

No.	Feature	Description
1	Area of land	91.71 hectare
2	Geographical coordinates	East 171146 North 1045715
3	Village / town	Mannarkottai & Valayapatti Village
4	Ownership of land	Private land acquired through negotiated settlement and under the possession of TANTRANSOCO (see Chapter 2)
5	Slope/Plain land	Undulating
6	Kind of land	Agriculture and barren
7	River/Coast (if any)	61 km from Coastal area
8	Permanent feature nearby if any	100 km from Perumal Peak.
9	Distance from nearest Wildlife sanctuary/National Park	62 km Meghamalai WLS, 100 km from Indira Gandhi National Park

- **Subproject S2 - Establishment of 400/230-110 kV substation at Ottapidaram with 2x500 MVA, 400/230 kV ICTs & 2x200MVA, 400/110 kV ICTs**

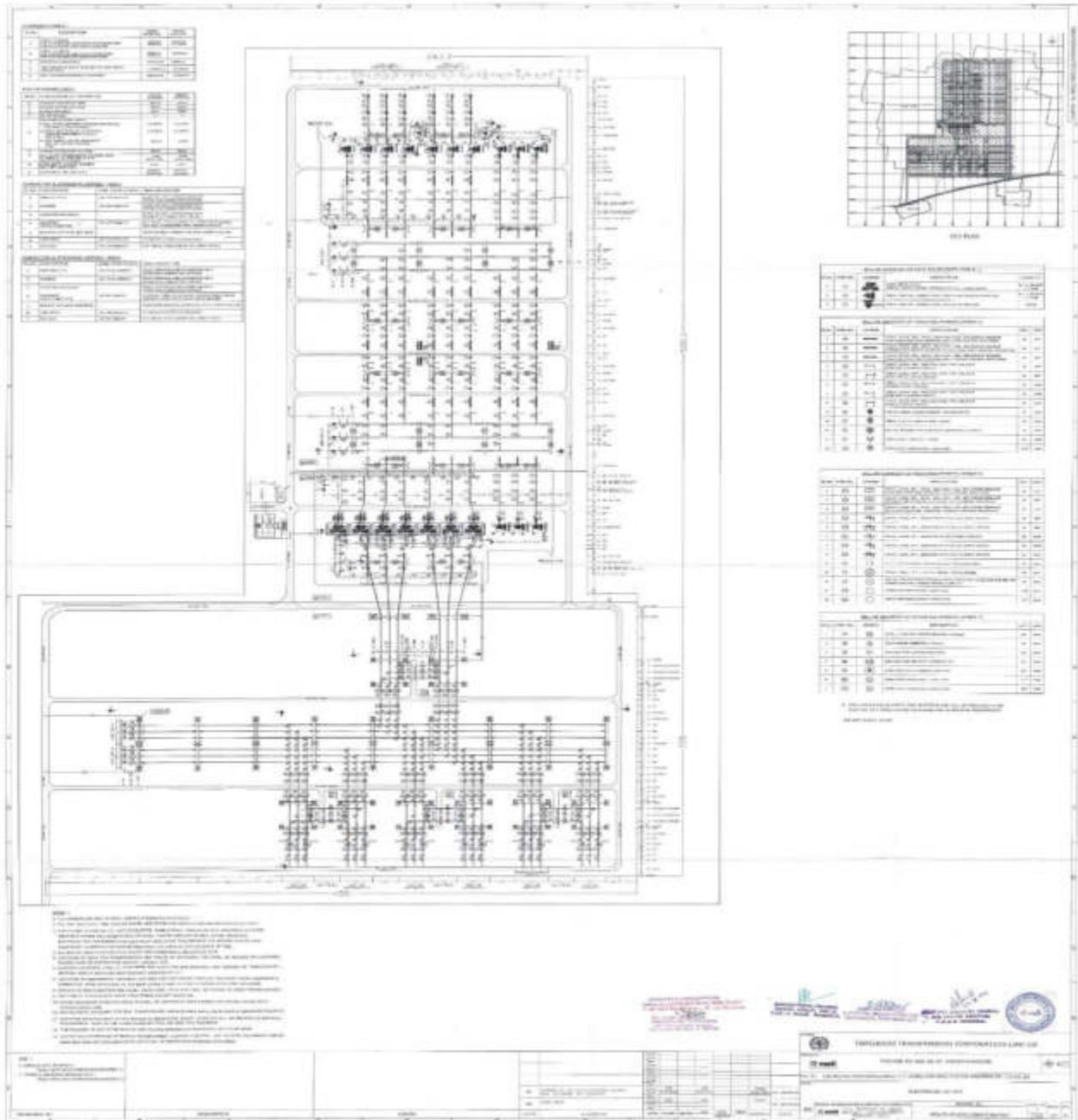
10. The work involves design, detailed engineering, fabrication, supply, erection, testing and commissioning of 400/230/110 kV SS at Swaminatham near Ottapidaram in Thoothukudi district of Tamil Nadu. The land has been transferred to TANTRANSOCO from the Ind Bharat Power Developer which has been lying barren and not being used by any informal settlers (see chapter 2 for further ownership details). Salient features of the site are given below in Table 1.4. Figure 1.3 shows the approved layout of substation.

Table 1.4: S2- Ottapidaram (2x500MVA) + (2x200MVA)

No.	Feature	Description
1	Area of land	26.13 hectare
2	Geographical coordinates	East 175781 North 984844
3	Village / town	Swaminatham
4	Ownership of land	Transferred from Ind Bharat (Thermal Power Developer/ Company) to TANTRANSOCO (see Chapter 2)
5	Slope/Plain land	Plain
6	Kind of land	Barren
7	River/Coast (if any)	15 km from Coast

8	Permanent feature nearby if any	No permanent feature nearby site.
9	Distance from nearest Wildlife sanctuary/National Park	54 km from Kuntangulam Bird Sanctuary (IBA)

Figure 1.2: Approved layout of Virudhunagar substation



Source: TANTRANSCO

Figure 1.3: Approved layout of Ottapidaram substation



Source: TANTRANSCO

1.4.2. Transmission Lines

11. For new transmission lines, the preliminary route alignments were prepared through satellite survey data by Anna University, Tamil Nadu. Based on the GIS survey data, three alternative routes were proposed for each transmission line (Route A, Route B and Route C). The best route for each transmission line was suggested by Anna University in consultation with the field team of TANTRANSCO and taking into consideration various factors such as avoiding habitat area, avoiding crop land, avoiding forest area, avoiding settlements etc. Detailed survey was undertaken along the Anna University suggested line by the respective contractors and suggestions were provided to finalise the angle points and route alignment based on the actual field condition. Suggestions were reviewed and realignment was made based on requirement.

The acceptable reasons for changing the angle point locations and number of angle points were truly reviewed by TANTRANSCO and verified with the contractor/field engineers before the final alignment was approved by TANTRANSCO. Alternate analysis of each transmission line is described in Annexure 1.

12. In each approved route the concerned contractor prepared the profile which included information on type of towers, number of angle points and suspension towers and location of suspension towers. Based on the final alignment route approved by Anna university, the profile of the transmission lines was approved by TANTRANSCO. Based on the approved profile, details of the coordinates of location of towers (angle points and suspension towers) are presented in Annexure 3. It is to be noted that for Reach 3 of the 765 kV Virudhunagar-Coimbatore line the approved coordinates have been furnished for approved profile of 53.69 km out of total length of 71.45 km. For the balance portion of 10.569 km from location 59-73, 4.009 km from location 80-89 and 3.179 km from location 92-97, the profile not yet finalised due to RoW issues. The angle point coordinates provided for the balance portion are as recommended by Anna University. After approval of profile the new coordinates for the balance portion will be updated. Salient features of final alignment of lines which has been approved by TANTRANSCO are described in the following section.

- **Subproject T1.1A- Details of 765 kV DC line Virudhunagar – Coimbatore, Reach 1**

13. Summary and salient features for the 765 kV Virudhunagar to Coimbatore line, Reach 1 is described in Table 1.5.

Table 1.5: T1.1: 765 kV DC Virudhunagar – Coimbatore, Reach 1 transmission line

No.	Details	Description
1	Line Length	86.9 kilometres
2	Total No. of Towers	247
3	Total No. of River crossings	1
4	Total Nos. of Road crossings (NH/SH)	7
5	Total Nos. of Rail line crossings	3
6	Total Nos. of EHT line crossings	13
7	Name of the Districts	Viridhunagar, Madurai, Dindigul
8	Number of revenue villages	36

- **Subproject T1.1B - Details of 765 kV DC line Virudhunagar – Coimbatore, Reach 2**

14. Summary and salient features for the 765 kV Virudhunagar to Coimbatore line, Reach 2 is described in Table 1.6.

Table 1.6: T1.1B: 765 kV DC Virudhunagar – Coimbatore, Reach 2 transmission line

No.	Details	Description
1	Line Length	94.54
2	Total No. of Towers	268
3	Total No. of River crossings	Nil
4	Total Nos. of Road crossings (NH/SH)	3
5	Total Nos. of Rail line crossings	3
6	Total Nos. of EHT line crossings	16
7	Name of the Districts	Dindigul, Thiruppur

No.	Details	Description
8	Number of revenue villages	26

- **Subproject T1.1C - Details of 765 kV DC line Virudhunagar – Coimbatore, Reach 3**

15. Summary and salient features for the 765 kV Virudhunagar to Coimbatore line, Reach 3 is described in Table 1.7.

Table 1.7: T1.C: 765 kV DC Virudhunagar – Coimbatore, Reach 3 transmission line

No.	Details	Description
1	Line Length	71.4
2	Total No. of Towers	210*
3	Total No. of River crossings	2
4	Total Nos. of Road crossings (NH/SH)	7
5	Total Nos. of Rail line crossings	1
6	Total Nos. of EHT line crossings	18
7	Name of the Districts	Tiruppur
8	Number of revenue villages	30

*The total number of towers is tentative as in 16.6 km of the line the detailed survey is yet to be done. The actual number of towers in this line may slightly vary.

- **Subproject T1.2 – 400 kV DC line Virudhunagar – Kayathar transmission line**

16. Summary and salient features for the Virudhunagar to Kayathar transmission line is described in Table 1.8.

Table 1.8: T1.2: 400 kV DC Virudhunagar – Kayathar transmission line

No.	Details	Description
1	Line Length	70.2 kilometres
2	Total No. of Towers	201
3	Total No. of River crossings	2
4	Total Nos. of Road crossings (NH/SH)	2
5	Total Nos. of Rail line crossings	1
6	Total Nos. of EHT line crossings	12
7	Name of the Districts	Thoothukudi, Virudhunagar
8	Number of revenue villages	30

- **Subproject T2.1 - 400 kV DCKamuthi–Ottapidaram transmission line**

17. Summary and salient features for the Kamuthi to Ottapidaram transmission line is described in Table 1.9.

Table 1.9: T2.1 - 400 kV DCKamuthi – Ottapidaram transmission line

No.	Details	Description
1	Line Length	71.6 kilometres
2	Total No. of Towers	206
3	Total No. of River Crossings	1
4	Total No. of Road crossings (NH/SH)	1
5	Total No. of Rail line crossings	1

No.	Details	Description
6	Total No. of EHT line crossings	8
7	Name of the District	Thoothukudi, Ramanathapuram
8	Number of revenue villages	28

- **Subproject T2.2 - 400 kV DCUdangudi – Ottapidaramtransmission line**

18. Summary and salient features for the Udangudi to Ottapidaram transmission line is described in Table 1.10.

Table 1.10: T2.2 - 400 kV DCUdangudi- Ottapidaram transmission line

No.	Details	Description
1	Line Length	67.9 kilometres
2	Total No. of Towers	200
3	Total No. of River Crossings	1
4	Total No. of Road crossings (NH/SH)	1
5	Total Ns. of Rail line crossings	2
6	Total No. of EHT line crossings	9
7	Name of the District	Thoothukudi, Thirunelveli
8	Number of revenue villages	16

- **Subproject T2.3A–Details of 230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS**

19. Summary and salient features for the 230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS is described in Table 1.11.

Table 1.11: T2.3A - 230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS

No.	Details	Description
1	Line Length	10.88 kilometres
2	Total No. of Towers	49
3	Total No. of River Crossings	Nil
4	Total No. of Road crossings (NH/SH)	1
5	Total Ns. of Rail line crossings	1
6	Total No. of EHT line crossings	6
7	Name of the District	Thoothukudi
8	Number of revenue villages	3

- **Subproject T2.3B–Details of 230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram**

20. Summary and salient features for the 230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram is described in Table 1.12.

Table 1.12: T2.3B - 230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram

No.	Details	Description
1	Line Length	6.23 kilometres
2	Total No. of Towers	27

No.	Details	Description
3	Total No. of River Crossings	Nil
4	Total No. of Road crossings (NH/SH)	Nil
5	Total Ns. of Rail line crossings	Nil
6	Total No. of EHT line crossings	5
7	Name of the District	Thoothukudi
8	Number of revenue villages	3

- **Subproject T2.3C- 110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS**

21. Summary and salient features for the 110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS is described in Table 1.13.

Table 1.13: T2.3C - 110 kV DC line from LILO of TT auto-T Sipcot feeder to Ottapidaram

No.	Details	Description
1	Line Length	8.95 kilometres
2	Total No. of Towers	44
3	Total No. of River Crossings	Nil
4	Total No. of Road crossings (NH/SH)	1
5	Total Ns. of Rail line crossings	1
6	Total No. of EHT line crossings	3
7	Name of the District	Thoothukudi
8	Number of revenue villages	1

- **Subproject T2.3D - 110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS**

22. Summary and salient features for the 110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS is described in Table 1.14.

Table 1.14: T2.3D - 110 kV SC line from proposed Ottapidaram to existing Vijayapuri SS

No.	Details	Description
1	Line Length	34.41 kilometres
2	Total No. of Towers	149
3	Total No. of River Crossings	Nil
4	Total No. of Road crossings (NH/SH)	1
5	Total Ns. of Rail line crossings	1
6	Total No. of EHT line crossings	9
7	Name of the District	Thoothukudi
8	Number of revenue villages	17

- **Subproject T2.3E - 110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS**

23. Summary and salient features for the 110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS is described in Table 1.15.

Table 1.15: T2.3E - 110 kV DC line from LILO of Eppodhmvendran to Ottapidaram SS

No.	Details	Description
1	Line Length	3.31 kilometres
2	Total No. of Towers	16
3	Total No. of River Crossings	Nil
4	Total No. of Road crossings (NH/SH)	Nil
5	Total Ns. of Rail line crossings	Nil
6	Total No. of EHT line crossings	1
7	Name of the District	Thoothukudi
8	Number of revenue villages	2

1.4.3. Bay Extension in Existing Substations

- **S3.1 – 400 kV bays at Kamuthi substation**

24. Erection of 2 nos. of 400 kV bays at Kamuthi 400 kV SS for connecting 400 kV DC quad line from Ottapidaram 400 kV SS. Table 1.16 shows the details of bay at Kamuthi substation. Figure 1.5 shows the approved layout of 400 kV bays at Kamuthi 400 kV SS. The bays are located on existing substation area.

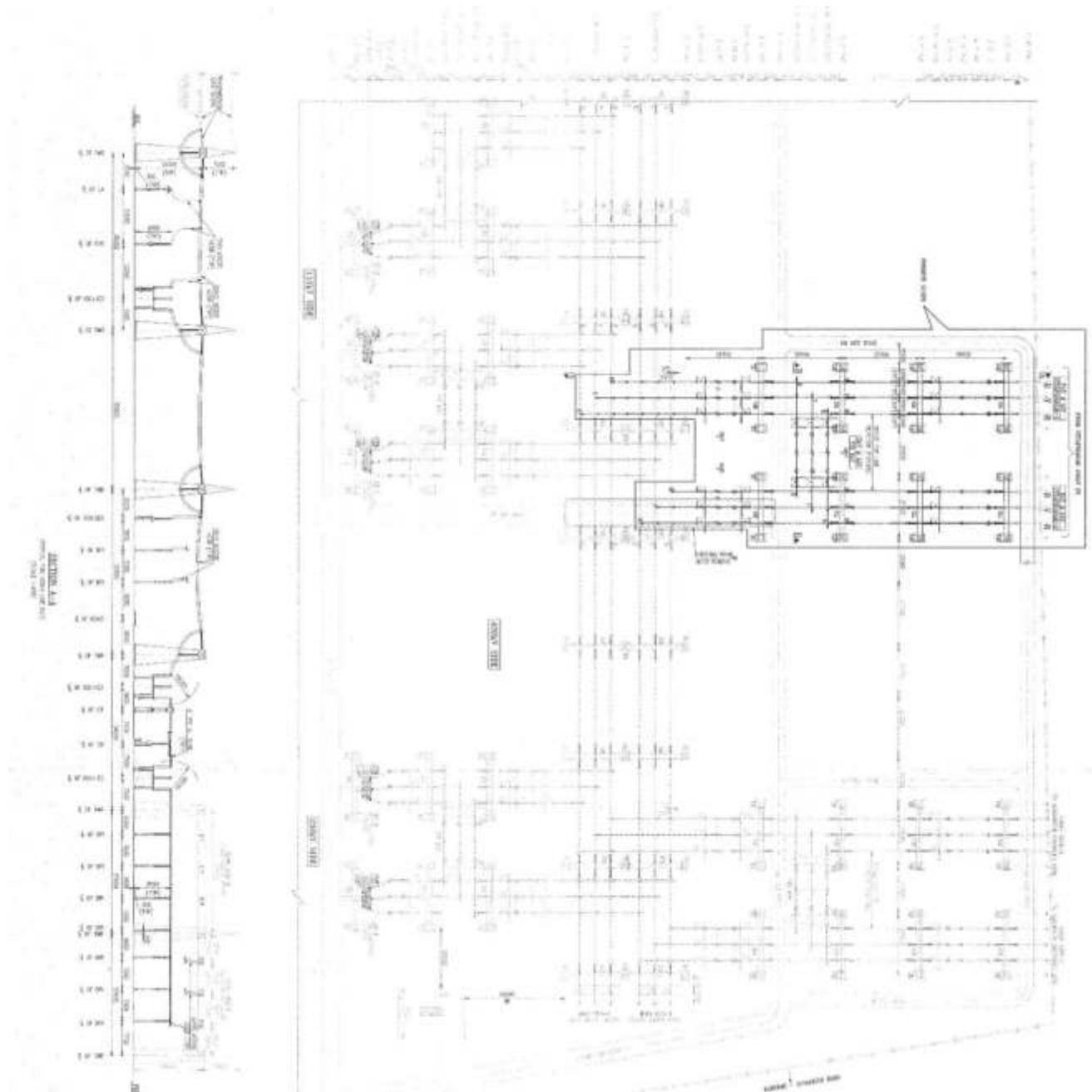
Table 1.16: S3.1-400 kV bays at Kamuthi substation

No.	Feature	Description
1	Area of land	Existing substation (70 Acres equivalent to 28.23 hectare)
2	Geographical coordinates	9° 20' 57.983" N 78° 23' 50.9832" E
3	Village / town	Kamuthi village
4	Ownership of land	TANTRANSCO
5	Slope/Plain land	Plain
6	Kind of land	Within the existing Substation land
7	River/Coast (if any)	26 km from Coast
8	Permanent feature nearby if any	Adjacent to Adani solar energy plant
9	Distance from nearest Wildlife sanctuary/National Park	50 km from Madurai Tank IBA, 54 km from Chitragudi and Kanjirankulam Bird Sanctuary, 64 km from Big Tank IBA.

25. Originally it was planned to erect 2 nos. of 400 kV bays at existing Kayathar 400 kV SS for connecting DC line from Virudhunagar 765/400 kV substation for 400 kV DC line from Virudhunagar 765/400 kV substation to Kayathar 400 kV substation. As per the original plan the route was from Virudhunagar sub-station to Kayathar sub-station. After the change in strategy by TANTRANSCO the approved route now connects from Virudhunagar sub-station to a common point AP 45. A newly built and activated transmission line financed by Ministry of New and Renewable Energy now connects the Kayathar sub-station to Thennampatti sub-station through the common point AP 45. Due to the change in strategy TANTRANSCO decided to drop the plan of additional bays at existing Kayathar 400 kV SS.

26. Originally it was planned to have 110 kV Bay at existing Vijayapuri 110 kV substation to connect 110 kV SC line on DC tower from the Ottapidaram 400/110 kV SS. There is one existing bay facility at the substation. TANTRANSCO decided that one switch will be provided to connect 110 kV SC line from the Ottapidaram SS. Therefore, the proposed bay provision at existing Vijayapuri 110 kV substation was dropped from the ADB financed Project.

Figure 1.4: Approved layout of 400 kV bays at Kamuthi 400 kV SS.



Source: TANTRANSCO

1.5. Minimizing Impacts on Resettlement

27. As a standard practice, the revised route of the transmission lines has been so prepared and finalised by TANTRANSCO to avoid and or to minimize impacts towards temporary damages on structures/crops/trees if any coming in the RoW of the transmission lines. For construction of transmission line, the project proponent follows the law of the land (i.e., the Indian Telegraph Act 1885, part 3, section 10 to 19 conferred under section 164 of the Electricity Act, 2003 through Gazette by India, extra ordinary dated 24th Dec. 2003), to place and maintain transmission lines under over along or across and posts in or upon, any immoveable property. However, the clause 10 (d) of same act stipulates that the user agency shall pay full compensation to all interested in any damages sustained during the execution of said work. Therefore, procedure has been designed to minimize impacts during detailed survey followed by foundation work, tower erection and during the stringing of conductors. The revised route of the transmission lines was finalised based on ground verification by the concerned contractors, review by TANTRANSCO and the feasibility of implementation of the project.

a) Tower' foundations and footings

28. All towers' foundations and towers' footings are dug and laid, including transportation of material and land clearance, generally at the end of a crop season to avoid impacts on crops within the four legs of the tower and approach ways.

b) Towers' erection

29. All towers are usually erected, including transportation of material, at the end of the crop season, to avoid impacts on crops within the four legs of the tower and approach ways. After erection of transmission towers, the land is restored to its previous use and farmers can continue cultivation of crops below the towers.

c) Stringing

30. Given the less time needed for the stringing, it is usually done right after the tower erection but before the next crop season.

31. Productive losses due to the transmission line construction are negligible. However, due care shall be taken to avoid damages to crops by taking up the construction activities during lean period or post-harvest season. As per the prevailing norms farming activities shall be allowed after the construction work is completed. All affected people will be provided land compensation of tower base area and land compensation of line corridor area (RoW) as per the provisions of Government of Tamil Nadu G.O. (Ms) No. 86. The compensation for damaged crop and tree will be provided as per the laid down procedure of the Government of Tamil Nadu.

32. For transmission lines, the preliminary route alignments were prepared through satellite survey data by Anna University, Tamil Nadu. Based on the GIS survey data, three alternative routes were proposed for each transmission line (Route A, Route B and Route C). The best route for each transmission line was suggested by Anna University in consultation with the field team of TANTRANSCO. Detailed survey was undertaken along the Anna University suggested line by the respective contractors and suggestions were provided to finalise the angle points and route

alignment based on the actual field condition. Suggestions were reviewed and realignment was made based on requirement. The acceptable reasons for changing the angle point locations and number of angle points were truly reviewed by TANTRANSCO and verified with the contractor/field engineers before the final alignment was approved by TANTRANSCO. Details on the alternate analysis between Anna University suggested line and final alignment approved by TANTRANSCO are provided in Annexure 1. The two substations land has been finalized in vacant land of which Virudhunagar substation land has been obtained through negotiated settlement from 3 owners and Ottapidaram land has been obtained through transfer from a private Thermal Power Developer/ Company (Ind Bharat).

1.6. Scope of Work for Compensation Plan

33. The scope of the Project includes (i) new transmission lines, (ii) new substations and (iii) additional bays at existing substation. As far as the two new substations are concerned, the sites have been finalized and the land has already been in possession with TANTRANSCO. The extension of bays at Kamuthi substation is being constructed within the existing substations premise without having any impact on land acquisition or involuntary resettlement. Due diligence has been conducted and found no impacts. Therefore, new substations and bay extension are not part of this Compensation Plan. The scope of this compensation plan includes social safeguards related impacts for the construction of transmission lines which include, foundation, erection and stringing of transmission lines (tower base and right of way).

1.6.1 Finalisation of angle points and suspension towers in Transmission Lines

34. Detailed survey was undertaken along the Anna University suggested line by the respective contractors and suggestions were provided to finalise the angle points and route alignment based on the actual field condition. Suggestions were reviewed and realignment was made based on requirement. The acceptable reasons for changing the angle point locations and number of angle points were truly reviewed by TANTRANSCO and verified with the contractor/field engineers before the final alignment was approved by TANTRANSCO. For each approved transmission line, a profile was prepared by the contractor which included type of towers, number of angle points and suspension towers and location of suspension towers. Based on the final alignment route approved by Anna university, the profile of transmission lines was approved by TANTRANSCO. Based on the details of the coordinates of angle points and suspension towers mentioned in the profile, the contractors identified the affected land owner with the help of Village Administrative Officer for consultation followed by construction of tower foundation. If there are any changes due to the development of land at the time of construction even though the profile was approved, that particular portion of the route may be deviated and the profile for the deviated portion would be approved from TANTRANSCO. In such cases, the contractors will again identify the affected land owner with the help of Village Administrative Officer for consultation followed by construction of tower foundation. Before the stringing of transmission lines, the contractors will identify the affected people along the RoW of transmission lines with the help of Village Administrative Officer.

35. The anticipated number of affected households was estimated in the RP in 2018 based on the preliminary route alignment prepared through satellite survey data by Anna University which was based on assumptions. The estimation of number of affected households in this updated RP is based on the available information such as actual number of towers and affected land in the RoW of final alignment of transmission lines. The actual number of affected households may slightly vary once the process of identification of all affected households is completed and the same will be mentioned in the final updated Compensation Plan.

1.6.2 Right of Way Considered for the Safeguards Assessment

36. The Project includes various transmission lines with different capacities which varies from 110 kV up to 765 kV. Right of Way considered for various lines are provided in Table 1.17.

Table: 1.17: Right of Way

#	Name of the Lines	Right of Way (meters)
1	765 kV double circuit line Virudhunagar - Coimbatore	67
2	400 kV double circuit line Virudhunagar - Kayathar	46
3	400 kV double circuit line Kamuthi - Ottapidaram	46
4	400 kV double circuit line Udangudi -Ottapidaram	46
5	230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS	35
6	230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram	35
7	110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS	22
8	110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS	22
9	110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS	22

1.6.3 Methodology

37. The broad scope and methodology adopted to prepare the updated Compensation Plan is as follows:

- Collection of maps showing final route alignment of transmission lines
- Obtaining number of towers, coordinate details of angle points and towers of approved transmission lines
- Collection of major crossing details of approved transmission lines
- Social assessment of three transmission lines which have undergone some alignment shift from Anna University suggested route
- Inventory surveys for transmission lines to assess the temporary impacts on loss of trees by a transact and walk over survey.
- Estimation of number of affected people based on the available information such as actual number of towers and RoW of final alignment of transmission lines.
- Public consultations with the villagers along the final alignment of transmission lines
- Review of Government of Tamil Nadu G.O. (Ms) No. 86 (Revised guidelines for payment of compensation)
- Estimation of revised compensation cost based on the information on affected land, crop/ trees and the guidelines for payment of compensation (G.O. No. 86)
- Review of Operational guidelines on functioning of GRM (GRC) and safeguards information disclosure

1.7 Limitation and Future Action for the Updated Compensation Plan

38. The updated Compensation Plan has been prepared based on the final route alignment

of the transmission lines and other field data/information collected by the contractors such as major crossing details of transmission lines, location details of towers, impact on land, crops and trees etc. It also included the findings of public consultations conducted along the revised transmission lines, which discussed the views and opinions of the community on the project, revised alignments and other implementation issues. The impacts related to loss of trees are based on the findings of inventory surveys conducted by the respective contractors. The estimation of number of affected households in this updated Compensation Plan (CP) is based on the available information such as actual number of towers and RoW of final alignment of transmission lines. Since the process of identification of affected household due to tower foundation, erection and stringing is an ongoing process, the actual number of affected households will be known once the process of identification of all affected households is completed and the same will be mentioned in the final updated Compensation Plan. Estimation of revised compensation cost in this updated Compensation Plan is based on the available information on affected land, crop/trees for towers and RoW of transmission lines and the guidelines for payment of compensation (G.O. No. 86). The actual compensation cost will be known once the process of assessment and valuation of affected assets for all affected households is completed and the same will be mentioned in the final updated Compensation Plan.

39. TANTRANSCO will submit the updated Compensation Plan to ADB for review. Upon ADB approval there will be disclosure of the updated Compensation Plan in the ADB website and the website of TANTRANSCO.

2. SCOPE OF LAND ACQUISITION AND INVOLUNTARY RESETTLEMENT

2.1 Background

40. The project does not require any private land acquisition for construction of transmission lines under the proposed ADB financing components. The impacts are categorized in to two types, impacts due to tower base and impacts due to transmission line along the RoW. The impacts due to tower base will occur in terms of restriction of land use within four legs of tower footings but not necessarily complete loss of land under the towers. The land under towers can be continuously used for crop cultivation. Temporary impacts are foreseen in terms of diminution of land value and loss of crops/trees along the RoW during the stringing of transmission lines and will not lead to any land use restriction. The impacts on crops/trees along the transmission lines are estimated based on the inventory surveys carried out by the contractors. The findings of inventory surveys along the transmission lines are provided in Annexure 2.

2.2 Impacts due to New Substations and Bay Extension

41. There are two new substations and bay extension at existing Kamuthi substation. None of the substations require compulsory land acquisition. Land for all the substations and bay extension are in possession of TANTRANSCO. Due diligence has confirmed that purchase of the substation lands was initiated prior to the involvement of ADB in the project. Details on the land status of each substation and bay extension is provided in Table 2.1.

Table 2.1: Impact related to Substation and Due Diligence Findings

#	Name of the Substation/bay Extension	Area of Land	Type of Land	Current Status of Land Ownership	Findings of the Due Diligence
1	Virudhunagar (2x1500MVA)	226.53 Acres (92.34 ha)	Private Dry land	TANTRANSCO	<p>A due diligence has been conducted as per the SPS requirement. Findings of the due diligence reveal that this is a private land that belongs to three owners. This is a dry land and is not irrigated and is used for fodder. There is no physical displacement. The land has been acquired through negotiated settlement by willing buyer and willing seller mechanism. TANTRANSCO has conducted prior consultation with all the three land owners. Name of the land owners and their respective share of land sell is as below:</p> <ol style="list-style-type: none"> 1. Mr. RVS Dureraj (24.53 Acres) 2. Mr. Rajan Baba (142 Acres) 3. Mr. Jagan Ali (60 Acres)

#	Name of the Substation/bay Extension	Area of Land	Type of Land	Current Status of Land Ownership	Findings of the Due Diligence
					<p>The guideline value of the land was INR 3.01 lakh per Acre and the market value as decided by the district collector was INR 4.5 lakh per Acre. However, the negotiation was completed at the rate of INR 7.67 lakh per acre. Consultation was carried out with one of the land owners by the safeguard's consultant team during the project preparation who was present during the due diligence. Another land owner was also telephonically consulted to get his feedback and opinion on the negotiated settlement. It is found that they agreed with the rate and do not have any objections. The negotiation process took approximately 6 months' time to be completed. Payment was made through an account payee cheque in July 2018. Following the payment, the land was registered in the name of TANTRANSCO at Sattur sub registrar office. There was a 11% stamp duty which was also borne by TANTRANSCO. There was no grievance found.</p> <p>Consultaions wijth the owners revealed that they have big chunk of landholding and the land sold to TANTRANSCO was earlier meant for developing solar power, however, due to some technical issues, they could not build their independent solar power plant. However, they opined that the negotiated amount is fair enough to start other business and they want that there shall be a big substation in the area to maintain the load stability.</p> <p>The district revenue office was also involved during the negotiation and finalization of</p>

#	Name of the Substation/bay Extension	Area of Land	Type of Land	Current Status of Land Ownership	Findings of the Due Diligence
					<p>rates. The negotiation was completed in presence of the district revenue officer who are independent of the buyer and seller and act as the independent and third-party endorser. Thefeore, no coercion was found and it was done in transparent manner.</p> <p>This being a negotiated settlement, the safeguard requirement-2 on involuntary resettlement of ADB SPS will not be triggered.</p>
2	Ottapidaram (2x500MVA) + (2x200MVA)	65.54 Acres (26.13 ha)	Barren Land earlier owned by Ind Bharat	TANTRANSCO	<p>The land was in possession of IND Bharat, the independent power producer (IPP) since 2016. TANTRANSCO had approached IndBharat to allocate the land for the proposed substation and IND Bharat has already transferred the land to TANTRANSCO in September 2017. The land is a barren land and not being used by any informal settlers. There is no compulsory land acquisition for the proposed substation. The land has been procured by TANTRANSCO through negotiated settlement and through mutual transfer of land from IndBharat to TANTRANSCO.</p> <p>Due diligence confirmed this is existing TANTRANSCO Land, with no persons living or using the land informally and therefore there will be no affected persons</p>
3	400 kV bays at Kamuthi substation	70 Acres (28.23 ha)	Existing substation land of TANTRANSCO	TANTRANSCO	<p>All the construction activities will be done within the existing substation premise which belongs to TANTRANSCO, hence there is no resettlement impact and no affected persons. The extension would be within the fenced boundary of TANTRANSCO.</p>

2.3 Impacts on Land Due to Tower Base/Footing

42. The total number of towers for all the transmission lines is estimated to be 1,623 of which 1,383 towers will be placed on private crop land, 155 towers will be placed on private waste land and 85 towers are to be placed on government land. Details are provided in Table 2.2.

Table 2.2: Tower Details on Land

#	Name of the Transmission Lines	Actual Length in (km)	Total no. of towers	No. of towers on private crop land	No. of towers on private waste land	No. of towers on government land
1.1 A	765 kV DC line Virudhunagar – Coimbatore, Reach 1	86.9	247	190	36	21
1.1 B	765 kV DC line Virudhunagar – Coimbatore, Reach 2	94.54	268	220	40	8
1.1 C	765 kV DC line Virudhunagar – Coimbatore, Reach 3@	71.4	210*	189	8	13
1.2	400 kV DC line Virudhunagar - Kayathar	70.2	201	175	16	10
2.1	400 kV DC line Kamuthi – Ottapidaram	71.6	206	206	0	0
2.2	400 kV DC line Udangudi – Ottapidaram	67.9	200	200	0	0
2.3 A	230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS	10.88	49	34	13	02
2.3 B	230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram	6.23	27	15	12	0
2.3 C	110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS	8.95	50	14	30	06
2.3 D	110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS	34.41	149	124	0	25
2.3 E	110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS	3.31	16	16	0	0
Total		526.32	1,623	1,383	155	85

@The disaggregated data on number of towers across type of land is calculated based on percentage of type of land from 160 towers.

*The total number of towers is tentative as in 16.6 km of the line the detailed survey is yet to be done. The actual number of towers in this line may slightly vary.

Source: TANTRANSCO, 2021

43. Estimation has been done to assess the impact of tower footings on land based on the type of land on which towers are to be placed. The type of land for each tower was identified during the profile preparation by respective contractors. Based on the number of towers to be placed on private crop land/private waste land/government land, percentage was estimated for type of land to be affected by tower base. Details on type of land (percentage) for towers in each

line is presented in Table 2.3.

Table 2.3: Type of Land (in Percent) for Tower Base

#	Name of the Transmission Lines	Total no. of towers	Type of Land for Towers (Percentage)			
			Private Crop Land	Private Waste Land	Govt. Land	Total
1.1 A	765 kV DC line Virudhunagar – Coimbatore, Reach 1	247	76.9%	14.6%	8.5%	100%
1.1 B	765 kV DC line Virudhunagar – Coimbatore, Reach 2	268	82.0%	14.9%	3.1%	100%
1.1 C	765 kV DC line Virudhunagar – Coimbatore, Reach 3@	210*	90.0%	3.8%	6.2%	100%
1.2	400 kV DC line Virudhunagar - Kayathar	201	87.0%	8.0%	5.0%	100%
2.1	400 kV DC line Kamuthi – Ottapidaram	206	100.0%	0.0%	0.0%	100%
2.2	400 kV DC line Udangudi – Ottapidaram	200	100.0%	0.0%	0.0%	100%
2.3 A	230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS	49	69.4%	26.5%	4.1%	100%
2.3 B	230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram	27	55.6%	44.4%	0.0%	100%
2.3 C	110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS	50	28.0%	60.0%	12.0%	100%
2.3 D	110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS	149	83.2%	0.0%	16.8%	100%
2.3 E	110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS	16	100.0%	0.0%	0.0%	100%

@The percentage of type of land is based on the data available from 160 towers (approved).

*The total number of towers is tentative as in 16.6 km of the line the detailed survey is yet to be done. The actual number of towers in this line may slightly vary.

Source: TANTRANSCO, 2021

44. The magnitude of impacts on land for the tower base varies according to the voltage capacity of tower¹ as per the standard practice. Estimate of tower base land have been determined based on the voltage capacity of tower. The total land affected for tower bases are 240.49 hectare (ha) of which 205.17 ha is private crop land². Only private crop land and private waste land has been considered for land value compensation as per the MoP Guidelines. Details are provided in Table 2.4.

¹ The land under each tower as below:

- 765kV Line= 2,500 square meter
- 400kV Line= 900 square meter
- 230 kV Line=324 square meter
- 110 kV Line= 100 square meter

² The land within the four legs of tower is affected during construction. However, after the construction, the land will be restored to its previous use and will be allowed for continued farming activities, hence, there will be no severity of impact or permanent loss of land. Also, it is to be noted that 100% of land value compensation would be provided in addition to the loss of crops and trees. Therefore, there would be no permanent loss of livelihood.

Table 2.4: Affected Land Area due to Tower Base/Footing

#	Name of the Transmission Lines	Total no. of towers	Total Affected Land (ha)	Private crop Land (ha)	Private waste Land (ha)	Govt. Land (ha)
1.1 A	765 kV DC line Virudhunagar – Coimbatore, Reach 1	247	61.75	47.5	9	5.25
1.1 B	765 kV DC line Virudhunagar – Coimbatore, Reach 2	268	67	55	10	2
1.1 C	765 kV DC line Virudhunagar – Coimbatore, Reach 3	210*	52.5	47.25	2.0	3.25
1.2	400 kV DC line Virudhunagar - Kayathar	201	18.09	15.75	1.44	0.9
2.1	400 kV DC line Kamuthi – Ottapidaram	206	18.54	18.54	0	0
2.2	400 kV DC line Udangudi – Ottapidaram	200	18	18	0	0
2.3 A	230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS	49	1.59	1.10	0.42	0.06
2.3 B	230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram	27	0.87	0.49	0.39	0.00
2.3 C	110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS	50	0.5	0.14	0.30	0.06
2.3 D	110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS	149	1.49	1.24	0	0.25
2.3 E	110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS	16	0.16	0.16	0	0
Total		1623	240.49	205.17	23.55	11.77

*The total number of towers is tentative as in 16.6 km of the line the detailed survey is yet to be done. The actual number of towers in this line may slightly vary.

Source: TANTRANSCO, 2021

2.4 Impacts on Land due to Transmission Line Right of Way

45. The total affected land area under the RoW has been calculated based on the length of the transmission line multiplying in to the width of right of right of way. Information on types of affected land under the RoW is compiled from the inventory survey conducted by the respective contractors. Details on affected land area under the RoW and type of land (in percentage) for each transmission line is provided in Table 2.5.

Table 2.5: Type of Land (in Percent) for Right of Way

#	Name of the Transmission Lines	Length in km	Type of Land for RoW (Percentage)			
			Private Crop Land	Private Waste Land	Govt. Land	Total
1.1 A	765 kV DC line Virudhunagar – Coimbatore, Reach 1	86.9	76.7%	15.8%	7.5%	100%
1.1 B	765 kV DC line Virudhunagar – Coimbatore, Reach 2	94.54	83.3%	13.6%	3.1%	100%
1.1 C	765 kV DC line Virudhunagar – Coimbatore, Reach 3	71.4	88.0%*	2.7%*	9.3%*	100%
1.2	400 kV DC line Virudhunagar - Kayathar	70.2	87.6%	8.0%	4.4%	100%
2.1	400 kV DC line Kamuthi – Ottapidaram	71.6	94.2%	4.9%	0.9%	100%
2.2	400 kV DC line Udangudi – Ottapidaram	67.9	71.4%	16.9%	11.7%	100%
2.3 A	230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS	10.88	70.1%	24.2%	5.7%	100%
2.3 B	230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram	6.23	56.1%	43.9%	0.0%	100%
2.3 C	110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS	8.95	31.4%	54.6%	14.0%	100%
2.3 D	110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS	34.41	83.7%	2.0%	14.3%	100%
2.3 E	110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS	3.31	100.0%	0,0%	0,0%	100%

*The percentage of type of land is based on the data available from 160 towers (approved).

Source: TANTRANSCO, 2021

46. A total of 2,817.59 ha of land is affected under the right of way of transmission lines of which 2324.07 ha is private crop land and 316.37 ha is private waste land. Only private crop land and private waste land in the RoW has been considered for land value compensation as per the MoP Guidelines. Impacts on crop lands are anticipated to last 1 crop season. During the profile preparation by the contractors, the angle point locations and line alignment was carefully selected to avoid any structures and sensitive area. Thus, no structures are affected by the RoW of transmission lines. Details on type of land affected for each transmission line is provided in Table 2.6.

Table 2.6: Affected Land Area Under the Right of Way

#	Name of the Transmission Lines	Actual length in (km)	Right of Way (meter)	Affected land area under the RoW (ha)	Private Crop Land in ha	Private Waste Land in ha	Govt. Land in ha
1.1 A	765 kV DC line Virudhunagar – Coimbatore, Reach 1	86.9	67	582.23	446.57	91.99	43.67
1.1 B	765 kV DC line Virudhunagar – Coimbatore, Reach 2	94.0	67	629.80	524.62	85.65	19.52

#	Name of the Transmission Lines	Actual length in (km)	Right of Way (meter)	Affected land area under the RoW (ha)	Private Crop Land in ha	Private Waste Land in ha	Govt. Land in ha
1.1 C	765 kV DC line Virudhunagar – Coimbatore, Reach 3	71.4	67	478.38	420.97*	12.92*	44.49*
1.2	400 kV DC line Virudhunagar - Kayathar	70.2	46	322.92	282.88	25.83	14.21
2.1	400 kV DC line Kamuthi – Ottapidaram	71.6	46	329.36	310.26	16.14	2.96
2.2	400 kV DC line Udangudi – Ottapidaram	67.9	46	312.34	223.01	52.79	36.54
2.3 A	230 kV DC line LILO of T-Sipcot Kavanoor SC line to Ottapidaram SS	10.88	35	38.08	26.69	9.22	2.17
2.3 B	230 kV DC line LILO of T-Sipcot Savasapuram feeder to Ottapidaram	6.23	35	21.80	12.24	9.57	0.00
2.3 C	110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS	8.95	22	19.69	6.18	10.75	2.76
2.3 D	110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS	34.41	22	75.70	63.36	1.51	10.83
2.3 E	110 kV DC line from LILO of Eppodhmvendran to Ottapidaram SS	3.31	22	7.28	7.28	0.00	0.00
Total				2,817.59	2324.07	316.37	177.15

*The disaggregated data on number of towers across type of land is calculated based on percentage of type of land from 160 towers (approved).

Source: TANTRANSCO, 2021

2.5 Impacts on Trees

47. Estimation of impact on trees are based on the inventory surveys carried out by respective contractors along the final alignment of the transmission lines. As per the estimate, total number of trees to be affected is 50,980. As far as fruit trees are concerned, these trees are not the basic source of income or livelihood and in most of the cases it is used for self-consumptions rather than selling in the market. Adequate compensation for loss of trees is being provided by TANTRANSCO based on its productivity. Details on number of trees are provided in Table 2.7. Details of the type of trees to be affected for each transmission line are presented in Annexure 2.

Table 2.7: Number of Trees to be Affected

#	Name of the Transmission Lines	Actual length in (km)	Total Trees affected
1.1 A	765 kV DC line Virudhunagar – Coimbatore, Reach 1	86.9	12663
1.1 B	765 kV DC line Virudhunagar – Coimbatore, Reach 2	94.0	18706
1.1 C	765 kV DC line Virudhunagar – Coimbatore, Reach 3	71.4	13135

#	Name of the Transmission Lines	Actual length in (km)	Total Trees affected
1.2	400 kV DC line Virudhunagar - Kayathar	70.2	208
2.1	400 kV DC line Kamuthi – Ottapidaram	71.6	190
2.2	400 kV DC line Udangudi – Ottapidaram	67.9	5534
2.3 A	230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS	10.88	14
2.3 B	230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram	6.23	63
2.3 C	110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS	8.95	133
2.3 D	110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS	34.41	300
2.3 E	110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS	3.31	34
Total			50,980

Source: TANTRANSCO, 2021

2.6 Affected Households and Affected Persons

48. The anticipated number of affected households and affected persons was estimated in the draft Compensation Plan (CP) in 2018 based on the preliminary route alignment prepared through satellite survey data by Anna University which was based on various assumptions. The estimation of number of affected households in the updated RP is based on the available information such as actual number of towers and affected land in the RoW of final alignment of transmission lines. The total number of affected households³ are estimated to be 4,644 comprising of 1,538 households affected by tower base and 3,106 households temporarily affected by right of way. The total number of affected persons⁴ are estimated to be 19,043 comprising of 6,307 persons affected by tower base and 12,736 persons temporarily affected by right of way. Details are provided in Table 2.8.

Table 2.8: Affected Households and Affected Persons

#	Name of the Transmission Lines	Affected Households (tower Base)	Affected Persons (Tower Base)	Affected Households (Right of Way)	Affected Persons (Right of Way)	Grand Total Affected households (tower base+RoW)	Grand Total Affected Persons (tower base+RoW)
1.1 A	765 kV DC line Virudhunagar – Coimbatore, Reach 1	226	927	634	2598	860	3525

³ For Tower Base: Estimate based on one AH per tower to be placed on private land

For Right of Way: Estimate based on total affected private land divided by the average land holding size as per the socio-economic survey (0.85 ha per HH)

⁴Number of affected persons has been calculated by number of AH multiplied by average household size as per the socio-economic survey (Average HH size is 4.1)

#	Name of the Transmission Lines	Affect ed House holds (tower Base)	Affecte d Person s (Tower Base)	Affecte d Househ olds (Right of Way)	Affecte d Person s (Right of Way)	Grand Total Affected household s (tower base+Ro W)	Grand Total Affected Persons (tower base+Ro W)
1.1 B	765 kV DC line Virudhunagar – Coimbatore, Reach 2	260	1066	718	2944	978	4010
1.1 C	765 kV DC line Virudhunagar – Coimbatore, Reach 3	197	808	510	2093	707	2901
1.2	400 kV DC line Virudhunagar - Kayathar	191	783	363	1489	554	2272
2.1	400 kV DC line Kamuthi – Ottapidaram	206	845	384	1574	590	2419
2.2	400 kV DC line Udangudi – Ottapidaram	200	820	324	1330	524	2150
2.3 A	230 kV DC line LILO of T-Sipcot Kavanoor SC line to Ottapidaram SS	47	193	42	173	89	366
2.3 B	230 kV DC line LILO of T-Sipcot Savasapuram feeder to Ottapidaram	27	111	26	105	53	216
2.3 C	110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS	44	180	20	82	64	262
2.3 D	110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS	124	508	76	313	200	821
2.3 E	110 kV DC line from LILO of Eppodhmvendran to Ottapidaram SS	16	66	9	35	25	101
Total		1538	6307	3106	12736	4644	19043

2.7 Summary Impacts

49. The project having transmission lines will not require any private land acquisition. Impacts are mostly temporary in nature. The impacts due to tower base will occur in terms of restriction of land use within four legs of tower footings but not necessarily complete loss of land under the towers. The land under towers can be continuously used for crop cultivation after the construction. Temporary impacts are foreseen in terms of diminution of land value and loss of crops/trees along the RoW during the stringing of transmission lines and will not lead to any land use restriction. The final route alignment of the transmission lines has been so prepared and finalised by TANTRANSCO to avoid and or to minimize impacts towards temporary damages on crops/trees in the RoW of the transmission lines. Summary of impacts related to the transmission lines are given in Table 2.9.

Table 2.9: Summary Impacts

#	Impacts	Quantity
1	Total number of towers on private crop land and area (ha) affected by the tower	1,383 towers
		205.17 ha
2	Total number of towers on private waste land and area (ha) affected by the tower	155 towers
		23.55 ha
3	Total number of towers on government land and area (ha) affected by the tower	85 towers
		11.77 ha
4	Total Private Crop Land Area under Right of Way (ha)	2324.07 ha
5	Total Private Waste Land Area under Right of Way (ha)	316.37 ha
6	Total Government Land under Right of Way (ha)	177.15 ha
7	Total number of affected trees in Right of Way	50,980
8	Total numbers of structures	0
9	Total estimated number of affected households and affected Persons due to tower footings	1538 affected households
		6307 affected persons
10	Total estimated number of affected households and affected persons under the RoW	3106 affected households
		12736 affected persons
11	Grand total of affected households and affected persons (tower footings and RoW)	4644 affected households
		19,043 affected persons

Source: TANTRANSCO, 2021

3. SOCIO ECONOMIC PROFILE

50. The socioeconomic household survey was carried out along the transmission lines suggested by Anna University during the preparation of the Draft RP. The revised alignment of transmission lines shows that all the lines except three are subjected to very marginal changes. It is apparent that the socio-economic profile of the people for transmission lines having very minor changes will remain more or less same as the profile mentioned in Draft RP. There are three transmission lines which have undergone some alignment shift from Anna University suggested route. In these three lines social assessments study was carried out by the respective contractors in 2021. The social assessment reports including the socioeconomic profile for these three lines are given in Annexure 6. The below sections present the analysis of findings of socioeconomic profile of the Draft RP.

3.1. General

51. Socioeconomic household surveys were conducted in the project area and a social analysis has been done through a sample socioeconomic household survey. This survey includes households along the transmission line route, however, the households covered under the surveys are not necessarily potentially affected by the subprojects. A total of 669 sample households were surveyed from August 2018 to December 2018 by the team of ADB consultants.

3.2. District Profile

52. The secondary data sources provide important data and included the latest documents from the state planning commission for the respective districts, and statistical handbooks compiled by the respective districts. The project affected districts except Ramanathapuram and Dindigul have a higher urban population as compared to the proportion of rural populations. The proportion of scheduled caste in the districts ranges from 13% to 21% and this is comparable with the state scheduled caste proportion of 20%. The proportion of scheduled tribes is below 1% across the districts and the proportion is 1.1% for the state. The data on selected indicators for the project affected districts as well as for Tamil Nadu is given in the below Table 3.1.

Table 3.1: Profile of project affected districts and Tamil Nadu

Indicator/Parameter	Thoothukudi	Virudhunagar	Madurai	Ramanathapuram
Total population	1,750,176	1,942,288	3,038,252	1,353,445
% of rural population	49.90%	49.53%	39.22%	69.66%
% of urban population	50.10%	50.47%	60.78%	30.34%
% of SC population	19.88%	20.59%	13.46%	18.40%
% of ST population	0.28%	0.12%	0.37%	0.08%
Sex ratio	1023	1007	990	983
Literacy rate	86.16	80.15	83.45	80.72
Male literacy rate	91.14	87.71	89.72	87.81
Female literacy rate	81.33	72.69	77.16	73.52
Life expectancy at birth (Male)	NA	NA	65.4	68.9
Life expectancy at birth (Female)	NA	NA	68.9	71.2
Infant Mortality Rate (2013-14)	12.5	13.0	16.13	13.0
Maternal Mortality Rate	105.8	125.09	120.0	49.0

% of HHs covered with drinking water supply	54.14%	6.92%	NA	NA
% of HHs with toilet facilities (2014)	56.67%	NA	52.16%	56.46%
Per capita income during 2011-12 at constant prices (In INR)	74,933	87,361	67,258	44,707
% of BPL HHs (2013-14)	18.33%	42.48%	31.49%	31.27%
Worker participation rate	42.74	NA	44.59	44.55
Worker participation rate (Male)	58.23	NA	59.14	57.53
Worker participation rate (Female)	27.61	NA	29.89	31.34
Total worker (Main and marginal)	748,095	950,158	1,354,632	602,977
% of cultivator	6.49%	6.02%	6.84%	29.0%
% of agriculture labourers	26.82%	21.96%	27.52%	10.0%
% workers in HH industry	3.06%	3.71%	3.49%	4.0%
% of other workers	63.64%	68.30%	62.14%	57.0%
Total cultivated area (In hectares)	200,377	120,940	89,250	284,428
Average size of agriculture land holdings	1.19	0.93	0.57	0.72
Total forest area (In hectares)	10,770	Nil	26,583	4,488
Electricity generation from thermal (In million unit)	5547.59	Nil	Nil	NA
Electricity generation from wind mill (In million unit)	329.41	Nil	Nil	NA
Number of working factories (Registered)	1036	3420	1252	NA
Number of small-scale industries	1346	2776	8645	NA
Number of medium & large industries	NA	40	NA	12
Indicator/Parameter	Dindigul	Tiruppur	Tamil Nadu	
Total population	2,159,775	2,479,052	72,147,030	
% of rural population	62.59	38.64	51.60	
% of urban population	37.41	61.36	48.40	
% of SC population	20.95	15.97	20.01	
% of ST population	0.37	0.22	1.10	
Sex ratio	998	989	996	
Literacy rate	76.26	78.68	80.09	
Male literacy rate	84.23	85.49	86.77	
Female literacy rate	68.33	71.82	73.44	
Life expectancy at birth (Male)	65.89	67.0	64.97	
Life expectancy at birth (Female)	69.16	69.2	68.85	
Infant Mortality Rate (2013-14)	13.0	7.3	21.0	
Maternal Mortality Rate	43.17	74.0	68.0	

% of HHs covered with drinking water supply	80.68%	NA	NA
% of HHs with toilet facilities (2014)	59.30	68.17	48.29*
Per capita income during 2011-12 at constant prices (In INR)	56,376	88,549	63,996
% of BPL HHs (2013-14)	28.95	33.95	NA
Worker participation rate (Total)	51.17	NA	45.6
Worker participation rate (Male)	61.56	65.72	59.3
Worker participation rate (Female)	40.76	36.05	31.8
Total worker (Main and marginal)	1,105,155	1,266,137	32,884,681
% of cultivator	14.97	10.73	12.92
% of agriculture labourers	42.34	19.46	29.21
% workers in HH industry	2.79	3.24	4.15
% of other workers	39.90	66.58	53.72
Total cultivated area (In hectares)	NA	211,070	NA
Average size of agriculture land holdings	1.07	NA	NA
Total forest area (In hectares)	138,923	NA	NA
Electricity generation from thermal (In million unit)	Nil	NA	NA
Electricity generation from wind mill (In million unit)	444.62	NA	NA
Number of working factories (Registered)	714	NA	NA
Number of small-scale industries	3,880	NA	NA
Number of medium & large-scale industries	NA	NA	NA

* The data is for the year 2011

Sources: District Statistical Hand Books (2016-17); District Human Development Reports (2017), State Planning Commission, Tamil Nadu; District Census Handbook, Directorate of Census Operations, Tamil Nadu

3.3. Socioeconomic Survey Findings

3.3.1. Demography

53. The sample household survey (669 sample households) finding shows that the average household size is 4.1 members. A very high proportion of households (95.5%) reported that they are staying in nuclear families. This is one of the main reasons for a small household size in the subproject area. The sex ratio of the subproject area is 1,000 males: 859 females. All the surveyed households reported that they reside in rural settlements. Details are given in Table 3.2.

Table 3.2: Demographic Feature

SI No	Particulars	Sub-project area
1	Total Household	669

2	Sex Ratio	859
3	Average Household Size	4.11
4	% of HHs reside in rural area	100%

Source: Socioeconomic Survey, August–December 2018

54. Regarding the social groups, the survey findings shows that the majority (66.5%) of the households belong to Other Backward Class (OBC). Nearly one-third (32.3%) of households belong to the scheduled caste category. In the subproject area there are no households belonging to scheduled tribes (ST) as per the survey findings. Details are given in Table 3.3.

Table 3.3: Households by Social Group

SI No	Particulars	No. of HHs	%
1	General	8	1.2
2	Scheduled Caste (SC)	216	32.3
3	Other Backward Class (OBC)	445	66.5
4	Scheduled Tribe (ST)	0	0
4	Total	669	100

Source: Socioeconomic Survey, August–December 2018

3.3.2. Literacy and Education

55. Among the surveyed households in the subproject area, the male literacy rate (88.1%) is slightly higher than the literacy rate among females (84.8%). This suggests that in terms of literacy women are not lagging greatly behind the men. When compared to the difference between male and female literacy rates in Tamil Nadu (13.4 percentage points), the gap in the subproject area is much lower (3.3 percentage points). Details are given in Table 3.4.

Table 3.4: Literacy Status

SI No	Particulars	Sub project area	Tamil Nadu (census 2011)
1	Overall literacy rate	84.7	80.1
2	Male literacy rate	88.1	86.8
3	Female literacy rate	84.8	73.4

Source: Socioeconomic Survey, August–December 2018

56. The levels of educational attainment across genders are similar as per the household survey in the subproject area. As shown in Table 3.5, no noticeable differences were found between the male and female education attainment levels. The data suggest that proportion of males completing secondary and higher levels of education are slightly higher when compared to their female counterparts. However, a feature to be noted is that attainment of technical education (such as diplomas) is higher among men (5%) when compared to women (1.2%).

Table 3.5: Gender Desegregated Education Achievement

SI No	Education level	Male		Female		Total	
		Nos.	%	Nos.	%	Nos.	%
1	Primary	251	17.3	288	23.1	539	20.0
2	Middle	451	31.1	333	26.7	784	29.1
3	Secondary	352	24.3	263	21.1	615	22.8
4	Graduate/Post graduate	148	10.2	113	9.1	261	9.7

5	Diploma	73	5.0	15	1.2	88	3.3
6	Illiterate	173	11.9	236	18.9	409	15.2
7	Total	1,448	100	1248	100	2,696	100

Source: Socioeconomic Survey, August–December 2018

3.3.3. Vulnerability

57. The household survey in the subproject area captured vulnerabilities of household on select parameters. The project defines vulnerable households as households headed by women, households with physically handicapped/disabled family members and those below the poverty line (BPL) household⁵. There are only three types of vulnerability found among the households surveyed which are shown in the Table 3.6. However, the socio-economic questionnaire covered all vulnerable categories⁶ as mentioned in the SPS, 2009. About 7.8% households are female headed households. There are 4.5% households having physically challenged persons. The finding in the subproject area shows that 379 households (56.7%) are below poverty line household. There are no land acquisitions and no structures identified along the RoW. Details are given in Table 3.6.

Table 3.6: Vulnerability feature of HHs

SI No	Particulars	No. of HHs	%
1	Female headed household	52	7.8
2	HHs having physically challenged persons	30	4.5
3	Below Poverty Line Households	379	56.7
4	Total number of HHs	669	
	<i>Note: Multiple Response</i>		

Source: Socioeconomic Survey, August–December 2018

3.3.4. Access to Basic Amenities

58. For a very high proportion of households (92.7%), piped water supply is the main source of drinking water. Piped water supply is connected to public stand points which are situated within the village. Very few households use hand pump (0.9%) and pond/river water (1.6%) for drinking water purposes. Details are given in Table 3.7.

Table 3.7: Main Source of Drinking Water

SI No	Main Source of Drinking Water	No. of HH	%
1	Piped supply	620	92.7
2	Hand pump	6	0.9
3	Pond/River	11	1.6
4	Others	32	4.8
5	Total	669	100.0

Source: Socioeconomic Survey, August–December 2018

59. Household members collect drinking water from public stand points. The survey findings show that the average distance from a main source of drinking water is 65 meters. It was also

⁵ BPL households are based on the government issued BPL cards. In April 2017, Krishan Kumar Bedi, Minister of State for Welfare of Scheduled Castes and Backward Classes, announced that the annual income ceiling for BPL families living in rural areas is Rs 49,000 and Rs 60,000 for those living in urban areas.

⁶Female headed households, scheduled tribe/indigenous people household, below poverty line household, landless household, household having physically challenged persons or elderly households

found that the average time taken to go, collect water and come back is nearly 40 minutes. The qualitative information reveals that though members must cover a short distance for collection of drinking water they have to wait for some time to collect drinking water due to a long queue at the public stand point. Details are given in Table 3.8.

Table 3.8: Distance & time taken for drinking water collection

SI No	Particulars	m
1	Average distance from main source of drinking water in meter	65
2	Average time taken to go, collect water & come back in minutes	40.4

Source: Socioeconomic Survey, August–December 2018

60. It is common in India that collection of drinking water is primarily the responsibility of women. The information collected during the household survey however reveals that in majority (52.6%) of the households both men and women in the family are involved in collection of drinking water. In more than two-fifth of households (42%) only women members collect the drinking water. Details are given in Table 3.9.

Table 3.9: Involvement in drinking water collection

SI No	Particulars	% of HH
1	Households where only men collects drinking water	5.4.8%
2	Households where only women collects drinking water	42.0%
3	Households where both men & women collects water	52.6%
5	Total	100.0

Source: Socioeconomic Survey, August–December 2018

61. Access to toilet is crucial to improving sanitation as well as health outcomes of people. Regarding sanitation facilities, the finding shows that most (73.5%) of the households have pour flush toilets. About 26.2% households in the subproject area reported that they do not have toilet facilities. Details are given in Table 3.10.

Table 3.10: Type of Sanitation Facilities

SI No	Type of Toilet	No. of Households	%
1	Pour flush	492	73.5
2	Community toilet	2	0.3
3	No Toilet	175	26.2
4	Total HHs	669	100

Source: Socioeconomic Survey, August–December 2018

62. Majority of the surveyed households in the subproject area reported that they have availability of basic amenities such as school, public health facility, public transport (bus), local market etc. About 72.9% of the households reported availability of public buses for transportation while the rest must rely on local vehicles or own arrangements. Most of the households (90.9%) have access to ambulance facilities for institutional delivery. Almost all the households reported that they have primary school facilities. About 67.4% households reported that they have secondary school, and 69% households have public health facilities within or near to the village. Details are given in Table 3.11.

Table 3.11: Availability of basic amenities

SI No	Particulars	No. of Households		%
1	Public transport (Bus)	488		72.9
2	Ambulance facilities	608		90.9
3	Local market for sell or purchase	467		69.8
4	Primary school in the village	649		97.0
5	Secondary school in/ near the village	451		67.4
6	Sub-centre/PHC in/ near the village	461		68.9
7	Total HHs	669		100

Source: Socioeconomic Survey, August–December 2018

3.3.5. Major Economic Activities

63. The average land holding size is 0.85 hectare in the project area. The most important economic activity of the households is non-agriculture-based wage labour with 60.7% of surveyed households are engaged in it. Other important economic activities are private jobs (33.5%), cultivation (34.7%), and wage labour in agriculture (41.1%). The survey captured information on family members' contribution to the major economic activities across gender. In activities such as non-agriculture-based wage labour, government and private jobs, and business, involvement is more by the male members. There are important activities such as cultivation, livestock, and wage labour in agriculture in which both the men and women have equal contribution. However, a sizeable proportion of households reported that women members (38.7%) engaged in government job. It is pertinent to mention here that women members also take part in some of the important economic activities in addition to their involvement to perform the household chores. Details are given in Table 3.12.

Table 3.12: Major economic activities of households

SI No	Particulars	% of HHs	Involvement by %		
			% men	% women	% both
1	Agriculture/cultivation	34.7	15.5	1.3	83.2
2	Wage labour (Agriculture)	41.1	29.5	6.5	64.0
3	Wage labour (Non-agriculture)	60.7	54.9	4.7	40.4
4	Livestock	13.5	3.3	1.1	95.6
5	Small enterprise (Home based)	1.6	36.4	18.2	45.5
6	Service in Govt sector	4.6	61.3	38.7	0.0
7	Service in private sector	33.5	84.4	7.1	8.5
8	Business	3.7	52.0	8.0	40.0
9	Other self-employed activity	1.3	77.8	11.1	11.1

Source: Socioeconomic Survey, August–December 2018

3.3.6. Cropping pattern

64. The major crop cultivated or produced in the subproject area is Dal with 17.3% households cultivate it. Other important crops cultivated are bajra (15.5%), maize (10.5%), and rice (7.9%). Details are given in Table 3.13.

Table 3.13: Major Cropping Pattern

SI No	Type of Crops	No. of HHs	%
1	Wheat	2	0.3
2	Dal	116	17.3
3	Rice	53	7.9
4	Maize	70	10.5
5	Vegetables	11	1.6
6	Sun flower	5	0.7
7	Onion	11	1.6
8	Bajra	104	15.5
9	Ground Nut	5	0.7
10	Cotton	36	5.4
11	Chilli	13	1.9
12	Ragi	1	0.1
13	Flower	3	0.4
14	Coconut	21	3.1
15	Tobacco	3	0.4
16	Total HH	669	100.0

Source: Socioeconomic Survey, August–December 2018

3.3.7. Average Yield of Major Crops

65. Among the major crops, the average yield per household is highest for rice (18.7 quintal). Quintal is equal to 100kg. This is followed by dal with the average production of 7.7 quintal per household. The lowest yield crop is bajra having an average production of 1.9 quintal per household) and maize having an average production of 1.8 quintal per household. The total earning is highest from dal as a greater number of households cultivate it and the per quintal selling price is also higher (INR 2,000 to 6,000 per quintal) in comparison to other produces. Many households also cultivate bajra but due to less average yield and low per quintal selling price (in the range of INR 1,500 to 2,100 per quintal) the total earning is lowest. Details are given in Table 3.14.

Table 3.14: Average Yield of MajorCrops

SINo	Type of Crop	Number of Households	%	Total Yield (Quintal/)	Average Yield (Quintal)	Total Cost in Rs.
1	Dal	116	17.3	786	7.7	3,759,800
2	Rice	53	7.9	787	18.7	1,802,500
3	Maize	70	10.5	128.5	1.8	1,868,00
4	Bajra	104	15.5	197.5	1.9	1,849.800
5	Cotton	36	5.4	80	2.2	990,000
6	Coconut	21	3.1	56	2.7	1,771,000
7	Total HHs	669				

Source: Socioeconomic Survey, August–December 2018

3.3.8. Average Annual Income

66. The average annual household income of surveyed households is INR 127,375. The economy of the subproject area is predominantly dependent on daily wage labour (70.1%) followed by agriculture (35.7%), and private service/job (34.1%). In terms of the amount of average annual income, the government service holders have the highest average (INR 219,536) followed by private service/job holders (INR 109,215). Details are given in Table 3.15.

Table 3.15: Average Annual Income

SI No	Source of Income	No. of HHs	% of HHs	Average Annual Income in Rs
1	Agriculture	239	35.7	61,477
2	Govt. Service/Job	28	4.2	219,536
3	Private Service/Job	228	34.1	109,215
4	Business	33	4.9	84,000
5	Wage Labour	469	70.1	70,625
6	Professional	10	1.5	71,000
7	Pension	9	1.3	85,889
8	Others	56	8.4	37,411
9	Total HH	669		127,375

Source: Socioeconomic Survey, August–December 2018

3.3.9. Average Annual Expenditure

67. The findings show that the annual average expenditure per household in the subproject area is INR84,803 out of which the major expenditure is incurred on food (41.1%). This is followed by expenditure on account of transportation (12.3%) and clothing (8%). Health and education account for 3.5% and 5.5% of the average expenditure respectively. On gas households spend about 6.1% of the total household expenditure. Details are given in Table 3.16.

Table 3.16: Average Annual Expenditure

SI No	Type of expenditure	Average Annual Expenditure (Rs.)	%
1	Food	34,892	41.1
2	Transportation/conveyance	10,433	12.3
3	Clothing	6,781	8.0
4	Health	2,960	3.5
5	Education	4,702	5.5
6	Interest payment on loans	1,434	1.7
7	Social functions/festival	3,426	4.0
8	Agriculture (such as seeds, hiring of farm implements etc.)	4,182	4.9
9	Minor consumer items (Soap, powder)	2,489	2.9
10	Electric Bill	2,410	2.8
11	House Maintenance	2,186	2.6

SI No	Type of expenditure	Average Annual Expenditure (Rs.)	%
12	Animal Husbandry	865	1.0
13	Gas	5,205	6.1
14	Others	2,838	3.3
	Grand total (1-14)	84,803	100.0

Source: Socioeconomic Survey, August–December 2018

3.3.10. Possession of Durable Goods

68. The commonly possessed durable goods among the surveyed households in the subproject area are mobile (96.9%), television (96.1%), and gas connection (94.5%). Majority of the surveyed households have bicycle (68.9%) and motor cycle/scooter (67%). Very few households have luxury items such as refrigerators (10.2%), computer/laptop (4%), washing machine (2.8%), and car (0.6%).

69. The survey also obtained information on use of the durable goods by gender. The findings show that items such as radio, mobile, television, and refrigerator is used by both men and women of the family. Goods such as bicycles, tractor, pump set with generator, and motor cycle/scooter are mainly used by men member of the family while washing machines and gas is mainly used by the women members of the family. Details are given in Table 3.17.

Table 3.17: Possession of durable goods

SI No	Particulars	% of HHs	User by %		
			Men	Women	Both
1	Radio	28.4	5.3	1.1	93.7
2	Mobile	96.9	2.5	1.2	96.3
3	Bicycle	68.9	90.0	1.5	8.5
4	Tractor	1.2	87.5	0.0	12.5
5	Pump set with generator	6.4	86.0	0.0	14.0
6	Television	96.1	0.5	0.2	99.4
7	L.P.G Connection/ Gas Cylinder	94.5	0.8	98.9	0.3
8	Computer/laptop	4.0	55.6	7.4	37.0
9	Refrigerator	10.2	0.0	2.9	97.1
10	Washing Machine	2.8	0.0	63.2	36.8
11	Motor cycle/Scooter	67.0	98.9	0.0	1.1
12	Car	0.6	75.0	0.0	25.0
13	Total Households		669		

Source: Socioeconomic Survey, August–December 2018

3.3.11. Household Indebtedness

70. Among the households in the subproject area, a small proportion (8.4%) of the households

has taken loan. Qualitative information from group discussion also supplements this trend. It was revealed during the consultation that people are not in the habit of taking loan unless and until it is of emergency. The main sources of taking loan are banks and SHGs. The interest rate charged by Bank varies from 3% to 9% depending on the type of bank and purpose of loans while SHGs charge 3% as interest for loan. The interest rate taken by private money lenders are in the range of 3% to 5%. Details are given in Table 3.18.

Table 3.18: Average Amount Taken from Different Sources and Interest Rate

Sl. No	Source	Number of Household	Average Amount Taken (INR)	Interest Rate
1	Bank	24	94,167	3% to 9%
2	Relatives	2	35,000	3%
3	Private money lender	8	1,15,000	3% to 5%
4	SHG	24	27,500	3%

Source: Socioeconomic Survey, August–December 2018

3.3.12. Benefits from schemes

71. The household survey collected gender disaggregated information regarding coverage of development schemes and financial inclusion. The finding shows that about 68.5% of households have benefitted under development schemes. Interestingly most of the benefits (91.5%) are availed by women members of the family. Qualitative information during consultation reveals that most of the women members got work under the MGNREGA scheme. Regarding the financial inclusion it was reported that almost all households (98.4%) have bank account. Majority (70.5%) of households have joint accounts while in about 18% households' men and women of the family have separate accounts. In 9.9% families only, men members have bank accounts. Details are given in Table 3.19.

Table 3.19: Coverage under development schemes

SI No	Particulars	% of HHs	Beneficiary by %			
			Men	Women	Both	Joint
1	HHs benefitted under development schemes	68.5	3.1	91.5	5.5	NA
2	Families having bank account	98.4	9.9	1.5	18.1	70.5
3	Total HHs	669				

Source: Socioeconomic Survey, August–December 2018

72. The survey collected information on coverage of social protection schemes such as social or health insurance in the subproject area. The finding shows that only 7% have social or health insurance schemes. Of the households having insurance schemes, in about 51% cases schemes mainly cover the men while in 44.7% cases the insurance covers both the men and women members. Details are given in Table 3.20.

Table 3.20: Insurance status

SI No	Particulars	% of Households	Beneficiary by %		
			Men	Women	Both
1	HHs having social/health insurance scheme	7.0	51.0	4.3	44.7
2	Total HHs	669			

Source: Socioeconomic Survey, August–December 2018

3.3.13. Major Illness

73. In the subproject area, about 7% of the households reported that their family member experienced major illness during the last one year. Qualitative information from the consultations underscores the fact that people in the area are usually healthy due to good food habits. The types of illness reported are of various types. Of the households reported major illness, non-communicable diseases such as diabetes and heart problem are reported by 31.9% households. Another 21.3% households reported eye problem. Details are given in Table 3.21.

Table 3.21: Type of Illness

SI No	Type of Disease/Illness	Number of Households	%
1	Heart problem	5	10.6
2	Diabetes	10	21.3
3	Eye problem	10	21.3
4	Cancer	2	4.3
5	Stomach problem	2	4.3
6	Kidney problem	2	4.3
7	TB	2	4.3
8	Intellectual disability	2	4.3
9	Leg fracture	2	4.3
10	Other diseases	10	21.3
	Total households reported illness	47	100.0

Source: Socioeconomic Survey, August–December 2018

3.3.14. Engagement of Women in Various Activities

74. Almost all the surveyed households (97.7%) reported that women are engaged in household work where they spend most of their time. A sizeable proportion of households reported that women are also engaged in cultivation (33.3%), agricultural labour (30.4%), non-agricultural labour (33.4%) and animal husbandry (13.4%). In non-agricultural labour women mostly do MGNREGA work. Details are given in Table 3.22.

Table 3.22: Type of Activities for Women

SI No	Activities	No. of Households	%
1	Cultivation	223	33.3
2	Trade & Business	19	2.8
3	Agricultural Labour	204	30.4
4	Non-Agricultural Labour	224	33.4
5	Small home-based enterprises run by women	6	0.8
6	Service	40	5.9
7	Household Work	654	97.7
8	Animal Husbandry	90	13.4
9	Diary/Poultry/Sheep rearing	24	3.6
10	Total HH	669	

Source: Socioeconomic Survey, August–December 2018

3.3.15. Women’s Voice in Decision Making

75. Regarding women’s say in decision making, almost all the surveyed households in the subproject area reported that women are actively involved in decision making on various aspects concerned to family such as health and education of children, financial matters, purchase of assets and every day activities of the family. Details are given in Table 3.23.

Table 3.23: Women’s Say in Decision Making

SI No	Issues	Number of Households	%
1	Financial matters	658	98.3
2	Education of child	666	99.5
3	Health care of child	666	99.5
4	Purchase of assets	658	98.3
5	Day to day activities	664	99.2
6	On social functions and marriages	667	99.7
7	Total HHs	669	

Source: Socioeconomic Survey, August–December 2018

3.3.16. Status on Electricity

76. All surveyed households (100%) in the sub project area are electrified. Details are given in Table 3.24.

Table 3.24: Status on Electrification

SI No	Particulars	Number of Households	%
1	Electrified Houses	669	100
2	Total HHs	669	

Source: Socioeconomic Survey, August–December 2018

77. The main source of electrification is government grid and electricity are supplied from the government grid. Electrification of the households has been done long time ago. As per the findings of the survey, households have been electrified for the last 35 years. The availability of electricity is not a problem as the average hours of availability of electricity is reported to be 21.5 hours in a day. Details are given in Table 3.25.

Table 3.25: Average Usage Pattern of Electricity

SI No	Particulars	Numbers
1	Average Years of Electrification	35
2	Average Hours of availability of electricity per day	21.5

Source: Socioeconomic Survey, August–December 2018

78. Households mainly use electricity for lighting purposes. As per the findings of survey almost all the households in the subproject area use the electricity for lighting purpose. None of the households except one use electricity for cooking purposes as almost all the households use gas for cooking purposes. There are two households who use electricity for pumping water for agricultural purposes. Details are given in Table 3.26.

Table 3.26: Purpose of Electricity Use

SI No	Purpose	Number of HHs	%
1	Lighting	666	99.6

2	Cooking	1	0.1
3	Pumping water for agriculture	2	0.3
4	Total HHs	669	

Source: Socioeconomic Survey, August–December 2018

79. Almost all the households (96.8%) are satisfied with the current electricity supply as almost all the time electricity is available to households.

3.3.17. Other Alternate Fuel Consumption

80. A very small proportion (3.1%) of households uses other non-electric energy sources as demand on such sources is very less due to reliable availability of electricity. About 2.1% of the households use kerosene/diesel for household activities. Use of battery (0.6%) and gas (0.4%) as non-electric energy sources is reported by very few households. Details are given in Table 3.27.

Table 3.27: Non-Electric Energy Sources

Sl. No	Source of Usage	Number of Households	%
1	Kerosene/diesel	14	2.1
2	Battery	4	0.6
3	Gas	3	0.4
4	Total households	669	

Source: Socioeconomic Survey, August–December 2018

3.4. Impact on Indigenous Peoples or Schedule Tribe

81. Government of India, under Article 342 of the Constitution, considers the following characteristics to define indigenous peoples [Scheduled Tribes (ST)]:

- (i) tribes' primitive traits;
- (ii) distinctive culture;
- (iii) shyness with the public at large;
- (iv) geographical isolation; and
- (v) social and economic backwardness before notifying them as a Scheduled Tribe.

82. Essentially, indigenous people have a social and cultural identity distinct from the 'mainstream' society that makes them vulnerable to being overlooked or marginalized in the development processes. STs, who have no modern means of subsistence, with distinctive culture and are characterized by socio-economic backwardness, could be identified as Indigenous Peoples. Indigenous people are also characterized by cultural continuity.

83. Constitution of India identifies schedule areas which are predominately inhabited by such people. The proposed Project and its components are located in the state of Tamil Nadu which has no schedule area as such. Also, land acquisition is not anticipated in the project except some temporary impacts on loss of crops in the transmission lines. Hence, no impact on indigenous population is envisaged in the project.

84. The Project being a transmission project includes two components such as substations and transmission lines. There is no compulsory land acquisition in the Project especially for the substations as it is based on negotiated settlement. Regarding the transmission lines, temporary

restriction to land during construction under the tower base and loss of crops/trees are foreseen. Transmission lines are usually planned in such a manner that it avoids settlement and habitat area. There is no physical displacement also. Therefore, the project will not cause any impact on indigenous people. The project area does not fall under any notified area as mentioned in the Constitution of India and the socio-economic sample survey recorded that there would be no scheduled tribe households. Positive Impacts are general in nature in terms of better reliability and efficiency in transmission system which does not have any immediate and direct impacts to the people in project area.

4. INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION

85. Public consultations were carried out during preparation of Draft compensation plan (CP) in the year 2018 along the route of transmission lines suggested by Anna University. The respective contractors undertook public consultations between January and March 2021 along the final alignments of the transmission lines to disseminate information about the project risks and benefits, to seek the views and opinions of the community regarding the project, proposed alignments and any implementation concerns. The detailed findings of public consultations conducted along the final route alignments have been presented in Annexure 4. There are three transmission lines which have undergone some alignment shift from Anna University suggested route. In these three lines social assessments was carried out by the respective contractors in 2021. The social assessment reports are given in Annexure 6 and it includes the findings of public consultations and gender consultations.

4.1. Consultations during preparation of draft compensation plan (CP)

86. As an integral part of the safeguards planning process, various stakeholders were consulted including the local people and communities during the preparation of the draft Compensation Plan and social due diligence. Informal consultations were also carried out at some of the district revenue offices and with the revenue authorities at the local level. It ensured that the affected people and other stakeholders are informed, consulted and allowed to participate actively in the process of project preparation and to be aware about the positive and negative impacts of the Project. The process of consultation will be continued during the detailed/final design and during implementation with various stakeholders such as affected people, concerned line department such as revenue, horticulture, agriculture departments and local administration.

4.2. Objective of Public Consultations

87. Following are the main objectives of the consultations:

- Make people aware about the project and its potential impacts with proposed mitigation measures.
- Choose the line alignment route in order to minimize adverse impacts.
- Understand the views of the people affected, with reference to loss of land, assets and compensation.
- Develop thorough coordination between all stakeholders for the successful implementation of the project.
- To increase awareness about the next steps relating to detailed design, exact tower pegging, losses and valuation etc.
- To increase awareness about the implementation schedule, compensation methods, grievance redress mechanism etc. and seeking views on continued participation.

4.3 Methods of Consultations

88. Various methods have been used during the stakeholder's consultations during the preparation of Compensation Plan. Methods used for public consultation and participation with concerned stakeholders are described in Table 4.1.

Table 4.1: Method of Consultations

Stakeholders	Purpose	Method
Officials at TANTRANSCO (Corporate Office) and at Project Site Offices	<ul style="list-style-type: none"> To seek their participation in the safeguards planning activities. To discuss about ADB's broad policy principles, eligibility and entitlements etc. 	<ul style="list-style-type: none"> Frequent individual meetings
Officials of Line Agencies such as Revenue and Forest at Project Level	<ul style="list-style-type: none"> To gather information about the land availability, critical issues etc. and the existing norms related to payment of compensation etc. 	<ul style="list-style-type: none"> Individual meetings and discussions
Local People/ Villagers/Likely Affected Persons	<ul style="list-style-type: none"> For information sharing about the project Seeking their views on the preliminary alignment and any concerns for further improvement Seeking their views on compensation and payment for various losses Seeking information on any scheduled tribe population living in the project area Discuss future plan of action such as detailed design, assessment of various losses etc. Discuss about the general Eligibility and Entitlement and Compensation. Discuss about Institutional setup and Grievance Redress Mechanism Seeking their participation during the project implementation 	<ul style="list-style-type: none"> Consultation meetings at various location/ villages along the transmission line routes and substations
Focused Group Discussions among the women in the Project Areas.	<ul style="list-style-type: none"> To prepare a gender assessment and to know about the general status of women To make the women aware about the project and potential impacts 	<ul style="list-style-type: none"> Focused Group Discussions

4.4. Public Consultations in the Project Area during preparation of draft RP

89. Public Consultations were carried out along the transmission line and substation locations by the safeguards team from August 2018 to December 2018. These activities were conducted at 56 locations through informal public meetings having a total 392 participants (364 male participants and 28 female participants). Summary details on the locations and number of participants are provided in Table 4.2 and the summary findings of the consultations are provided in Table 4.3. Findings of the consultations suggest that there is a mixed opinion about the proposed project where some people raise their concern about the potential loss, proposed mitigation measures such as compensation, restoration etc. and some people near Coimbatore area raised their reservations about the project. These are the initial level of consultations where peoples' views have been captured and the same can be taken as action agenda by the

TANTRANSCO and the contractor during the construction to handle these issues carefully. Peoples' reservations and concerns were clarified in terms of explaining the mitigations. They were informed that the consultation process will be continued.

Table 4.2: Locations and Participants (Public Consultations)

#	Name of the Transmission Lines	Number of Public Consultations	Total Male Participants	Total Female Participants	Participants (Grand Total)
1	765 kV double circuit line Virudhunagar - Coimbatore	21	144	14	158
2	400 kV double circuit line Virudhunagar – Kayathar	5	32	0	32
3	400 kV double circuit line in and out at Virudhunagar for Kamuthi to Thappagundu (proposed) line	Included in Virudhunagar-Coimbatore line because it is a LILO having only 5 km length			
4	400 kV double circuit line Ottapidaram - Udangudi	10	56	4	60
5	400 kV double circuit line Ottapidaram - Kamuthi	8	47	8	55
6	230 kV double circuit line in and out at Ottapidaram for Sipcot - Kavanoor line	4	26	0	26
7	230 kV double circuit line in and out at Ottapidaram for Sipcot - Savasapuram line	1	5	0	5
8	110 kV double circuit line in and out at Ottapidaram for Ottapidaram – Eppothumvendran	2	16	0	16
9	110 kV single circuit line Ottapidaram - Vijayapuri	5	38	2	40
10	110 kV double circuit line in and out at Ottapidaram for TTNAuto - T-off Sipcot line	0	0	0	0
Total		56	364	28	392

Table 4.3: Summary Findings of Public Consultations

Issues Discussed	People's Views and Perception
General perception about the project	Almost all the villagers reported that they were not aware about the proposed transmission line project. People in general felt that the project will help in increased power supply and transmission. Although it may not be directly beneficial to them as electricity is not currently a problem. At the same time most people during the consultation expressed that the proposed project will ensure more power supply to other remote areas of the region where availability of sufficient electricity is an issue.
Support of local people for the proposed project	<p>People from most of the villages agreed to provide conditional support to the proposed project. Most of the villagers believed there are other HT lines already in the periphery of the villages and one additional line will provide no such benefit to them. The majority during the consultation revealed that there are no such employment opportunities for them, and a good farm land is their only productive asset. Therefore, they need alternative employment opportunities from the government to strengthen their income.</p> <p>There are certain areas where the villagers are not in favour of the project. In Puliampulam, Gobalpuram villages of Madurai district; Kilangundal, Padiyaandi palayam, and savadi palayam villages of Tirupur district; Malaipatti and Sirukkulam villages of Virudhunagar; and Sivagananapuram</p>

Issues Discussed	People's Views and Perception
	village of Tuticorin the villagers are not happy with the proposed project as they are concerned that the project will disturb their valuable farming activities and crop production which is their only means of livelihood. However, it was explained to the people about the technical details of construction and its scheduling and also clarified that the impacts are not permanent in nature and construction schedule will follow off the crop season. These early consultations were based on the preliminary alignment, TANTRANSOCO will be taking into consideration affected persons views in finalising the alignment.
Critical issue and concern by the local people for the project	Most of the villagers during the consultation expressed that the installation of tower will affect the value of their land. In addition, agricultural and allied activities will also be affected during the construction stage. That people have only marginal farm land which is used for cultivation. However, marginal farmers are those who have less than 2.5 acres of land (equivalent to 1 hectare of land). Therefore, they think that the disruption in farming activities and loss of value of land will affect their earning and in the long term potentially the living standard of the household. As noted previously, this issue can be resolved once people are aware of the MoP guidelines with regards to compensation. It was clarified that there would be no permanent impact and therefore, there would be no permanent loss of income and livelihood. The MoP guidelines provides 10% of land value compensation under the RoW (although the entire RoW is not be affected entirely) and also 85% of land value compensation under the tower base. In addition to loss of standing crops and trees. Peoples's concern came out of the previous projects where these provisions were not made and MoP guidelines was not adopted or effective. The benefits of MoP guidelines were explained to make the people understand about the current compensation mechanism and entitlement which is far better than the previous projects
Criteria to be considered during project design, operation stage and construction	Most of the villagers suggested that the HT line should be at least 1km away from the village, and the height of the tower and line should be of maximum height. Some villagers highlighted that there are other existing lines also. They suggested that the HT line should cross one side of the village instead of different directions from the villages. In most villages people expressed that the tower should be installed on the corner of the field and not in the middle of the farm land. Few villagers along the proposed Virudhunagar to Coimbatore 765 KV suggested that the proposed line should follow the existing 400KV. Line. People from Narasavillai village of Tuticorin district mentioned that the main crop is banana and the land is mostly wetland. They felt that their farm lands need protection with maximum height for the tower and HT line.
Employment potential in the project	Almost all the villages expressed that local people want job/employment opportunity during implementation of the proposed project.
Compensation expected in case of loss of crops	Most of the people during consultation held that they want cash compensation at market rate for loss of crops and loss of land due to tower installation. Some villagers were of the view that as their cultivable land is very precious, and they do not have alternate means of livelihood they should be given maximum compensation as per the prevailing market rate. Most of the villagers felt that a member of each affected family should be given work or job during the construction stage. It was mentioned to the people that compensation would be as per the latest market value, however, there may be some opportunities for temporary jobs during construction.
Perceived loss	Most of the villages expressed the apprehension that due to overhead HT line and tower installation the value of their precious farmland will be severely reduced. Some of them pointed out that in case of emergency nobody will

Issues Discussed	People's Views and Perception
	<p>buy the land that has towers installed. For those household who depend on cultivation as the main source of income, the loss of precious farm land due to tower footing and disruption of agricultural activities will lead to reduction of crop yield and this will lead to decrease in household income. People in Valayapatti village in Virudhunagar district felt that due to HT line and several towers no factory and small industries will be coming to the area. Some villagers during the consultation also mentioned that though they have land near the road side it will be difficult for them to sell for establishment of factories after towers will be installed in the land. These early consultations were based on the preliminary alignment, TANTRANSOCO will be taking into consideration affected persons views in finalising the alignment. It was also clarified that the lines will pass mostly through the agricultural land where there is no such settlement to come up. Loss of land value under the tower base would be compensated up to 85% of land value and there would be no change of ownership. Therefore, the current policy will mitigate such impacts through compensation</p>
Safety issues	<p>Almost all the villagers felt that HT lines are not safe for human beings and other animals. The safety issues pointed out by the villagers included transmission line is not safe during rainy season; working in the agriculture field under the high-tension line is always risk and fearful; increased heat due to high tension line; the high sound from the HT line creates fear among the people; standing for a long time under the transmission line has harmful effect on the body.</p> <p>Certain villages in Tuticorin district mentioned that the storms always flow with high speed here which raises the danger of breakdown of the high voltage line any time. Some villagers during the consultation also underscored the fact that harmful radiations from HT line also affect the movement of animals and birds.</p> <p>During consultations it was explained that all the necessary mitigations will be taken in to account as per international safety standards, including those for noise.</p>

4.5. Gender Consultations during the preparation of draft RP

90. Consultations among women have been conducted through focused group discussions (FGDs) from August 2018 till December 2018 at 13 locations having a total of 93 women participants. Various locations are described in Table 4.4 and summary findings of the gender consultations are described in Table 4.5.

Table 4.4: Locations and Participants (Gender Consultations)

#	Name of Village	Number of women participants
1	Pasuvanthanai	10
2	Ottapidaram	6
3	Sillanathan/Tuticorin	6
4	Valasamuthiram	6
5	South Veerapandiyapuram	10
6	O Lakshmi Narayanpuram	8
7	Chandiragir	7
8	Ramnathpuram	5
9	Vagaikulam	8

#	Name of Village	Number of women participants
10	Gobalapuram	6
11	Pudhukkottai	6
12	Lalapuram	7
13	Ayyanaristru	8
Total		93

Table 4.5: Findings on Gender Consultations

Issues Discussed	Women's views and perception
Primary occupation of women	Women are primarily engaged in the household work. In addition, they assist the men in own cultivation during the agriculture season. Some of them also engage in seasonal agriculture labour. A sizeable number of women also perform non-agricultural labour such as MGNREGA work. In the villages near to Tuticorin, Virudhnagar some women members work in malls and nearby factories.
Natures of jobs mainly performed by the women members	In addition to the usual household work women are engaged in agricultural work, wage labour, working as sales girl in nearby malls and working in mat factories. In non-agricultural wage labour women mostly do MGNREGA work such as cleaning of shrubs, cleaning of water bodies etc. Collection of drinking water is also an everyday activity for women members.
Inequality in the receipt of wages, payments, for the work that the women perform	Almost all the women mentioned that they got less payment as compared to men on the pretext of not working hard and performing work that require less physical labour. For agricultural labour women get less than the amount received by the male members and the gap is in the range of Rs 50 to Rs 100. The difference in receipt of wages is also observed in non-agricultural work and construction work.
Role of women in the decision-making of the household	Almost all the women agreed that women have equal share along with the male counterpart regarding household decisions on important matters such as education, purchase of assets, and financial matters. Working women have more power on the use of their money but they take the decision after discussion with other family members. Some of the women mentioned that their view is prevailed on household decision making in matters such as education, and participation in social functions of the community.
Views and concerns about the project	Women had little awareness about the Project, and they are of the opinion that transmission line Project will not have any impact on them. However, they foresee that there could be some development work near the proposed new substation and its adjacent area where women may benefit out of those programs.

4.6. Consultations during the implementation

91. Public Consultations were carried out by respective contractors along the final alignment of transmission lines to disseminate information about the project risks and benefits and to seek the views and opinions of the community regarding the proposed alignment and any implementation concerns. The detailed findings of these public consultations have been presented in Annexure 4. In addition, one-to-one consultations are being carried out by TANTRANSCO and concerned contractors during the detailed survey, during assessment and determination of compensation values, during disbursement of compensation and during the construction.

92. There are three transmission lines (400 kV DC line Virudhunagar-Kayathar;765 kV DC line Virudhunagar-Coimbatore, Reach 2;110 kV DC line from LILO of Eppodhmvendran to Ottapidaram) which have undergone some alignment shift from Anna University suggested route. Informal public consultations and gender consultations were carried out by the contractors along the final alignments of these lines in early 2021 to disseminate information about the project risks and benefits and to seek the views and opinions of the community regarding the proposed route and any implementation concerns. The findings of the public consultations and gender consultations are mentioned in the social assessment reports (Refer Annexure 6).

93. The dissemination of project information and information on revised alignment to the affected people was made by one-to-one consultation through the contractor during the detailed survey due to COVID-19 restrictions on public meetings/consultations. After the identification of affected people through the village administrative officer, TANTRANSO officials (AE, AEE) undertook individual consultation with each affected people. During the one-to-one consultation, information on the project, compensation for affected land, trees and crops were given to affected landowner. Information regarding the provisions of G.O. (Ms) No. 86 (Revised guidelines for payment of compensation) was explained to the affected landowner during the consultation.

94. Prior to construction activities, TANTRANSO field engineer/contractor undertook individual consultation with each affected landowner and take the consent of affected landowner to undertake detailed assessment of affected land, tree and crops and again did the consultation during determination of agreed compensation values and at the time of disbursement of compensation cheque. Construction work on tower foundation was commenced after taking the signature of affected landowners in the Madras Electricity Department (MED) form. During the construction activities TANTRANSO field engineer/contractor hold discussions with affected people to discuss about the schedule of next stage of activities and other implementation issues. Consultation with the affected people will be continued throughout the construction stage.

95. The locations and number of participants of public consultations are given in Table 4.6. The summary of public consultations conducted along the final alignment of transmission lines are presented in Table 4.7.

Table 4.6: Locations and participants (Public Consultations along final alignments)

#	Name of the Transmission Lines	Number of Public Consultations	Participants (Grand Total)
1	765 kV DC line Virudhunagar – Coimbatore, Reach 1	9	71
2	765 kV DC line Virudhunagar – Coimbatore, Reach 2	18	116
3	765 kV DC line Virudhunagar – Coimbatore, Reach 3	5	34
4	400 kV DC line Virudhunagar - Kayathar	18	105
5	400 kV DC line Kamuthi – Ottapidaram&Udangudi – Ottapidaram	10	71
6	230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS	3	18
7	230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram	3	18
8	110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS	2	12
9	110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS	3	18

#	Name of the Transmission Lines	Number of Public Consultations	Participants (Grand Total)
10	110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS	3	16
Total		74	479

Table 4.7: Summary Findings of Public Consultations for each transmission line

765 kV DC line Virudhunagar – Coimbatore, Reach 1	
Issues Discussed	People's Views and Perception
General perception about the project	Most of the villagers during the consultation mentioned that they became aware of the project during the detailed survey. Some people said they were aware of the transmission line project because they saw tower erection work or learned about it from others. Some villagers felt that the project's power transmission is more useful for large-scale industries and companies in the country than for them. Only a few people believed that the project is important because it generates energy for the villagers.
Support of local people for the proposed project	In some of the villages people in general were not in favor of the project as the line passes over the agricultural land. In particular, the villagers of Vadamalakuruchi in Virudhunagar district have expressed conditional support for the project as they were worried that their farming activities and crop yield would be affected. It was explained to the participants during the consultation that contractor shall take the views of affected individuals into account and construction activity would take place in a time other than the crop season especially harvesting.
Critical issue and concern by the local people for the project	For majority of the villagers, land value depreciation is one of the key concerns. Some of the affected people expressed that owing to the existence of towers, selling land in the emergency will be difficult. A few participants felt that impact of the tower erection on small and marginal farmers may be a matter of concern. Other concerns included the difficulty to dig borewell near the tower for water supply, groundwater depletion, negative impacts on crop productivity, and the loss of fruit trees. It was informed to the affected people that in addition to providing compensation for the loss of standing crops and fruit trees, the project provides compensation of 100 percent of the land value within four legs of the tower. Some villagers have expressed their apprehensions about land acquisition for the project. However, they were informed that there will be no land acquisition or change in land ownership.
Criteria to be considered during project design, operation stage and construction	Some of the affected people felt that the route alignment should be designed in such a way that it would have minimum impact to the fruit bearing trees. For them fruit trees are a source of livelihood and cutting of fruit trees should be avoided. It was explained that the impact to the fruit trees would be minimum and the project provides suitable compensation at the market rate for the loss of fruit trees.
Employment potential in the project	Majority of the villagers felt that local people should be provided employment opportunities during project implementation. A few of them expressed the apprehension that workers from outside the state is being engaged for the construction activity of the towers and transmission lines. Hence employment

765 kV DC line Virudhunagar – Coimbatore, Reach 1	
Issues Discussed	People's Views and Perception
	potential to the local villagers is minimum.
Compensation expected in case of loss of crops	<p>Most of the affected people felt that they want cash compensation at the market rate land loss due to tower installation and stringing of lines. A few people expected the compensation amount to be paid as long as the tower is there on their land. Some people opined that twice the size of the affected land should be given to them as part of land compensation.</p> <p>It was explained to the people that the project provides compensation of 100 percent of the land value for restriction of land within four legs of the tower. There is no permanent loss of land.</p>
Perceived loss	Most of the villagers felt that apart from the loss of land there are production losses. In addition, the removal of fruit trees and other trees within tower base or RoW have an effect on their livelihood. It was clarified during the consultation that the project provides compensation to not only loss of land but also for loss of trees and standing crops during the construction.
Safety issues	Some of the villagers felt that HT lines are not safe for human beings. Some others mentioned that power transmission line is not safe during rainy season and expressed concern about electric shock during the rainy season. A few people suggested that a dedicated phone number may be given so that people can report in case of a safety emergency. During the consultation it was informed that all necessary mitigation measures would be taken in accordance with international safety standards.

765 kV DC line Virudhunagar – Coimbatore, Reach 2	
Issues Discussed	People's View and Perception
General Perception about the project	<ul style="list-style-type: none"> • Most of the villagers were well aware of the proposed T/L project. • People in general are feeling that the proposed T/L should not traverse agriculture land.
Support of local people for the proposed project	<ul style="list-style-type: none"> • The people of the villages welcome the project. However, they demand proper compensation for the land owners for the loss they would incur. • The project affected persons (PAPs) do not welcome the project due to the loss they would incur in terms of land, yield and income. • It was explained during the consultations that there would be no permanent impact on crop land and yield due to the project. In addition to providing compensation for the loss of standing crops and trees during construction, the landowner can continue the farming activities after the construction is over.
Critical issue and concern by the local people for the project	<ul style="list-style-type: none"> • Since most of the villagers are not aware about the exact location and RoW of the proposed T/L, people are expressing their concerns towards loss of their land and crop. It was explained during the consultations that such information will be shared with the affected people by the field official once the owner of the land is identified through Village Administrative Officer. • In a few villages the people have limited knowledge / awareness of the grievance redress mechanism to present their concerns to the concerned authority.
Criteria to be considered during project design,	<ul style="list-style-type: none"> • The alignment of the route should be done in such a way that the T/L passes through barren land rather than agriculture land.

operation stage and construction	<ul style="list-style-type: none"> It would be of great relief if the towers of the T/L are located in government land.
Employment potential due to project	<ul style="list-style-type: none"> The project is being executed by migrant workers from other states rather than from the local area. The T/L can lead to development of new industries and factories, but there is no guarantee that contractor would hire people from the villages along the line.
Compensation expected in case of loss of crops	<ul style="list-style-type: none"> Majority of the people expressed their concern on delay in receipt of compensation. It was explained that the process of payment of compensation is time consuming as assessment of affected land, tree and crop and other processes takes time. In a few villages it was shared that the local lawyers are instigating some affected people to demand higher compensation.
Perceived loss	<p>The following concerns were raised by the participants due to erection of towers in the agriculture land</p> <ul style="list-style-type: none"> Hindrance to the agriculture activities Land cannot be used for constructing houses or any other commercial buildings Land cannot be used for growing tall trees within the row Difficulty in ploughing the field <p>It was explained that 100% of the land value would be compensated for the restriction of land below the tower base and there would be no change of land ownership. The landowner can continue the farming activities after the construction is over.</p>
Health and Safety issues	<p>Some of the villagers mentioned the following health and safety issues:</p> <ul style="list-style-type: none"> The transmission line is unsafe during lightning or heavy rain. During rainy seasons, the current gets carried through the water droplets The power line could cause health concerns to farmers who spend most of the day in their land. <p>It was informed during the consultations that all the appropriate mitigation steps would be taken into account in compliance with international safety standards.</p>

765 kV DC line Virudhunagar – Coimbatore, Reach 3

Issues Discussed	People's View and Perception
General Perception about the project	Majority of the participants are not aware about the project in detail. People in Muthukalivalasu (in Kangeyam Taluk) and Parapalayam (in Oothukuli Taluk) village came to know about the project from the field staff. Majority of people believed that the project is unnecessary for their locality though it would enhance power supply of the state. Most people felt that the project would affect their precious cropland, trees and livelihood.
Support of local people for the proposed project	People in most of the villages are not in favor of the project. The people of Sadayapalayam village expressed conditional support and held that the project should not harm their croplands and crops. It was explained to the

	participants during the consultation that construction activity would take place in a time other than the cropping season.
Critical issue and concern by the local people for the project	Critical issues mentioned by majority of the participants include loss of crop lands, land value depreciation, risk of electromagnetic radiation from high voltage line, difficulty in selling the lands, restriction in undertaking agricultural activities. Some people pointed out that there would be discomfort due to noise from the transmission lines, and possibility of quick draining of battery levels of vehicles near the transmission line.
Criteria to be considered during project design, operation stage and construction	Majority of people suggested that the transmission line and towers should be on waste or barren lands. Some people suggested the option of underground transmission lines rather than overhead lines so that their precious crop land will be not affected.
Compensation expected in case of loss of crops	Some people held that there should be compensation at best rate to allow people to reclaim and maintain their livelihoods. Some people wanted compensation in the form of lands in a good location with enough water and electricity supply. People in one village (Parapalayam village) demanded that the towers be built away from their cropland and villages instead of providing any compensation.
Perceived loss	Most of the participants felt that there would be land loss, land value depreciation and a high likelihood of lands being unusable for any livelihood activities.
Health and Safety issues	Majority of the people during the consultation raised concerns about the safety of the transmission lines. It is mostly due to concerns about the transmission line's high-voltage supply and impact of electromagnetic radiation effects. Some of them mentioned about the possibility of quick draining of battery levels of vehicles near the line.

400 kV DC line Virudhunagar - Kayathar	
Issues Discussed	People's Views and Perception
General perception about the project	Almost all villagers indicated that they were aware of the transmission line project as they saw or heard the visit of officials during the recent detailed survey. In general, people thought that the project might help to boost the state's power supply and transmission, although it may not be of direct benefit to them. At the same time, the majority of the consultation indicated that the proposed project would ensure a greater supply of electricity to other remote regions of the country, where the availability of adequate electricity is a problem.

400 kV DC line Virudhunagar - Kayathar

Issues Discussed	People's Views and Perception
Support of local people for the proposed project	<p>People from most villages agreed to provide support for the project. During the implementation of the project, they also expressed their support, especially if villagers are given job opportunities during the tower erection activities. There are certain areas where the villagers are not in favour of the project. Such areas are Irukkankudi and K. Mettupatti in Virudhunagar district and Ilanthapatti, Koththali and Kadalaiyur in Thoothukudi district. They are not satisfied with the proposed project because they are worried that their farming activities and crop production, which is their only livelihood, will be affected by the project. It was explained to the people during the consultation that TANTRANSCO shall take the views of affected individuals into account and construction schedule will follow off the crop season.</p>
Critical issue and concern by the local people for the project	<p>During the consultation, the majority of the villagers claimed that the construction of the tower would affect the value of their property. Furthermore, during the construction stage, agricultural and allied operations would also be affected. Farming relies more on rainfall (rain-fed lands) rather than irrigation. Therefore, there was apprehension that the disruption of farming operations and the loss of land value would have an impact on their earnings and possibly the living conditions of the household in the long term. Fear of groundwater depletion is also a major concern shared by a few villagers because of experience from other projects such as wind turbines and solar panel installations that have been introduced in the region.</p> <p>It was explained to the villagers that there would be no permanent impact due to the project. It was informed that in addition to providing compensation for the loss of standing crops and trees, the project provides compensation of 20 percent of the land value under the RoW and also 100 percent of the land value compensation under the tower foundation. The fear of groundwater depletion is also discussed and informed that there will be no such effects due to tower installations in this project.</p>
Criteria to be considered during project design, operation stage and construction	<p>A few villagers expressed that the approach way to tower construction should not be destructive to their crops. Choosing of alternative routes which does not affect the crop lands is mostly preferred. It was explained that the damage of crops in the approach way would be minimum and suitable compensation will be paid for damaged crops.</p>
Employment potential in the project	<p>Most of the villagers suggested that local people should be involved in the job/employment opportunities during project implementation. A few of them expressed the apprehension that job opportunity may not be provided to the local villagers and it may be given to the existing workers of concerned engineering company responsible to construct the towers and transmission lines.</p>

400 kV DC line Virudhunagar - Kayathar	
Issues Discussed	People's Views and Perception
Compensation expected in case of loss of crops	During the consultation, most individuals expressed that they want cash compensation at the market rate level for crop loss and land loss due to tower installation and stringing. Some villagers held the opinion that they should be granted maximum compensation according to the prevailing market rate because their crop yield is valuable. It was explained that the impact on crop is minimal and the project provides compensation for the damaged crop at market rate.
Perceived loss	Most of the villagers expressed apprehension that the value of their precious farm land will be reduced due to overhead HT line and tower installation. Some of them noted that nobody would buy the land that has towers built in the event of an emergency requirement. For households that depend on agriculture as their primary source of income, the loss of valuable farmland due to the tower base and the disruption of agricultural activities would lead to a decrease in crop yield, resulting in a decrease in household income. It was explained during the consultation that 100% of the land value would be compensated for the restriction of land below the tower base and there would be no change of land ownership.
Safety issues	Most villagers have no problem regarding the safety. In some villages, villagers felt that HT lines are not safe for human beings. A few villagers pointed out that power transmission line is not safe during rainy season; working in the agriculture field under the HT line is often dangerous and fearful; increased heat due to high tension line; the high sound from the HT line generates fear among the people; standing for a long time under the transmission line has harmful effect on the body. It was informed to the people that appropriate mitigation steps would be taken in compliance with international safety standards.

400 kV DC line Kamuthi – Ottapidaram & Udangudi – Ottapidaram	
Issues Discussed	People's View and Perception
General Perception about the project	<ul style="list-style-type: none"> • All the villagers were aware of the proposed T/L project • Affected People felt that the proposed T/L should not pass through their agriculture land and losses must be minimised. • Villagers felt that detailed information on project should be available including the transmission line alignment. • Most of the villagers felt that the project won't benefit them directly as the line will not supply electricity to their village
Support of local people for the proposed project	<ul style="list-style-type: none"> • The villagers do not directly oppose the project. However, they expressed their concern that the passing of T/L line may affect the crop land of affected people. • Majority of the project affected persons (PAPs) do not welcome the project happily due to the loss they may incur in terms of land, crop yield and income. They expect adequate compensation of their losses due to the project. • It was explained during the consultations that there would be no permanent impact on crop land and yield due to the project. In addition

400 kV DC line Kamuthi – Ottapidaram & Udangudi – Ottapidaram	
Issues Discussed	People's View and Perception
	to providing compensation for restriction of land, the loss of standing crops and trees during construction, the landowner can continue the farming activities after the construction is over.
Critical issue and concern by the local people for the project	<ul style="list-style-type: none"> • Majority of the villagers had limited knowledge /information about the schedule of construction. It was explained that such information is shared with the project affected people one-by-one by the field staff of contractor before the construction. • Some affected landowner mentioned that during the excavation for laying the foundation of the towers the topsoil was not stored separately in spite of requests by the landowner. It was informed to affected people that the relevant contractors will be intimated about this issue and to take required measures to restore the top soil. • Some PAPs felt that during the construction their crop may be damaged due to movement of vehicle. It was explained during the consultations that priority will be given to do the construction activity during off the crop season. Also, compensation will be given for the loss of any standing crops during construction. • A few affected people held that work on tower foundation started on their land without intimating them about this. • Some affected people felt that the MED form used for assessment and valuation of affected land and other assets should be in local language along with English language.
Criteria to be considered during project design, operation stage and construction	<ul style="list-style-type: none"> • Most of the PAPs felt that the alignment of the route should be done in such a way that the T/L passes through barren land rather than agriculture land. • The affected landowners felt that tower erection and stringing work should be undertaken during the non-cropping season to avoid the loss to standing crops. • The villagers expressed their desire for the alignment to pass over the unused Government lands.
Employment potential due to project	<ul style="list-style-type: none"> • The project is being executed by migrant workers from other states rather than from Tamil Nadu. • Some villagers felt that the project can lead to development of new industries and factories, but there is no guarantee that contractor would hire people from the villages for construction work.
Compensation expected in case of loss of crops	<ul style="list-style-type: none"> • Majority of the affected people expressed their concern on delay in non-receipt of compensation. It was explained during the consultations that the process of payment of compensation is time consuming as assessment of affected land, tree and crop and other processes takes time. • Some affected people held that the estimation of compensation amount for affected land should be higher. It was explained that the estimation of compensation for land follows the guidelines of Government Order no. 86.
Perceived loss	<p>The following concerns were raised by the PAPs due to erection of towers in the agriculture land</p> <ul style="list-style-type: none"> • Hindrance to the agriculture activities • Land cannot be used for growing tall trees under the line • Difficulty in ploughing the field with tractors

400 kV DC line Kamuthi – Ottapidaram & Udangudi – Ottapidaram	
Issues Discussed	People's View and Perception
	It was explained that 100% of the land value would be compensated for the restriction of land below the tower base and there would be no change of land ownership. The landowner can continue the farming activities after the construction is over.
Health and Safety issues	<p>Some of the villagers mentioned the following health and safety issues:</p> <ul style="list-style-type: none"> • The transmission line is unsafe during lightning or heavy rain. • During rainy seasons, the current gets carried through the water droplets • The power line could cause health concerns to farmers who spend most of the day in their land. • There were reports of tractors experiencing a rapid battery drain while being parked under the transmission towers. <p>It was informed during the consultations that all the appropriate mitigation steps would be taken into account in compliance with international safety standards.</p>

230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS	
Issues Discussed	People's Views and Perception
General perception about the project	<ul style="list-style-type: none"> ▪ Majority are unaware about the project ▪ Some believed that the project should not cause any inconvenience to the villager. ▪ Some felt project will help improve the state's power supply.
Support of local people for the proposed project	<ul style="list-style-type: none"> ▪ Majority expressed a positive support towards the project. ▪ Some in Perianatham village expressed conditional support
Critical issue and concern by the local people for the project	<ul style="list-style-type: none"> ▪ Loss of crops and their production, ▪ Depreciation of land value ▪ Passing of the transmission line route near their villages.
Criteria to be considered during project design, operation stage and construction	<ul style="list-style-type: none"> ▪ The route be diverted through the barren lands to avoid crop damage. ▪ Careful implementation in order to prevent damage to their crops
Compensation expected in case of loss of crops	<ul style="list-style-type: none"> ▪ Majority expects cash compensation at the best market rate. ▪ A few people wanted the rerouting of line instead of compensation
Perceived loss	<ul style="list-style-type: none"> ▪ Crop disruption ▪ Reduced crop production ▪ Land value depreciation
Safety issues	<ul style="list-style-type: none"> ▪ Some expressed no concerns about safety. ▪ Some expressed impacts of electromagnetic field (EMF) radiation from the line ▪ Some feared electric shocks in waterlogged areas (Perianatham village)

230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram	
Issues Discussed	People's Views and Perception
General perception about the project	<ul style="list-style-type: none"> ▪ Majority are unaware about the project ▪ Some believed that the project is unnecessary for local interest ▪ Some felt project will help increase in power supply

230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram

Issues Discussed	People's Views and Perception
Support of local people for the proposed project	<ul style="list-style-type: none"> ▪ Majority expressed no support as it will affect their crop land. ▪ Villagers of M. Subramaniapuram were in favour of the project.
Critical issue and concern by the local people for the project	<ul style="list-style-type: none"> ▪ Loss of crops and their production ▪ Depreciation of land value ▪ The transmission line passes near their villages.
Criteria to be considered during project design, operation stage and construction	<ul style="list-style-type: none"> ▪ Changing the route or taking extra precautions to avoid damaging the crops
Compensation expected in case of loss of crops	<ul style="list-style-type: none"> ▪ Majority expects cash compensation at the best market rate. ▪ People in Sindalakattai village does not expect compensation and instead wants the rerouting of line
Perceived loss	<ul style="list-style-type: none"> ▪ Land loss, crop damage, ▪ Crop productivity reduction ▪ Land value depreciation
Safety issues	<ul style="list-style-type: none"> ▪ For majority no such safety issues ▪ Some have no idea on the impact of transmission line

110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS

Issues Discussed	People's Views and Perception
General perception about the project	<ul style="list-style-type: none"> ▪ Majority have no previous knowledge of the project ▪ Majority thought that there will be no direct benefit to the village ▪ Some held that the project would enhance the power production in the State.
Support of local people for the proposed project	<ul style="list-style-type: none"> ▪ Majority expressed a positive support towards the project. ▪ Some of them expressed conditional support
Critical issue and concern by the local people for the project	<ul style="list-style-type: none"> ▪ Land value depreciation ▪ Effect on cropland
Criteria to be considered during project design, operation stage and construction	<ul style="list-style-type: none"> ▪ Some villagers opined for routing the transmission line under the ground
Compensation expected in case of loss of crops	<ul style="list-style-type: none"> ▪ Some villagers are undecided about the mode of compensation. ▪ Some people expect monetary compensation at market value
Perceived loss	<ul style="list-style-type: none"> ▪ Losses of cropland and crop productivity ▪ Land value depreciation
Safety issues	<ul style="list-style-type: none"> ▪ For majority no such safety issues ▪ Some have no idea on the safety issue

110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS

Issues Discussed	People's Views and Perception
General perception about the project	<ul style="list-style-type: none"> ▪ Majority had no previous knowledge of the project

110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS	
Issues Discussed	People's Views and Perception
	<ul style="list-style-type: none"> ▪ Majority believed that the project is unnecessary and of no benefit to the villager. ▪ Some felt project would bring prosperity to the state.
Support of local people for the proposed project	<ul style="list-style-type: none"> ▪ Majority expressed opposition to the project as it would affect their precious crop land. ▪ The residents of Thethampatti village provided support
Critical issue and concern by the local people for the project	<ul style="list-style-type: none"> ▪ Land value depreciation ▪ Impacts on crops and agricultural lands ▪ land value depreciation and fear of land being unusable
Criteria to be considered during project design, operation stage and construction	<ul style="list-style-type: none"> ▪ The route be redirected through the barren lands to avoid crop disruption
Compensation expected in case of loss of crops	<ul style="list-style-type: none"> ▪ Majority people wanted the rerouting of line instead of any compensation for loss of crop land ▪ Some expects cash compensation at the best rate.
Perceived loss	<ul style="list-style-type: none"> ▪ Crop losses ▪ Reduced crop production ▪ Land value depreciation
Safety issues	<ul style="list-style-type: none"> ▪ Most of the villagers raised concerns about the transmission line's safety. ▪ Some expressed impacts of electromagnetic field (EMF) radiation from the line.

110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS	
Issues Discussed	People's Views and Perception
General perception about the project	<ul style="list-style-type: none"> ▪ Majority people are unaware about the project ▪ Majority believed that the project would not provide any direct benefit to the villagers. ▪ Some felt project will help improve the state's power supply.
Support of local people for the proposed project	<ul style="list-style-type: none"> ▪ Majority expressed support towards the project. ▪ Some villagers expressed conditional support ▪ Some in Lakshmipuram village are not in favour of the project as it would affect their crop and land.
Critical issue and concern by the local people for the project	<ul style="list-style-type: none"> ▪ Loss of crops and their production, ▪ Depreciation of land value ▪ Land value depreciation
Criteria to be considered during project design, operation stage and construction	<ul style="list-style-type: none"> ▪ Some of them have no understanding of project implementation ▪ Some of them suggested careful implementation in order to prevent damage to their crops
Compensation expected in case of loss of crops	<ul style="list-style-type: none"> ▪ Most of the people during the consultation expressed that there should be cash compensation at the best market rate.

110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS	
Issues Discussed	People's Views and Perception
Perceived loss	<ul style="list-style-type: none"> ▪ Loss of valuable land ▪ Reduced crop production ▪ Land value depreciation
Safety issues	<ul style="list-style-type: none"> ▪ Some expressed no concerns about safety of the line. ▪ Some felt that there are impacts of electromagnetic field (EMF) radiation from the line.

4.7. Disclosure

96. In order to avail broad support from the affected people along the transmission line corridor for smooth implementation of the project, TANTRANSCO through the contractors disseminated project information through public consultations and one-to-one consultation to affected persons.

97. The entitlement matrix of the updated compensation plan shall be made available at the project site office of TANTRANSCO inter alia site office of the contractor for each package including disclosure in newspaper as appropriate. TANTRANSCO disclosed the construction schedule to affected people during one-to-one consultation in the relevant stretches of the transmission line before the commencement of construction works.

98. The updated Compensation Plan will be made available at the field offices of TANTRANSCO and project site office of contractors. The updated Compensation Plan, after the approval of ADB, will be disclosed in ADB's website and in TANTRANSCO's website. Subsequently, the final compensation plan will also be disclosed in ADB's website and in TANTRANSCO's website.

5. GRIEVANCE REDRESS MECHANISM

5.1 Need of the GRM

99. Grievance Redress Mechanism (GRM) is an integral and important mechanism for addressing/resolving the concerns and grievances of project affected people. The grievances may include concerns of affected people arising out of implementation of the project, implementation of the Compensation Plan for resettlement impacts as well as adverse environmental impacts. The Grievance Redressal Committee (GRC) is expected to resolve the concerns and grievances of the affected people during the project cycle.

100. The GRM should not impede access to the country's judicial or administrative remedies. APs can approach the court of law at any time and independent of the Project's grievance redress process. This includes ADB's Accountability Mechanism whereby people adversely affected by ADB-financed projects can express their grievances, seek solutions and report alleged violations of ADB's operational policies and procedures, including safeguard policies.

101. The GRM will not deal with matters pending in a court of law. TANTRANSCO will ensure that the APs and the line agencies that participate in project activities understand the role and functions of GRM of the project in resolving problems and grievances pertaining to land selection for tower base, availing the Right of Way for stringing and payment compensation for the losses. All the cost related to GRM will be funded by the TANTRANSCO.

5.2 Establishment of GRM

102. The GRM is established by TANTRANSCO in June 2020. For the smooth operation of the GRM and GRCs an operational guideline on functioning of GRM (GRC) has been prepared in consultation with TANTRANSCO which describes the procedures and mechanism of functioning of GRCs. The structure and mechanism of functioning of GRCs mentioned in the operational guideline is based in response to implementation experience and reflects a revised GRC membership and process that is designed to better reflect social norms and community leadership preferences. The GRM consists of GRCs at two levels. The first level is handled by a GRC established at the General Construction Circle (GCC) level. The second level GRC is established at the project level and is headed by the Chief Engineer (Trichy).

5.3 Scope of Grievance Redress Mechanism

103. The scope of the GRM is:

- To examine all kinds of concerns or grievances arising out of implementation of the project, including concerns relating to the resettlement compensation, environmental concerns or adverse project impacts, and to resolve such grievances in a transparent manner.
- GRC will not deal with matters pending in the courts of law.

- For the GRM, only members of GRC, affected people and/or representatives of affected people will be allowed to participate in the meetings and consultations for grievance redressal.⁷
- Decision of the GRC will be communicated to the aggrieved in writing/E-MAIL.

5.4 Informal Resolution of Grievances

104. Grievances be initially and informally handled at the site-level. The site level consultation with potential affected parties, TANTRANSCO and contractor can take place in an informal setting and no written records are required to be maintained. If the affected person is not satisfied with the remedial measures proposed by the contractor, he/she can make a formal representation to the first level GRM. The complaint can relate to either compensation payment or environmental issues.

105. For any urgent matter, in particular emergency and health and safety issues, the contractor will take note of the grievance/complaint and get immediately in contact with the appropriate TANTRANSCO officials. Short-term issues (e.g., dust, noise, leaks, inappropriate behaviour, conflict, etc.) may be corrected immediately, by the contractor. In case of impending damage to structures, productive assets, flora or fauna, or physical cultural resources, the contractor is required to take remedial action in consultation with TANTRANSCO supervising engineer. TANTRANSCO will make a record of the issues raised and remedial measures taken.

5.5 First (GCC) Level GRC

106. If grievances cannot be resolved informally at site-level, the formal first level of GRM will be triggered. They will be sorted by the respective Superintending Engineer/GCC for their eligibility, level of urgency and by nature (suggestions or comments, grievances/complaints related to adverse impacts of the project on an individual or group, violations of law, etc.). The respective Superintending Engineer/GCC will send a formal reply to the complainant within 10 working days of the receipt of the grievance/complaint, to acknowledge receipt, provide the complaint's registration number, and set up the GRC meeting.

107. Most of the concerns and grievances of project affected people is expected to be addressed at the GCC level since TANTRANSCO officials at this level looks after the implementation of the project. At the first level the concerns and grievances will be addressed at the GCC level. The first level GRC involves TANTRANSCO General Construction Circle (GCC) officials. i.e., GCC Madurai and GCC Coimbatore. The members of the GRC at GCC level are: Superintending Engineer in respective GCC and a contractor's representative. The Executive Engineer and/or Assistant Executive Engineer in respective GCC will help the Superintending Engineer in addressing the grievances of affected people at this level. During the grievance redressal, the affected people can invite an elected representative of village panchayat/urban ward⁸ from the his/her village/urban ward to ensure that the interest of the affected people is duly

⁷Informal resolution of grievances before entry into the GRM and all other forms of stakeholder consultation and participation are governed by applicable provisions in the project Initial Environmental Examination and Resettlement Plan.

⁸In Tamil Nadu, village panchayat is the first level of local governance in the rural area and urban ward of City/Municipality/Town forms the first level of local governance in urban area. Under the Tamil Nadu Panchayats Act, 1994, the President of the village panchayat is the elected representative of the village panchayat. Similarly, as per the amended Tamil Nadu District Municipalities Act, 1920, the ward Councillor is the elected representative of the ward of a Municipal Corporation/ Municipality/Town.

protected as per the extant compensation notification issued as per relevant Government Order.

108. The aggrieved will be informed that participation in the GRM does not limit their access to other forms of recourse, including through the legal system or raising concerns directly to ADB. However, the aggrieved should be encouraged to first attempt to resolve their complaints through the project GRM before addressing their concerns to ADB.

109. A complaint to the GCC (first) level can come from the following sources:

- Directly from the project affected people that belongs to the jurisdiction of the respective GCC.
- Complaints of affected people made to the site level official i.e., Executive Engineer, Assistant Executive Engineer, Assistant Engineer.
- Complaints of affected people made to Chief Engineer/Transmission Projects-II/Trichy or TANTRANSCO head quarter and referred to first level GRC (GCC) by second level GRC.

110. After the aggrieved AP formally lodge the grievance at GRC in GCC, the Superintending Engineer will assign suitable TANTRANSCO official to contact the petitioner for an amicable solution of the grievance.

5.5.1 Recording of complaint and grievance redress at GCC level

111. The respective Superintending Engineer/GCC will record the complaint in a complaint database. It is suggested that the respective Superintending Engineer/GCC can designate appropriate official for record keeping and maintenance of the complaint database. Details of all meetings and inspections will be documented; minutes will be signed by all members of the GRC and annexed to the grievance file.

112. A joint inspection be done by the relevant TANTRANSCO official with the presence of the petitioner or nominated representative of the petitioner. If the aggrieved AP wish, he/she can invite a representative of the village/urban ward to the joint inspection or any other consultation. Once the grievance is addressed, an action taken report (ATR) will be prepared by the GCC. Wherever possible it is suggested to take the signature of petitioner in the ATR as a proof for the future. The grievance redress at this stage shall be completed within 4 weeks of the complaint of the petitioner.

113. If the aggrieved party is unsatisfied with the decision at the GCC level or in case GCC Madurai/ Coimbatore is unable to provide a resolution at their level, the respective Superintending Engineer of the GCC will forward the case to the Chairman of the GRC (project level GRC) i.e., Chairman of GRC for further action. The respective Superintending Engineer of GCC will also forward all the documents and records of that particular case to the Chairman of the GRC. Alternatively, the affected person can also submit the case to second level GRC at project level headed by Chief Engineer Trichy if he/she is not satisfied with the redress provided by the first level GRC.

5.6 Second (Project) Level GRC

114. The second level GRC is at project level. The GRC at project level will be the appellate authority and will be responsible to address the unresolved complaints from the GCC (first) level. The members of the GRC at project level consist of Chief Engineer/Transmission Projects-II/Trichy; Chief Financial Controller/TANTRANSCO; and Superintending Engineer/Civil-I/Transmission. Acting as the Chairman of GRC, the Chief Engineer/Transmission Projects-

II/Trichy will review the complaints coming directly to him from any other sources (ADB, affected people, TANTRASCO head quarter) and will assign the complaints to the relevant GCC for the redressal. In case it is not addressed at first and second level GRC, the second level GRC can refer the matter to the District Magistrate.

115. A complaint to the GRC at project level may originate from sources inter alia the following:
- Directly from the project affected people
 - Unresolved complaints of affected people from respective GCC level
 - Complaints of affected people made to ADB

5.6.1 Recording of complaint and grievance redress at project level

116. A designated person in the office of Chief Engineer/Transmission Projects-II/Trichy will record the complaint in a complaint database. The records of all complaints, i.e., direct complaint from affected people, unresolved complaints from GCC level, and complaints forwarded from ADB will be recorded in the database. It is suggested that the Chief Engineer/Transmission Projects-II/Trichy can designate an official for record keeping and maintenance of the complaint database.

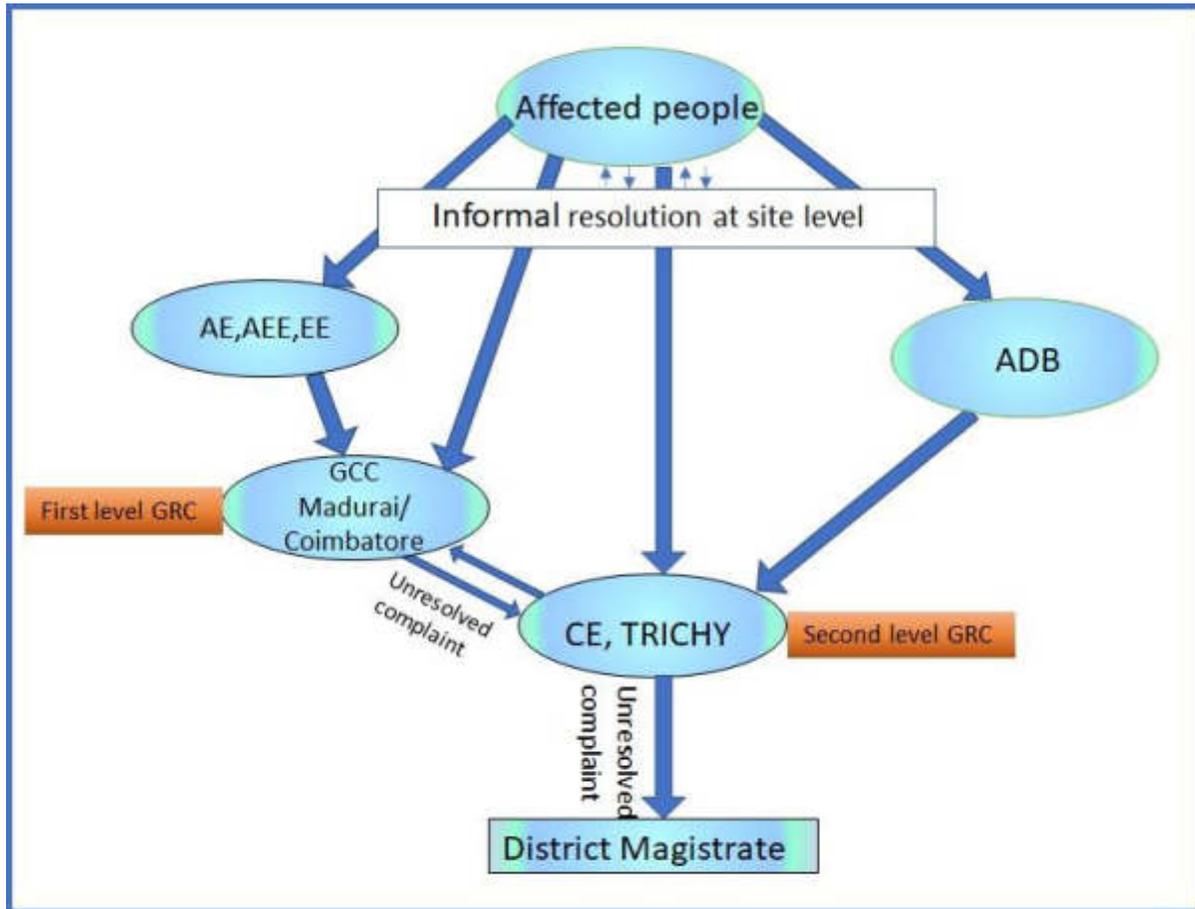
117. The GRC Chairman will review the complaints coming to him from other sources (directly from affected people, ADB) and will assign the complaints to the relevant GCC for the redressal. The process of grievance redressal will be same as mentioned in the first level GRC (GCC level) process above.

118. With regard to the unresolved complaints coming from the first level GRC, the GRC Chairman will review all incoming complaints and associated documents and records and will constitute the GRC panel for redressal. The affected people (petitioner) will be contacted by the office of Chief Engineer and an amicable solution of the grievance of the affected people will be made. If needed, the committee Chairman will conduct an inspection or consultation at the site of the affected party by a TANTRASCO official assigned for the purpose. The aggrieved AP will again be invited to nominate a representative of his/her village /urban ward to the joint inspection or any other consultation.

119. Once the grievance is addressed, an action taken report (ATR) will be prepared by the GRC Chairman. The grievance redressal shall be completed within 4 weeks of receiving the unresolved complaint from the respective GCC. In case the affected person is not satisfied with the solution provided by GRC at project level, he/she can make a complaint to the concerned District Magistrate.

120. The avenues for grievance handling for affected people are depicted in Figure 5.1 below.

Figure 5.1: Avenues for grievance handling for affected people



5.7 GRC Record Keeping and Updating of Complaint Database

121. Records of all complaint received, including address and contact details of the complainants, survey no., dates of the complaints received, details of the complaint, action taken from TANTRANSCO, and status of the complaint will be recorded at GCC level and project level and should ideally be shared between the two levels. The complaint database at GCC level and project level need to be updated at regular intervals. A summary of complaints received and the outcome of grievance redressal will be included in the semi-annual safeguard monitoring reports submitted to ADB.

122. All costs incurred in GRC meetings, consultations, communication and reporting/information dissemination will be borne by TANTRANSCO. Cost estimates for grievance redress are included in cost estimates in the Compensation Plan under the line item of administrative cost. The complainants shall not be charged any fee for the service.

5.8 Disclosure of GRC

123. For the efficient functioning of the GRM, information dissemination about the existence of such GRCs shall be done by TANTRANSCO. The information on GRCs in the form of posters

and banners should be displayed at appropriate places along the transmission line corridors and other places as deemed appropriate by the TANTRANSCO official. This will ensure that affected people are aware about the existence of a GRM for the redressal of grievances, if any.

124. The disclosure of information should include the email and contact number of relevant GRC members and should contain instructions on how to make a grievance. The disclosure should also have information that if the aggrieved AP wish, he/she can invite a representative of the village panchayat/urban ward to the joint inspection or any other consultation.

125. For the transmission line corridor in the jurisdiction of GCC Madurai, the disclosure information should contain the official email address, contact number and office address of Superintending Engineer Madurai. Similarly, for the transmission line corridor in the jurisdiction of GCC Coimbatore, the disclosure information should have the official email address, contact number and office address of Superintending Engineer Coimbatore. The above information should be available in both English and Tamil language.

6. POLICY AND LEGAL FRAMEWORK

6.1. Overview

126. The compensation Plan is based on national policies and laws, relevant G.O. of Government of Tamil Nadu and ADB's Safeguard Policy Statement of 2009. In India, compensation for land acquisition and resettlement assistance for project affected persons/families is directed by the National law - "The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (RFCTLARR)". There is no land acquisition for the transmission line. Therefore, the RFCTLAAR will not be applicable to this Project. The relevant national laws applicable to this project are: (i) The Electricity Act, 2003; (ii) The Indian Telegraph Act, 1885; and (iii) Ministry of Power's (MoP) guideline related to compensation for transmission line. The compensation principles adopted for this project shall comply with applicable laws and regulations of the Government of India/ State Govt, as well as with the involuntary resettlement safeguard policy principles of the ADB's Safeguard Policy Statement (2009). Gap analysis between ADB's SPS, 2009 requirements and national/state regulation is described in Table 6.1 with suggestive actions for TANTRANSCO to bridge the gap for the Project.

6.2. ADB Safeguard Policy Statement

127. ADB has adopted the SPS in 2009 including safeguard requirements for environment, involuntary resettlement and indigenous peoples. The objective of the involuntary resettlement policy is to avoid involuntary resettlement wherever possible; to minimize involuntary resettlement by exploring project and design alternatives; to enhance, or at least restore, the livelihoods of all displaced persons in real terms relative to pre-project levels; and to improve the standards of living of the displaced poor and other vulnerable groups.

128. The involuntary resettlement safeguards cover physical displacement (relocation, loss of residential land, or loss of shelter) and economic displacement (loss of land, assets, access to assets, income sources, or means of livelihoods) as a result of (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or on access to legally designated parks and protected areas. It covers them whether such losses and involuntary restrictions are full or partial, permanent or temporary. Followings are the basic policy principle of ADB SPS, 2009:

- Identification of past, present, and future involuntary resettlement impacts and risks and determination of the scope of resettlement planning;
- Carrying out meaningful consultations with affected persons, host communities, and concerned non-government organizations;
- Improvement or at least restoration of the livelihoods of all displaced persons;
- Ensuring physically and economically displaced persons with needed assistance;
- Improvement of the standards of living of the displaced poor and other vulnerable groups;
- Development of procedures in a transparent, consistent, and equitable manner if land acquisition is through negotiated settlement;
- Ensuring that displaced persons without titles to land or any recognizable legal rights to land are eligible for resettlement assistance and compensation for loss of non-land assets;

- Preparation of a resettlement plan elaborating on displaced persons' entitlements, the income and livelihood restoration strategy, institutional arrangements, monitoring and reporting framework, budget, and time-bound implementation schedule;
- Disclosure of resettlement plan, including documentation of the consultation process in a timely manner to affected persons and other stakeholders;
- Execution of involuntary resettlement as part of a development project or program;
- Payment of compensation and provision of other resettlement entitlements before physical or economic displacement; and
- Monitoring and assessment of resettlement outcomes, their impacts on the standards of living of displaced persons

129. The project will recognize three types of displaced/affected persons: (i) persons with formal legal rights to land lost in its entirety or in part; (ii) persons who lost the land they occupy in its entirety or in part who have no formal legal rights to such land, but who have claims to such lands that are recognized or recognizable under national laws; and (iii) persons who lost the land they occupy in its entirety or in part who have neither formal legal rights nor recognized or recognizable claims to such land. The involuntary resettlement requirements apply to all three types of displaced/affected persons.

6.3. Statutory Requirements

6.3.1 The Electricity Act, 2003, Part-VIII, Section 67 & 68

Quote:

Section 67 (3-5):

- (3) A licensee shall, in exercise of any of the powers conferred by or under this section and the rules made thereunder, cause as little damage, detriment and inconvenience as may be, and shall make full compensation for any damage, detriment or inconvenience caused by him or by any one employed by him.*
- (4) Where any difference or dispute [including amount of compensation under sub-section (3)] arises under this section, the matter shall be determined by the Appropriate Commission.*
- (5) The Appropriate Commission, while determining any difference or dispute arising under this section in addition to any compensation under sub-section (3), may impose a penalty not exceeding the amount of compensation payable under that sub-section.*

Section 68 (5 & 6):

- (5) Where any **tree standing or lying near an overhead line or where any structure or other object which has been placed or has fallen near an overhead line** subsequent to the placing of such line, interrupts or interferes with, or is likely to interrupt or interfere with, the conveyance or transmission of electricity or to interrupt or interfere with, the conveyance or transmission of electricity or the accessibility of any works, an Executive Magistrate or authority specified by the Appropriate Government may, on the application of the licensee, cause the tree, structure or object to be removed or otherwise dealt with as he or it thinks fit.*
- (6) When disposing of an application under sub-section (5), an Executive Magistrate or authority specified under that sub-section shall, in the case of any tree in existence before the placing*

of the overhead line, award to the person interested in the tree such compensation as he thinks reasonable, and such person may recover the same from the licensee.

Explanation. - For purposes of this section, the expression "tree" shall be deemed to include any shrub, hedge, jungle growth or other plant.

Unquote.

130. The Electricity Act (2003) as amended in 2007 has also been taken into consideration. Section 67 and 68 of Part-VIII and Section 164 of part-XVII are relevant. The Electricity Act makes provision for payment of compensation for acquiring land and refers that land will be acquired as per LAA, 1984⁹. This is primarily relevant to the substations. The Electricity Act has the provision for issuing notification to all the concerned villages and people prior to any construction activities. As far as the trees or crops or structure near the overhead line is concerned, it does not say directly about payment of compensation, however, if the competent authority thinks deem fit, then compensation may be paid.

6.3.2 The Indian Telegraph Act, 1885, Part-III, Section 10

Quote:

Section 10 – *The telegraph authority may, from time to time, place and maintain a telegraph line under, over, along, or across, and posts in or upon any immovable property, Provided that*

- a) the telegraph authority shall not exercise the powers conferred by this section except for the purposes of a telegraph established or maintained by the [Central Government], or to be so established or maintained;*
- b) the [Central Government] shall not acquire any right other than that of user only in the property under, over, along, across in or upon which the telegraph authority places any telegraph line or post; and*
- c) except as hereinafter provided, the telegraph authority shall not exercise those powers in respect of any property vested in or under the control or management of any local authority, without the permission of that authority; and*
- d) in the exercise of the powers conferred by this section, the telegraph authority shall do as little damage as possible, and, when it has exercised those powers in respect of any property other than that referred to in clause (c), shall pay full compensation to all persons interested in any damage sustained by them by reason of the exercise of those powers.*

Unquote.

Section 16 of the Indian Telegraph Act, 1885 which stipulates as under:

16. Exercise of powers conferred by section 10, and disputes as to compensation, in case of property other than that of a local authority:

- (1) If the exercise of the powers mentioned in Section 10 in respect of property referred to in clause (d) of that section is resisted or obstructed, the District Magistrate may, in his discretion, order that the telegraph authority shall be permitted to exercise them.*

⁹ This still refers to LAA, 1894 because the Electricity Act has not been amended after 2013, therefore, reference to RFCT in LARR, 2013, has not been made.

(2) *If, after the making of an order under sub section (1), any person resists the exercise of those powers, or, having control over the property, does not give all facilities for this being exercised, he shall be deemed to have committed an offence under section 188 of the Indian Penal Code (45 of 1860).*

131. Indian Telegraph Act (1885) has also been taken in to consideration for its relevant applicability. Part-III of the Act¹⁰ is applicable for transmission and distribution projects. The Indian Telegraph Act does not have any provision for permanent land acquisition except for payment of compensation for construction of lines and towers as temporary impacts. The Indian Telegraph Act, 1885 is usually followed, which does not have any provision of land acquisition for construction of transmission pillars and lines. The act exercises the power to remove any trees interrupting the transmission lines, however, subsection of section 18 of the Act provides the opportunity for compensation for cutting the trees if the tree is in existence before the telegraph line was placed. The telegraph authority may, from time to time, place and maintain a telegraphic line under, over, along or across, and post in or upon, any immovable property provided that the telegraph authority shall not exercise the powers conferred by this section except for the purpose of a telegraph established or maintained by the Central Government, or to be so established or maintained. If any tree standing or lying near a telegraph line interrupts, or is likely to interrupt, telegraphic communication, a Magistrate of the first or second class may, on the application of the telegraph authority, cause the tree to be removed or dealt with in such other way as he deems fit. When disposing of an application under sub-section (1), the Magistrate shall, in the case of any tree in existence before the telegraph line was placed, award to the persons interested in the tree such compensation as he thinks reasonable, and they shall be final.

6.3.3 MoP Guidelines, 2015

132. The Ministry of Power (MoP) vide its order No. 3/7/2015-Trans dated 15 April 2015 constituted a committee comprising of representatives of various State Govt., MoP, Central Electricity Authority (CEA) & POWERGRID under the chairmanship of Special Secretary, MoP to analyze the issues relating to RoW for laying of transmission lines in the country and to suggest a uniform methodology for payment of compensation on this account. Based on the recommendation of the Committee, Ministry of Power, Govt. of India vide its notification dated 15th Oct'15 has issued guidelines for payment of compensation for damages regarding RoW. The said guideline was adopted by Government of Tamil Nadu vide order *U.O. No 455/ACS (F)/P/2017 dated 22-11-2017* for implementation. As per the guideline the following compensation shall be paid in addition to normal tree and crop damage compensation:

- i) Compensation @ 85% of land value as determined by District Magistrate or any other authority based on circle rate/guideline value/Stamp Act rates for tower base area (between four legs).
- ii) Compensation in the width of Right of Way (RoW) corridor, due to laying of transmission line subject to maximum of 15% of land value determined based on circle rate/guideline value/Stamp Act rates.

¹⁰ Power to place Telegraph Lines and Posts

6.3.4 Government of Tamil Nadu Guidelines for payment of compensation, 2019

133. The Energy Department, Government of Tamil Nadu order (G.O. (Ms) No. 86) dated 30-10-2019 containing guidelines for payment of compensation towards damages regarding RoW for transmission lines 110 kV and 230 kV lines and above (see Annexure 5). The guideline mentions the following provisions for compensation:

1. For the tower base area, the existing provision of 85% shall be enhanced to 100% of assessed land value.
2. For diminution of land value for stringing corridor area (RoW) the existing provision of 15% shall be enhanced to 20% of assessed land value.
3. Rs. 50,000/- is fixed as minimum payable amount for tower base area for first 3 cents, if the assessed land value is less than Rs. 50,000/-.
4. Rs. 10,000/- may be fixed for every additional one cent or part thereof, if the tower base area exceeds 3 cents and this would be added to the minimum payable amount for tower base area.

134. The provisions of the G.O. (Ms) No. 86 are being implemented for this project for the land compensation of tower base area and land compensation of corridor area (RoW). The compensation amount for crop and tree is based on the rate determined by the Department of Agriculture and Department of Horticulture of Government of Tamil Nadu.

135. Provided in table 6.1 below is an analysis of gaps with the relevant aspects of India/State Governments's legal framework and ADB's Safeguard Policy 2009, as well as necessary measures to address these gaps.

Table 6.1: Gaps between National/State Govt Requirements & ADBs Safeguard Policy 2009

Relevant ADB Safeguard Policy Principles	Legal Framework of India/State Govt. relevant to transmission Project	Degree of alignment or Gaps and proposed actions to address gaps
Carry out meaningful consultations with affected persons, host communities, and concerned nongovernment organizations.	The electricity Act-2003, The Indian Telegraph Act, 1885 and the MoP Guideline, 2015 does not refer to such policy principles and hence, does not align.	TANTRANS CO will continue to ensure a process of consultation with affected persons and others during Compensation plan preparation

Relevant ADB Safeguard Policy Principles	Legal Framework of India/State Govt. relevant to transmission Project	Degree of alignment or Gaps and proposed actions to address gaps
		and implementation, to inform them of their entitlements, to ensure their participation in planning and to address the needs of vulnerable groups.
Establish a grievance redress mechanism to receive and facilitate resolution of the affected persons' concerns.	The electricity Act-2003, The Indian Telegraph Act, 1885 and the MoP Guideline, 2015 does not refer to such policy principles and hence, does not align.	TANTRANS CO will establish a GRM to address the concerns and grievances of the project affected people.
Provide cash compensation at replacement cost	The electricity Act-2003, The Indian Telegraph Act does not say directly about the replacement cost. The MoP Guideline, 2015 and the State Govt. G.O. (Ms) No. 86 has the provision of circle rate/guideline value/Stamp Act rates. This is partially aligned.	TANTRANS CO will do the valuation based on the latest guideline value while assessing the land restriction value for the tower base area and the diminution of land value in the

Relevant ADB Safeguard Policy Principles	Legal Framework of India/State Govt. relevant to transmission Project	Degree of alignment or Gaps and proposed actions to address gaps
		RoW (Corridor) due to laying of transmission line. Compensation of loss of trees and crops will be based on market value.
Improve or at least restore, the livelihoods of all displaced persons.	The electricity Act-2003, The Indian Telegraph Act, 1885, the MoP Guideline, 2015 and the State Govt. G.O. (Ms) No. 86 does not refer to such policy principles and hence, does not align. However, it may be noted that this is not applicable as there is no physical displacement in this project and only temporary loss of livelihood.	TANTRANS CO will provide adequate compensation for all losses as per the Entitlement Matrix.
Ensure that displaced persons without titles to land or any recognizable legal rights to land are eligible for resettlement assistance and compensation for loss of non-land assets.	The electricity Act-2003, The Indian Telegraph Act, 1885, the MoP Guideline, 2015 and the State Govt. G.O. (Ms) No. 86 does not refer to such policy principles and hence, does not align.	Provisions are included in the Entitlement Matrix of the compensation plan to pay compensation to the non-

Relevant ADB Safeguard Policy Principles	Legal Framework of India/State Govt. relevant to transmission Project	Degree of alignment or Gaps and proposed actions to address gaps
		titleholders (informal and non-registered) for their non- land lost assets.
Improve the standards of living of the displaced poor and other vulnerable groups, including women, to at least national minimum standards	The electricity Act-2003, The Indian Telegraph Act, 1885, the MoP Guideline, 2015 and the State Govt. G.O. (Ms) No. 86 does not refer to such policy principles and hence, does not align.	Provision for vulnerable groups have been made in the entitlement matrix. TANTRANS CO will ensure that equal wages for men and women if engaged by the contractor with adequate provision for the health safety of women under the environment management plan.
Pay compensation prior to physical or economic displacement	The electricity Act-2003, The Indian Telegraph Act, 1885, the MoP Guideline, 2015 and the State Govt. G.O. (Ms) No. 86 does not refer to such policy	Compensation for all land restriction required for tower footings will be paid

Relevant ADB Safeguard Policy Principles	Legal Framework of India/State Govt. relevant to transmission Project	Degree of alignment or Gaps and proposed actions to address gaps
	principles and hence, is not aligned.	prior to start of civil works. Right-of-way will be cleared, and compensation will be paid for the losses along the transmission line during the stringing in phased manner.
Prepare and disclose a Resettlement Plan	The electricity Act-2003, The Indian Telegraph Act, 1885, the MoP Guideline, 2015 and the State Govt. G.O. (Ms) No. 86 does not refer to such policy principles and hence, does not align.	TANTRANS CO will prepare and obtain approval of the Compensation Plan by ADB and then disclose
Monitor and assess resettlement outcomes and impacts and the achievement of the objectives of the resettlement plan and disclose monitoring reports.	The electricity Act-2003, The Indian Telegraph Act, 1885, the MoP Guideline, 2015 and the State Govt. G.O. (Ms) No. 86 does not refer to such policy principles and hence, does not align.	TANTRANS CO will monitor the processes, outputs, outcomes and impacts of the Compensation Plan implementation and share the monitoring reports with affected

Relevant ADB Safeguard Policy Principles	Legal Framework of India/State Govt. relevant to transmission Project	Degree of alignment or Gaps and proposed actions to address gaps
		persons and other stakeholders including ADB. Bi-annual safeguard monitoring reports will be submitted and disclosed on the ADB website.

6.4. Basic Policy Principles for the Project

136. The basic principles adopted for the project are:

- Avoid negative impacts of land acquisition and involuntary resettlement on persons affected by the project to the extent possible;
- Where negative impacts cannot be avoided, assist affected persons, through adequate compensation;
- Carry out meaningful consultations with affected persons and inform the affected persons of their eligibility and entitlements. Ensure their participation in planning, implementation and monitoring of the project;
- Disclose information related to impacts, eligibility and entitlement and ensure affected persons’ participation in planning and implementation of compensation plan;
- Provide compensation for all losses at replacement/market value in accordance with the Compensation Plan;
- Ensure that affected persons without titles to land or any recognizable legal rights to land are eligible for compensation for loss of non-land assets such as trees and crops and any other assets if built by the non-titled holders;
- Anyone moving into the project area after the cut-off-date will not be entitled to compensation;
- Provide compensation of transmission lines by section by section during project implementation;
- Establish grievance redress mechanisms to ensure resolution of disputes;
- Ensure adequate budgetary support to cover implementation costs for the Compensation Plan;
- Monitor implementation of the Compensation Plan;

- Ensure that the land under the right of way and below the tower are restored to its previous use after the construction;
- People shall be allowed to continue their agricultural activities under the right of way after the construction.

137. Additionally, the issues related to the RoW for the transmission lines will be dealt with proper care especially for temporary losses. For the loss of crops and trees due to construction of overhead lines, cash compensation payable by cheque will be provided during construction works.

6.5. Cut Off Date

138. As a prior notice MED form is given to the identified affected landowners after finalization of tower location and before the construction informing that the proposed transmission line is being routed through the property of the individual. The MED form contains the particulars of the land, ownership details and the details of the land/trees/crops to be damaged due to the construction of the proposed transmission line and acknowledgement is received from landowner. This serves as a record for identifying the actual affected persons and the date of issuance of this notice can be treated as cut-off-date for identification and assessment of damages.

6.6 Valuation of Compensation and Payment Mechanism

139. After the consent of affected landowner, detailed assessment of affected land, tree and crops is done in the presence of TANTRANSCO official and district revenue official. The particulars of the detailed assessment are filled in the MED form issued to affected landowner. The signature of the landowner in the filled MED form is taken before the processing of compensation. Valuation of compensation for non-fruit trees is based on timber value at market price. Compensation for fruit trees is based on annual net product market value multiplied by remaining productive years. Assessment of compensation for loss of crop is done by the TANTRANSCO with the help state horticulture department. The disbursement of compensation payment mechanism has following procedures:

- The project affected landowner is identified through the local people and verified through the village administrative officer (VAO).
- Detailed assessment of affected land/tree/crops is done in the presence of TANTRANSCO field official and district revenue official/ agriculture department/horticulture department official etc.
- TANTRANSCO field official undertake consultation with the affected people and an agreed value of compensation is determined with the consent of affected people.
- The contractor provides the agreed compensation amount in cheque to the affected people on behalf of TANTRANSCO.
- After the payment of compensation, the contractor gets the amount reimbursed from TANTRANSCO.

7. ENTITLEMENT, ASSISTANCE AND BENEFITS

7.1. Eligibility and Entitlement

140. There is no compulsory land acquisition involved in the Project and there will be no permanent loss of land or permanent restriction to the land use. Lands for the substations are already in the possession of TANTRANSOCO. Therefore, the entitlements mentioned in the Compensation Plan is relevant to all the impacts related to construction of transmission lines which includes, tower foundation, tower erection and stringing of conductors. Impacts will occur both for the tower base (between four legs) as well as in the right of way. As per the guidelines of Government of Tamil Nadu G.O. No. 86, APs are entitled for land compensation of 100% of land value for tower base area. Similarly, APs are entitled for land compensation of 20% of land value for diminution of land value for stringing in corridor area (RoW). The width of the RoW for each transmission line has been specified in Chapter-2. Loss of trees will be compensated as per the entitlement matrix. Additionally, compensation for temporary damages to crops during construction will also be compensated at market value. Lack of legal documents of their customary rights of occupancy or land titles shall not affect their eligibility for compensation. Compensation towards temporary damages to all eligible APs is paid as per the assessment and Entitlement Matrix. People having no land right such as informal settlers will only be eligible for compensation for non-land assets such as loss of crops and trees if grown by them. The Entitlement Matrix for the Project is given in Table 7.1.

Table 7.1: Entitlement Matrix

#	Type of Losses/Impacts	Definition of Entitled Persons/Households)	Entitlement	Details
1	Land affected by tower base (between four legs)	Titled owner	Compensation of 100% of land value	<ul style="list-style-type: none"> • Land value to be determined by the concerned District Magistrate/ or any other authority based on Circle rate/ Guideline value / Stamp Act rates for tower base area. • 100% of land value will be provided as per the Government of Tamil Nadu order (G.O. No. 86).
2	Land in the width of Right of Way (RoW) corridor due to laying of transmission line	Titled owner	Compensation of 20% of land value	<ul style="list-style-type: none"> • Land value to be determined by the concerned District Magistrate/ or any other authority based on Circle rate/ Guideline Value / Stamp Act rates. • 20% of the land value will be paid as per the Government of Tamil Nadu order (G.O. No. 86).
3	Loss of crops for the following Impacts: 1. Crops under the tower base 2. Crops in the width of the RoW	All affected households (titled holders, share-croppers, lease holders and non-titled households)	Compensation at market value	<ul style="list-style-type: none"> • Compensation at market value to be computed with assistance of agriculture department. • Advance notice to APs to harvest crops. • In case of standing crops, cash compensation at current market cost to be calculated of mature

#	Type of Losses/Impacts	Definition of Entitled Persons/Households)	Entitlement	Details
	3. Construction related impacts on crops if occur beyond the width of RoW			crops based on average production.
4	1. Trees under the tower base 2. Trees in the width of the RoW 3. Construction related impacts on Trees if occur beyond the width of RoW	All affected households (titled holders and non-titled holders)	Compensation at market value	<ul style="list-style-type: none"> • Compensation at market value to be computed with assistance of horticulture department. • For fruit bearing trees compensation at average fruit production for next productive years to be computed at current market value. • For timber trees compensation at market cost based on type of trees. • Timber will be retained by the owner.
5	Other unexpected damages (if found) during construction	All affected households	Compensation at market value	<ul style="list-style-type: none"> • Compensation at market value as assessed by the concerned authority.
6	Impacts on vulnerable households	Vulnerable affected householdssuch as households headed by women, physically handicapped/disabled family, and below poverty line as certified by local authority	Vulnerability assistance to be considered in kind	<ul style="list-style-type: none"> • Vulnerable affected persons will be given priority by the contractor while engaging for temporary jobs (where feasible) during construction. • Multiple vulnerability will be considered as one unit for vulnerable assistance.
7	Unanticipated impacts	All affected persons	Unforeseen impacts will be documented and mitigated based on the principles agreed upon in the Compensation Plan and ADBs SPS 2009.	

8. RELOCATION AND INCOME RESTORATION

141. The Project does not involve private land acquisition or compulsory land acquisition; hence, no physical displacement is foreseen. Based on the data following detailed design of the actual alignment of transmission lines, there is no impacts on any physical structures. Impacts are limited to the temporary loss/damage to crops during the construction of transmission lines for which adequate compensation are being provided as per the entitlement matrix which is as per the current market value. Land restriction under the tower base and diminution of land value for stringing within the corridor area (RoW) is being compensated as per the Government of Tamil Nadu order (G.O. No. 86). Affected People can resume their agricultural activities after the construction. All the trees being felled due to the Project will be compensated as per the entitlement matrix. TANTRANSCO will ensure that advance notice is issued to the affected people prior to the start of construction work and that compensation process should also be undertaken before the construction. In case of future maintenance work, TANTRANSCO will pay compensation for any loss. Should construction activities result in unavoidable livelihood disruption, compensation for lost income for the period of disruption will be provided.

142. Impacts on vulnerable people is marginal as there is no land acquisition, and compensation for the land value for tower base area and land value for stringing in corridor area (RoW) is provided as per the Government of Tamil Nadu order (G.O. No. 86) in addition to the losses of crops and trees. The period of impacts due to tower erection and stringing is only one crop season or less. Affected people can resume their agricultural activities after the construction as the crop land is restored to its previous use. Lastly, vulnerable affected persons will be given priority by the contractor while engaging for temporary jobs (where feasible) during construction.

9. RESETTLEMENT BUDGET AND FINANCING PLAN

9.1. Overview

143. The estimate of the compensation cost mentioned in the draft Compensation Plan (CP) in 2018 was based on the provisions of MoP guidelines. Later, the Energy Department of Government of Tamil Nadu vide G.O. No. 86 dated 30-10-2019 issued revised guidelines for payment of compensation towards damages for transmission lines 110 kV and 230 kV lines and above. The provisions of G.O. No. 86 are applicable for this Project. Hence, the provisions of G.O. No. 86 pertaining to compensation cost for land restriction for tower base and diminution of land value for stringing within the corridor area (RoW) has been applied to estimate the updated compensation cost.

144. The updated compensation cost estimate for implementation of the Compensation Plan (CP) for the project includes eligible compensation for land restriction for tower base, diminution of land value for stringing within the corridor area (RoW), loss of trees and crops in the RoW and support cost for implementation of Compensation Plan. Budget provision for compensation for tower base (@100% of the assessed land value) and RoW corridor (20% of the assessed land value) has been made as per provisions of G.O. (Ms) No. 86. For calculation of land compensation, the average rate of land value is taken as INR 24,70,000/ per ha. This unit cost of land value per ha is derived on the basis of average land compensation value as per the provisions of G.O. No. 86. The unit cost for the loss of crop/tree has been derived through rapid field appraisal and old experience of similar project implementation and is based on market value. A contingency provision equivalent to 10% of the total cost has also been made to accommodate any variations from this estimate and to include any cost to be incurred for unanticipated impacts. The amount of compensation paid for affected land, tree and crops is updated periodically and are mentioned in the social safeguard monitoring reports.

9.2 Compensation Cost

145. The total indicative cost is estimated to be INR 3223.97 million equivalents to INR 322.40 crores. Details are given in Table 9.1. The following estimated budget is part of the complete project cost.

Table 9.1: Updated Compensation Cost

Item	Unit	Unit Cost (INR)	Quantity	Amount (Million INR)	Amount (Crores INR)
A. Compensation					
Compensation for Private Land for <u>Tower Base</u> (@ 100% of total calculated value) Land value calculation is based on the latest guideline value as per the provisions of G.O. No. 86	Hectare	2470000	228.72	564.94	56.49
Compensation for Private Land for <u>Right of Way</u> (@ 20% of total calculated value) Land value calculation is based on the latest guideline value as per the provisions of G.O. No. 86	Hectare	2470000	2640.44	1304.38	130.44

Item	Unit	Unit Cost (INR)	Quantity	Amount (Million INR)	Amount (Crores INR)
Loss of Trees/Crops along the right of Way (@ INR 2,000,000 per kilometre as per standard previous rate)	Kilometre	20,00,000	525.78	1051.56	105.16
Sub Total A				2920.88	292.09
B: Support Cost for Implementation of Compensation Plan					
Administrative Cost (including GRM/Consultations)		lump sum		5	0.50
Monitoring Cost		lump sum		5	0.50
Sub Total- B				10	1.00
Total				2930.88	293.09
Contingency (10%)				293.09	29.31
Grand Total (INR)				3223.97	322.40

10. INSTITUTIONAL ARRANGEMENTS

10.1 Overview of Project Implementation

146. The Department of Energy, Tamil Nadu has the overall responsibility for ensuring the project implementation on behalf of Government of Tamil Nadu. Tamil Nadu Transmission Corporation Limited (TANTRANSCO), the state-owned transmission utility, is both the executing agency (EA) and Implementing Agency (IA) of ADB-financed project. TANTRANSCO has Project Management Unit (PMU) and Project Implementation Units (PIU) for the implementation of the project. The nodal officer from the Executing Agency is the Joint Managing Director.

147. The PMU at corporate level (headquarter) consists of a technical team and a financial team. The technical team is headed by Director Transmission projects who is assisted by Chief Engineers and Superintending Engineers. The financial team is headed by Director Finance and supported by Chief Financial Controller and Financial Controllers.

148. At project level there are General Construction Circle (GCC) Madurai and GCC Coimbatore, who have formed PIUs for implementation of the project. The PIUs are headed by Chief Engineer Transmission project-II, Trichy. The PIU at GCC Madurai¹¹ consists of a team headed by Superintending Engineer, GCC Madurai and supported by Executive Engineer/C/765kV/TP/Virudhunagar, Executive Engineer/TLC/Madurai, Executive Engineer/TLC/Virudhunagar and Executive Engineer/TLC/Tirunelveli. The PIU at GCC Coimbatore is headed by Superintending Engineer, GCC Coimbatore and supported by Executive Engineer/TLC/Perundurai.

149. Details on the project organisation and implementation entities and their roles and responsibilities are described in Table 10.1 and depicted in Figure 10.1. The roles and responsibilities for implementation of safeguards issues are discussed in the subsequent subsection of this chapter.

Table 10.1: Roles & Responsibilities of Project organisation and Implementation entities

Project Implementation entities	Roles and Responsibilities
Executing & Implementing agency: TANTRANSCO Board of Directors	<ul style="list-style-type: none"> • Overall responsibility for execution of the project • Periodic review of the project activities to ensure timely implementation of the project. • Ensuring compliance with loan covenants including social and environmental safeguards, financial, economic and others. • Timely approval of bid documents bid evaluation reports and contract award.
TANTRANSCO Management	The Executing Agency has multiple levels of management who are responsible for the timely implementation of the project. The key personnel for purposes of this project are as follows; <ul style="list-style-type: none"> • Joint Managing Director

¹¹PIU Madurai looks after the implementation of all the contract packages except Package 10 (T-22), 765 kV DC line Virudhunagar – Coimbatore, Reach 3. The implementation of Package 10 is overseen by PIU Coimbatore.

Project Implementation entities	Roles and Responsibilities
	<ul style="list-style-type: none"> ○ Coordinating the communication with Government of India and Government of Tamil Nadu with respect to the project. ○ Ensuring timely approval of bid documents and bid evaluation reports by TANTRANSCO Board. ○ Periodic monitoring of the project implementation activities in coordination with the Director Transmission Projects and Director Finance. ○ Ensuring coordination between technical department responsible for project implementation and finance department to ensure timely availability of counterpart funds ○ Ensuring Institutional Capacity Building activities under the Output 3 of the Project are implemented. <p>The project management unit at corporate level and the responsibilities of key officials-</p> <ul style="list-style-type: none"> ● Director Transmission Projects <ul style="list-style-type: none"> ○ Timely submission of bid documents and bid evaluation reports to Board Level Tender Committee (BLTC) and Board of Directors of TANTRANSCO. ○ Timely administering of the tender, issue of contract award and implementation approvals thereof etc. ○ Fortnightly monitoring of the implementation of the project components along with the respective Chief Engineers including physical visits to the project sites to address any project implementation issues; ○ Periodic Reporting to the Board of Directors, Joint Managing Director and ADB on project implementation. ● Director Finance and Financial Controller HQ <ul style="list-style-type: none"> ○ Ensuring availability of counterpart funds for the smooth implementation of the project. ○ Managing the Advance Account including timely submission of withdrawal applications, and projected project expenses for replenishment of advance account. ○ Keeping records of payment made through Advance Account for liquidation of Advance Account and Auditing purposes. ○ Keeping records of project related expenses incurred through counterpart funds. ○ Engaging Project Auditors to audit all the expenses incurred with respect to the project. ○ Final Approval and payment of bills / invoice of the contractor. ○ Taking responsibility for implementing Institutional Capacity Building activities related to improving Financial Management Capacity.

Project Implementation entities	Roles and Responsibilities
	<ul style="list-style-type: none"> ○ Financial reporting of the project to the to the Joint Managing Director / Project Steering Committee / Funding Agency. • Chief Engineer Civil in TANTRANSCO Headquarters <ul style="list-style-type: none"> ○ Preparation of working estimate of the project scheme, technical specification, commercial terms, floating and administering of tender, tender negotiation and award of contract and issuance of implementation approvals in coordination with the procurement team headed by a Superintending Engineer. ○ Approval of design drawings, inspection of equipment's at factory location etc. in coordination with the procurement team; <p>The project implementation unit and the responsibilities of key officials-</p> <ul style="list-style-type: none"> • Chief Engineer Transmission project-II, Trichy (PIUs head) <ul style="list-style-type: none"> ○ Day to day monitoring of project implementation in coordination with the General Construction Circles (GCC), resolving project implementation issues and reporting to the Director on overall project implementation status. ○ Act as the Chairman of Grievance Redress Committee (GRC) at project level • Superintending Engineers General Construction Circle (GCC) - Madurai and Coimbatore <ul style="list-style-type: none"> ○ Support HQ in preparing the working estimate of the project scheme for running the tender. ○ Upon award of tender, overall responsibility of implementing the transmission lines coming under the jurisdiction of the circle for both transmission substation and transmission lines, supervision of the dedicated Executive Engineer appointed for implementation of 765kV transmission line. ○ Handover of project site to the contractor, inspection of equipment's at the factory location, issuing of dispatch instructions, day to day monitoring of the project activities, resolving any project site specific issues, fortnightly reporting of project implementation status to the HQ in coordination with the circle Executive Engineers and Asst. Executive Engineers. ○ Preparation of all vendor bills with breakdown of all material received in line with the vendor invoice and LOA, verification of the bills with the LOA of the tender including calculating liquidated damages (if any), and final approval of the bills and forwarding for payment to the finance dept. at HQ.

Project Implementation entities	Roles and Responsibilities
	<ul style="list-style-type: none"> ○ Assessment and approval of compensation payment for RoW of Transmission lines in coordination with the field Junior Engineer and Revenue Department. ○ Ensuring of timely reimbursement of compensation payment of RoW made by the contractors. ○ Review of safeguard monitoring reports / gender monitoring report ○ Upon completion of the project construction, in coordination with the Protection and Communication Wing (P&C) carry out the testing and commissioning of the equipment's for handover to the operations department. ○ Handover of all project drawings, manual, project billing to the System Operations department for project capitalization and system operation. ● Deputy Financial Controller General Construction Circle (GCC) - Madurai / Coimbatore <ul style="list-style-type: none"> ○ Verification of all bills containing invoices including verification of detailed breakup of components to confirm to the LOA of the project, payments to be made on account of RoW compensation; ○ Forwarding of the bills for payment to the Finance dept. at the HQ upon final approval of the Superintending Engineers GCC; ○ Addressing specific queries on the bills, Record keeping and maintaining of the project account at the GCC level including reporting on the financial progress of the project.

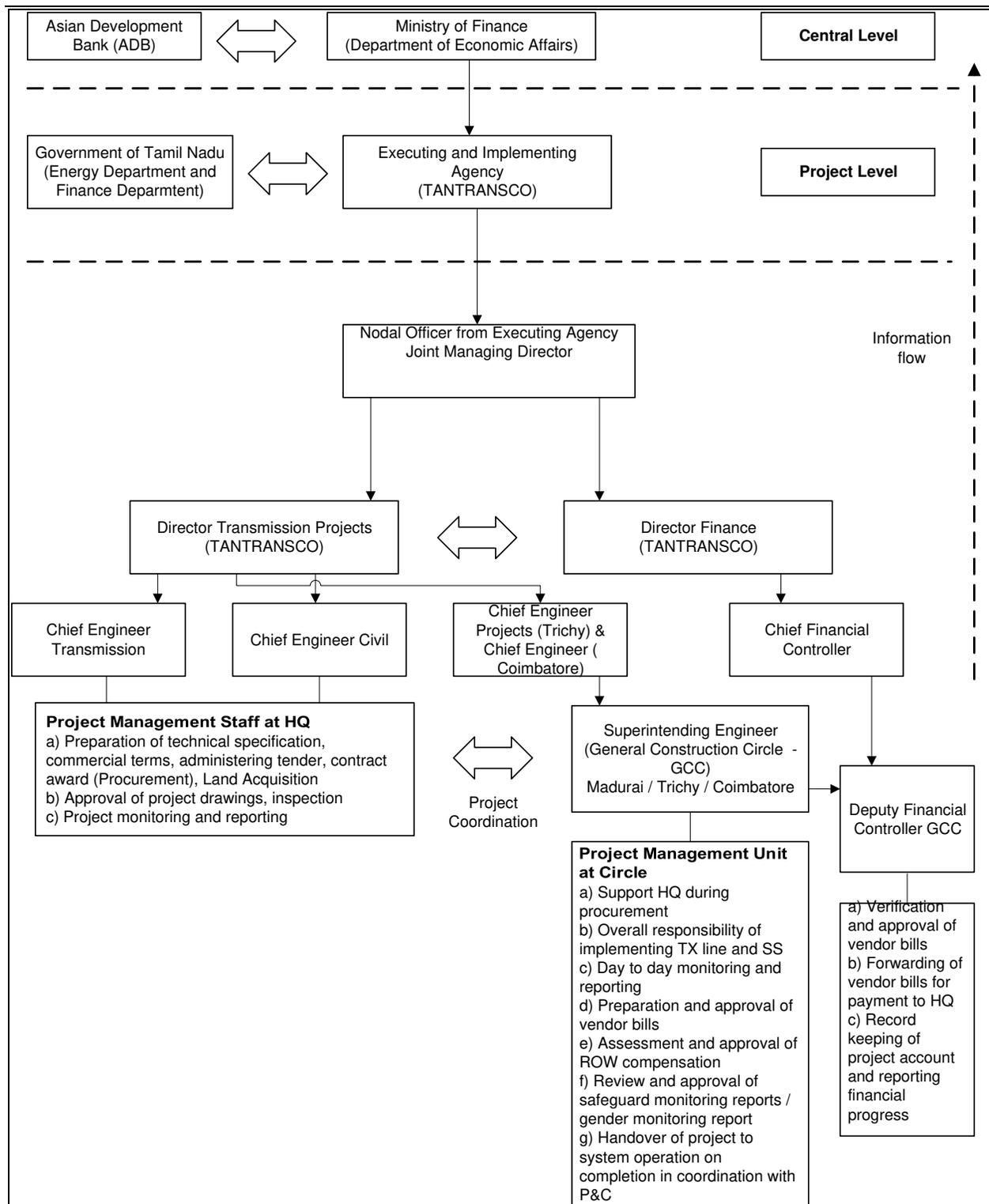


Figure 10.1: Project Organization and Implementation Structure

10.2. Roles and Responsibilities related to safeguard implementation

TANTRANSCO is ultimately responsible for safeguards supervision and ensuring compliance with the loan covenants related to safeguards. The main responsibilities for supervision and monitoring of safeguards aspects (social, environment, health & safety) lies with the GCC, Madurai and Coimbatore. TANTRANSCO is assisted by the safeguard consultants (Social safeguard, Environment, Health & Safety) under the Transaction Technical Assistance (TRTA) and works closely with the district revenue and other officials for assessment and valuation of affected land and assets.

10.2.1 TANTRANSCO and PMU

The key responsibilities on safeguard implementation include the following:

- Overall supervision of the implementation of IEE/EMP and Compensation Plan (CP).
- Timely endorsement of safeguards documents submitted by GCC- Madurai/Coimbatore and further submission to ADB for approval.
- Comply with all safeguards loan covenants in the Loan Agreement.
- Submission of safeguard documents (updated RP and semi-annual safeguard monitoring reports) to ADB for review
- Formation of project GRM

10.2.2 GCCMadurai /Coimbatore and PIUs

The PIUs at GCC Madurai and GCC Coimbatore will play the key role for updating the compensation plan (CP), valuation of compensation, disbursement of compensation, redressal of grievance etc. Following are the roles and responsibilities of PIUs at GCC Madurai and GCC Coimbatore:

- Together with the contractor finalize the detailed design and pegging of each tower and finalizing the route alignment
- Ensure that contractors collect field data and undertake public consultations for updating of Compensation Plan (CP)
- Together with the TRTA safeguard consultant, update the Compensation Plan (CP) as per the detailed/final design and as per the actual impacts and actual losses.
- Submit the updated Compensation Plan (CP) to TANTRANSCO for endorsement and further submission to ADB for approval.
- Ensure continued consultations with stakeholders
- Disclosure of the draft Compensation Plan and updated Compensation Plan in accordance with the ADB's SPS.
- Determine the assessment of losses and estimation of compensation payments for affected persons in consultation with relevant district officials.
- Negotiation with the affected persons on the compensation value.
- Redressal of grievance of affected persons through the GRC at GCC level and keeping of all records of the complaints received.
- Ensure that compensation to affected persons is provided in compliance with entitlement matrix of the Compensation Plan, in accordance with ADB's Safeguard Policy Statement

(2009) and all applicable national/state rules and regulations, including the G.O. (Ms) No. 86 (Revised guidelines for payment of compensation).

- Ensure that all compensation required for obtaining necessary land use rights for erection of towers is provided to affected persons prior to tower erection, and all compensation required for obtaining necessary RoW (Corridor) for lines is provided to the affected persons prior/during stringing.
- Distribution of compensation amount through cheques to the APs.
- Reimburse the Contractor for compensation payments made by the Contractor within 60 days of receipt of invoice from the Contractor together with records related to assessment of impact, payment of compensation, and copy of the cheque to each affected person and proof of receipt of payment of compensation.
- Ensure that the Contractor complies with all conditions as stipulated in the entitlement matrix of the Compensation Plan (CP), and that all necessary RoW and rights for land use are obtained for construction of towers and lines.
- Secure necessary budget for the compensation to affected persons and ensure timely reimbursement of compensation amount to the Contractor.
- Prepare the semi-annual social safeguards monitoring report on the progress of implementation of Compensation Plan and submit to TANTRANSCO for review which will subsequently be submitted to ADB.

10.2.3 Roles and Responsibilities of Contractor

150. Other than the Design, supply, installation and commissioning of transmission lines and substations, the contractor shall be responsible (but not limited to) for the following activities:

- Finalize detailed design of transmission lines and towers with endorsement from the GCC Madurai/Coimbatore.
- The Contractor shall provide the detailed information on tower coordinates including the result of social assessment and public consultation findings to TANTRANSCO (GCC-Madurai/Coimbatore) for updating of the Compensation Plan (CP). The contractor will prepare a spreadsheet of data on affected assets of project affected persons and amount of compensation on the basis of completed MED forms.
- For towers, identify the exact location of each tower and owner of the land and measure impacts. The Contractor with assistance of TANTRANSCO field official and field level officials of revenue department shall quantify the extent of land to be affected by the towers and assess quantity of crops and trees loss and any other asset under them. The contractor will collect the land ownership details and other social parameters required for updating the compensation plan and will get the ownership details verified by concerned village administrative officer. Based on the details, TANTRANSCO (GCC-Madurai/Coimbatore) officials with the assistance of concerned revenue/agriculture/horticulture department officials will do the estimation of compensation amount as per the entitlement matrix of the Compensation Plan. The Contractor shall issue cheques in the name of the affected persons from their account on behalf of TANTRANSCO. The officials of GCC-Madurai/Coimbatore shall distribute the

cheques to affected persons, with the support of the Contractor. TANTRANSCO shall reimburse the Contractor for amounts paid to affected persons.

- For transmission lines, identify the owner of the land required for stringing, and measure impacts. The Contractor shall quantify the extent of land affected by the Right of Way (RoW) and assess losses of crops and trees for each affected person. Based on the details, TANTRANSCO (GCC-Madurai/Coimbatore) with the assistance of concerned revenue/agriculture/horticulture department officials will do the estimation of compensation amount as per the entitlement matrix of the Compensation Plan. The Contractor shall issue cheques in the name of the affected persons from their account on behalf of TANTRANSCO. The officials of GCC-Madurai/Coimbatore shall distribute the cheques to affected persons, with the support of the Contractor. TANTRANSCO shall reimburse the Contractor for amounts paid to affected persons.
- Keep all records related to the compensation to affected persons, including copies of each cheque issued to affected persons, for at least three years following Completion of the Contract. The Contractor shall provide these data to TANTRANSCO (GCC-Madurai/Coimbatore) for updating the RP and preparing semi-annual monitoring reports.
- Provide monthly progress reports to TANTRANSCO (GCC-Madurai/Coimbatore) related to payments to affected persons, physical progress of construction work, and grievances (if any) to address and incorporate in the monitoring reports which shall be submitted to ADB by TANTRANSCO on a semi-annual basis.
- The contractor will depute its designated staff for the GRC and will assist TANTRANSCO in providing required information during redressal of the grievance of affected person.
- The Contractor shall collect field data/information and provide all information collected to the TANTRANSCO for its use in preparing semi-annual monitoring reports.

10.2.4 Roles and Responsibilities of TRTA Safeguard Consultant

151. TANTRANSCO will be assisted with TRTA safeguards consultant/s under the Technical Assistance Special Fund (TASF). The consultant will be assisting TANTRANSCO in updating the draft Compensation Plan based on the field data and information provided by the contractor. The safeguard consultants will be assisting TANTRANSCO for preparing the semi-annual monitoring reports to be submitted to ADB. Following are the broad scope:

A. Updating the draft Compensation Plan (CP)

- Based on the detailed/final design by the contractor and as approved by TANTRANSCO the social safeguard consultant will assist TANTRANSCO to integrate final impacts in to the Draft Compensation Plan and will update the Compensation Plan accordingly.
- Assist TANTRANSCO in updating the Compensation Plan based on the available information on impacts, ownership details, and entitlement related to compensation.
- Establish dialogue with the affected communities and ensure that their concerns and suggestions are incorporated in the project.

- Together with TANTRANSCO (GCC-Madurai/Coimbatore) and concerned contractor, conduct public consultation among the affected communities and disclosure of updated Compensation Plan.

B. Capacity Building Training to TANTRANSCO (PMU/PIU) and EPC Contractor

- Provide on the job training on the social safeguards aspect especially ADB's Safeguard Policy Statement (2009) requirement on Project implementation and on monitoring.

C. Social Safeguards Monitoring

152. The social safeguard consultant will assist TANTRANSCO to (i) monitor the progress of implementation of the Compensation Plan which includes the payment of compensation, status of grievance redressal etc., (ii) document and disclose monitoring results and identify necessary corrective and preventive actions in the semi-annual monitoring reports, (iii) follow up on these actions to ensure progress toward the desired outcomes, and (iv) prepare semi-annual monitoring reports on social safeguard component. Specific tasks for monitoring include the following:

- Implementation and disbursement of compensation to the affected person.
- Monitor and measure the progress of implementation of the Compensation Plan.
- Issues related to compensation for erection of towers and right of ways.
- Highlighting any litigation for clearance of Right of Way and Tower Footings.
- Monitor the functioning of grievance redress mechanism.
- Preparation of Semi-Annual Monitoring Report.
- Preparation of Corrective Action Plan if required during Monitoring.

10.3. Capacity Assessment of TANTRANSCO

TANTRANSCO has various decentralized units at various project locations. Although, there is no specific safeguards cell present in TANTRANSCO, however, designated officers are there to deal with the compensation and RoW issues. TANTRANSCO is also experienced with implementing other multilateral agency funded projects such as KfW project and are aware about the safeguard requirement of international agencies. There are concerned and designated officers at TANTRANSCO HQ who are dedicated for this project. There are designated staff in GCC Madurai and Coimbatore for this Project. Field engineers have been deputed for this Project. Although, they are engineers, however, they are capable of implementing the compensation plan. The compensation plan has been developed with close coordination, participation and consultation with all the concerned officials from HQ and in the GCC level. The need of orientation and awareness about the ADB's SPS was discussed with the project team. ADB has recruited TRTA consultants where the social safeguards consultant will provide on the job training to the concerned and designated engineers responsible for implementing compensation plan. Additionally, TANTRANSCO will be communicated about various training program being organized by ADB for its EAs so that TANTRANSCO can nominate designated staff for attending the trainings.

153. Various roles and responsibilities regarding the compensation plan (CP) are provided in Table **10.2**

Table 10.2: Institutional Roles and Responsibilities for Compensation Plan

Activity	Responsible Agency
Institutional Setup for Finalization and Implementation of RP	
Appointment of Contractor	TANTRANSCO
Appointment of TRTA Consultant	ADB
Updating, Finalization, Implementation and Monitoring of Compensation Plan	
Finalization of alignment and pegging of towers	Contractor/ GCC-Madurai/Coimbatore
Social Assessment on loss of land and other assets	Contractor/ GCC-Madurai/Coimbatore
Updating the Draft Compensation Plan as per the detailed design	Contractor/ GCC-Madurai/Coimbatore/TRTA Consultant
Consultations and Disclosure of Safeguards document	Contractor/ GCC-Madurai/Coimbatore/TRTA Consultant
Approval of updated Compensation plan	TANTRANSCO HQ/ADB
Disclosure of updated Compensation Plan in website	TANTRANSCO HQ/ADB
Fixing the compensation value	GCC-Madurai/Coimbatore/Concerned District Authority
Allocation of Budget related to compensation	Contractor to be reimbursed by TANTRANSCO
Distribution of Cheques related to compensation	GCC-Madurai/Coimbatore with assistance from Contractor
Taking possession of land and Right of Way	GCC-Madurai/Coimbatore
Grievances Redress	TANTRANSCO HQ/GCC-Madurai/Coimbatore/ Contractor
Monitoring	TANTRANSCO HQ/GCC-Madurai/Coimbatore/ TRTA Consultant
No Objection to commence the construction	GCC-Madurai/Coimbatore
Project Construction	Contractor

ADB- Asian Development Bank, TANTRANSCO- Tamil Nadu Transmission Corporation Limited, TRTA- Transaction Technical Assistance, HQ-Head Quarter

11. IMPLEMENTATION SCHEDULE

154. The updated Compensation Plan (CP) has been prepared based on the available information as per the final alignment of transmission lines. The implementation progress of each transmission line is different and the status of the physical progress of the same is updated and mentioned in the semi-annual social safeguard monitoring report.

155. This is a linear project and the work of tower foundation, erection and stringing is being implemented in stages. The construction is being implemented on piecemeal basis after taking consent from affected landowners. All land required for tower footings is provided free of encumbrances to the contractor prior to handing over of project sites and the start of civil works. Before the stringing of lines RoW will be cleared for laying of lines in a phased manner. Public consultation will be done as needed during the entire duration of the project.

156. For the construction of transmission line, a stage and section wise approach is adopted for payment of compensation to affected people. TANTRANSCO will ensure that compensation is being paid simultaneously during the construction of tower foundation and erection for the section which is ready for construction. The compensation process will be completed preferably prior to the start of civil work activities for each stage at relevant section or simultaneously during construction. Each contractor has a bar chart for the schedule of activities for implementation. The tentative implementation schedule for the project is given in Table 11.1. The schedule may vary depending on the exact project implementation.

Table 11.1: Implementation Schedule

Compensation Plan Component/Activities	Quarter											
	2020				2021				2022			
	1	2	3	4	1	2	3	4	1	2	3	4
Phase- I: Project Initiation Stage												
Appointment of TRTA Consultant	★											
Appointment of Contractor	★											
Phase- II: Updating, Implementation & Monitoring Stage												
Detailed Survey by respective contractors		★	★	★								
Finalisation of tower coordinates & approval		★	★	★								
Pegging of towers and collection of ownership details based on final alignment of lines		★	★	★	★	★	★					
Collection of land owners' details along the RoW based on final alignment of lines			★	★	★	★	★					
Compilation of land record, ownership			★	★	★	★	★					
Finalization of list of affected persons			★	★	★	★	★					
Serving of notice to affected persons			★	★	★	★	★					
Joint assessment & record of assets in MED form			★	★	★	★	★					
Agreement on compensation amount by AP			★	★	★	★	★	★				
Updating the draft Compensation Plan						★				★		
Approval on the updated Compensation Plan and disclosure						★						
Payment of compensation amount			★	★	★	★	★	★				
Construction of tower foundation, erection & stringing of lines				★	★	★	★	★	★			
Monitoring			★	★	★	★	★	★	★			

Note: In the Transmission Project, most of the activities under phase-II (updating and Implementation) are simultaneous and parallel which is overlapping.

12. MONITORING AND REPORTING

157. Monitoring will be the responsibility of TANTRANSCO through GCC-Madurai/Coimbatore and the TRTA consultants with input from the contractors. Regular monitoring activities will be carried out internally by the GCC-Madurai/Coimbatore which will provide ADB periodic information for assessing progress of implementation of compensation plan and identifying potential difficulties and problems. Monitoring will ensure that implementation and disbursement of compensation is on schedule and problems are dealt with on a timely basis. TANTRANSCO is required to implement safeguard measures and relevant safeguard plans, as provided in the legal agreements, and to submit semi-annual monitoring reports on the implementation performance.

158. TANTRANSCO will (i) monitor the progress of implementation of safeguard plans, (ii) verify the compliance with safeguard measures and their progress toward intended outcomes, (iii) document and disclose monitoring results and identify necessary corrective and preventive actions in the periodic monitoring reports, (iv) follow up on these actions to ensure progress toward the desired outcomes, and (v) submit semi-annual monitoring reports on safeguard measures as agreed with ADB.

159. Monitoring will include various issues such as progress of final alignment of lines, update of number of affected persons, update on the impact, update of Compensation Plan, disbursement of compensation, number of grievances raised and redressed, number of consultations and physical progress of construction. GCC-Madurai/Coimbatore through its contractor and TRTA consultants will be responsible for updating of Compensation Plan (CP), preparation of semi-annual monitoring reports and will provide the safeguard documents to TANTRANSCO HQ. TANTRANSCO will review the safeguard documents. Upon endorsement by TANTRANSCO HQ the documents will be submitted by TANTRANSCO to ADB for review, approval and disclosure. All the semi-annual monitoring reports will be made available at the GCC-Madurai/Coimbatore for providing access to these documents to the affected persons. Semi-annual Monitoring reports and updated Compensation Plan (CP) will be disclosed on the ADB website.

ANNEXURE 1: DETAILS ON THE ALTERNATE ANALYSIS FOR THE PROPOSED LINES INCLUDING MAPS

1.1: 765 kV DC line from Virudhunagar SS to Coimbatore SS (Bee line length 208.5 km)

Alternative Routes	Length In Km	% Deviation from Bee Line	Landuse Crossing Details (Km)						No. of Angle Points				Number of Crossings				Remark
			Forest	Built-up/Habitation	Road Crossing	Crop Land + Plantation	Waste land	Water Bodies	0 to 30 deg	30 to 60 deg	60 to 90 deg	Total Number	River	Road (NH/SH)	Rail Line	Major Power lines	
Route D	241.90	16.02	-	Nil	0.89	189.57	39.11	12.31	54	33	5	92	4	7	6	31	Suggested by Anna University
Route E	252.57	21.13	0.89	Nil	0.57	197.81	39.00	14.16	207	111	1	319	2	14	6	43	Final route Approved by TANTRANSCO

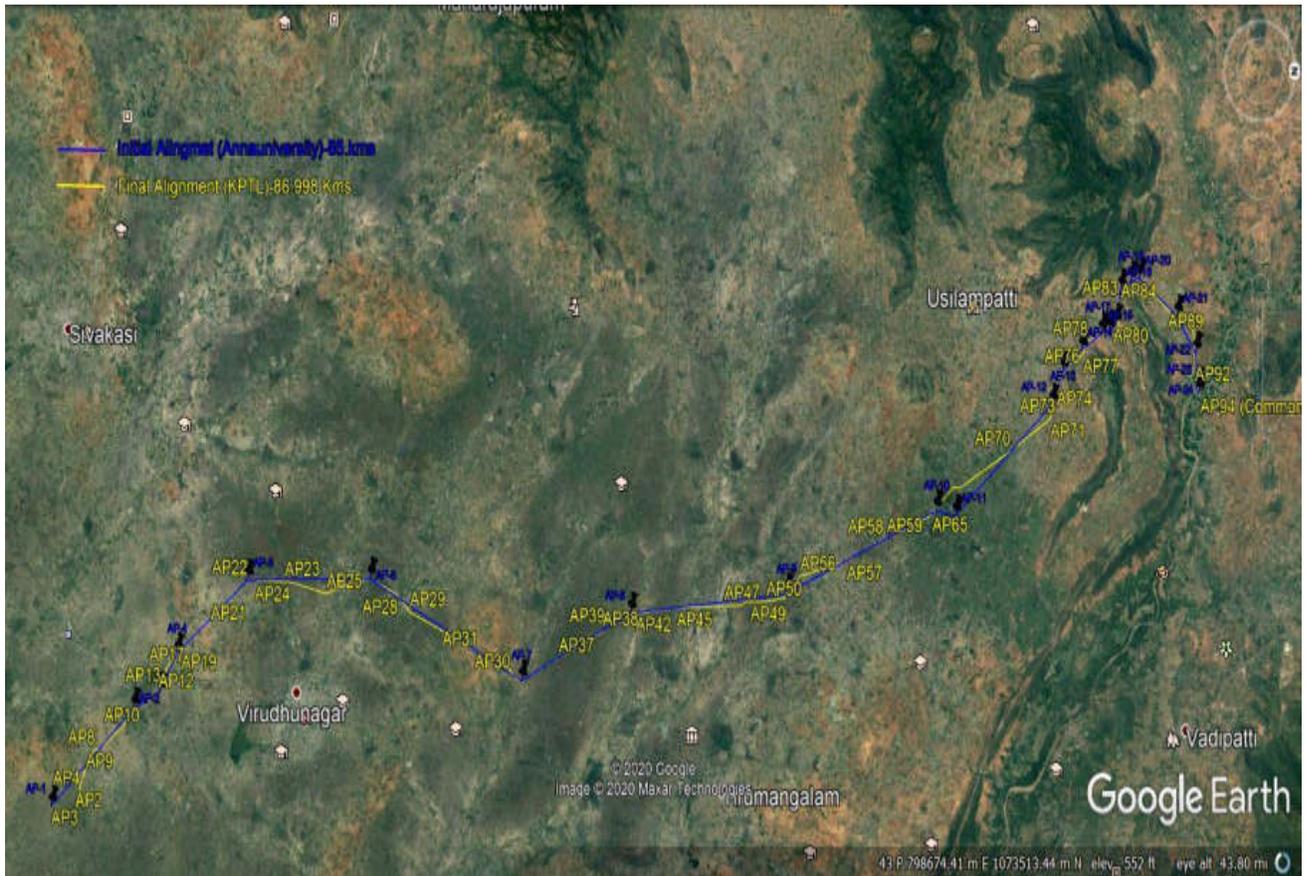
Note: 1. Route D was planned to use Landuse/cover Map prepared using Resourcesat Satellite (5.8m resolution) and Least Cost Path Analysis in an GIS environment. The least cost path route was generalized to minimize the number of angle points and crossings. The route was submitted by Anna University to TANTRANSCO

2. Route E: The contractors/field engineers from TANTRANSCO surveyed the angle points and tower locations of the route submitted by Anna University and suggestions were provided. Suggestions were reviewed and realignment was made. The acceptable reasons for changing the angle point locations and number of angle points were truly reviewed by TANTRANSCO and verified with the latest available high resolution satellite imagery before Route E is approved by Anna University and by TANTRANSCO.

3. The reasons for increase in number of angle points in Route E are: Crossing of existing power line, construction of new power line, National/State Highway and Railway line; avoidance of individual residential building, densed coconut groves and the reserved forest; avoidance of Poultry farm, firework factory; avoidance of active private quarry land and windmill towers throughout the route.

4. The 765 kV line comprised of three sections. Contract has been awarded to KPTL for construction of Reach 1, to KEC for construction of Reach 2 and to Transrail for construction of Reach 3 of the line. The maps below show the Anna University suggested route and the final route alignment approved by TANTRANSCO.

MapA1: 765 kV DC line Virudhunagar – Coimbatore, Reach 1 (Preliminary and final alignment)



MapA2: 765 kV DC line Virudhunagar – Coimbatore, Reach 2 (Preliminary and final alignment)



MapA3: 765 kV DC line Virudhunagar – Coimbatore, Reach 3 (Preliminary and final alignment)



1.2:400 kV DC line from Virudhunagar SS to Kayathar

Alternative Routes	Length In Km	Number of Angle Points	Number of Major Crossings					Major Power lines (EHT line crossings)	Remark
			Forest	Built-up/Habitation	River	Road (NH/SH)	Rail Line		
Route C	72.07	27	-	Nil	1	Nil	1	5	Suggested by Anna University
Route D	70.2	73	-	Nil	2	2	1	12	Final route alignment approved by TANTRANSCO

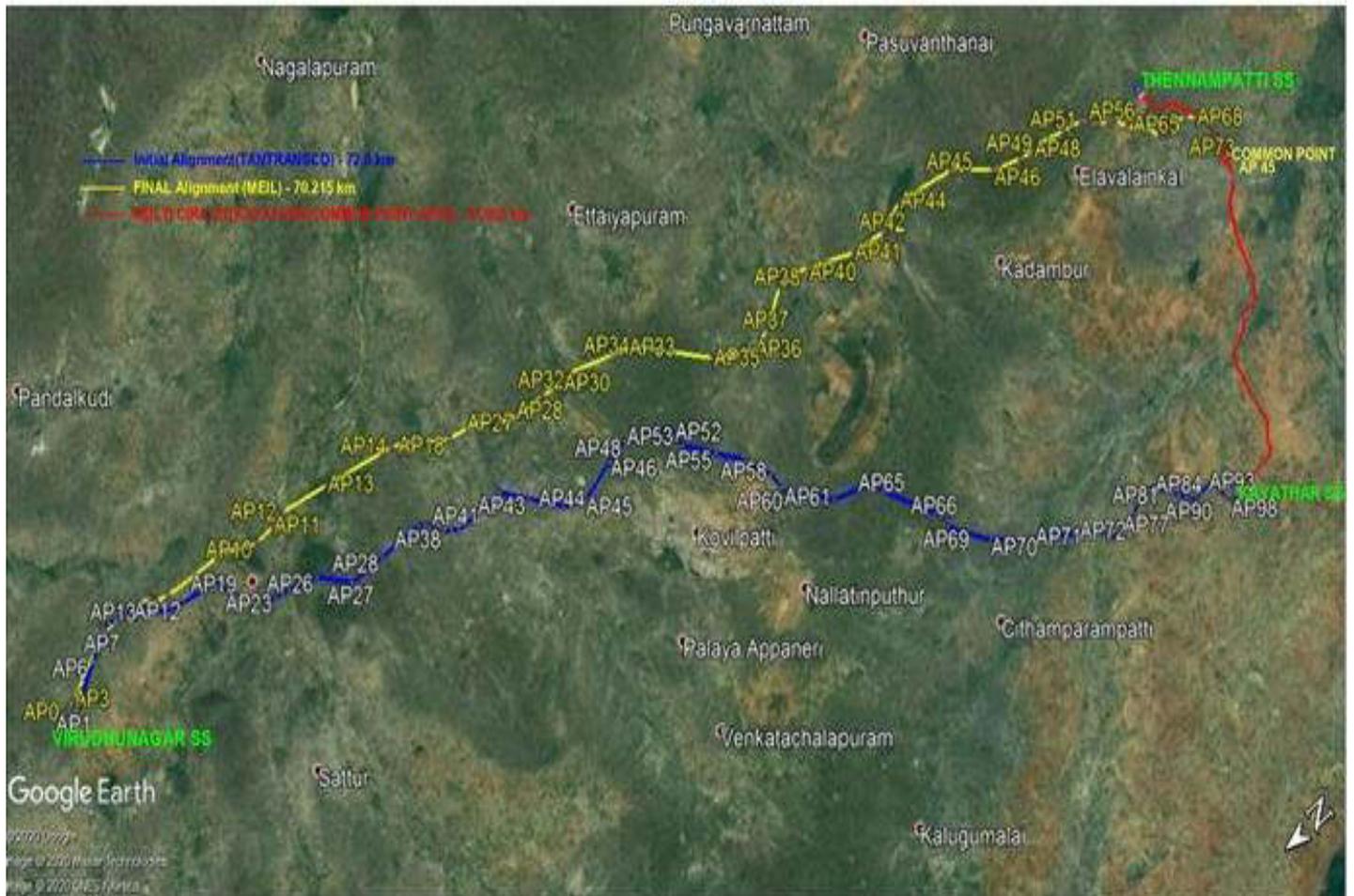
Note: 1. Route C was planned to use Landuse/cover Map prepared using Resourcesat Satellite (5.8m resolution) and Least Cost Path Analysis in an GIS environment. The least cost path route was generalized to minimize the number of angle points and crossings. The route was submitted by Anna University to TANTRANSCO

2. Route D: The contractors/field engineers from TANTRANSCO surveyed the angle points and tower locations of the route submitted by Anna University and suggestions were provided. There was a change in strategy by TANTRANSCO and it was planned to connect the line from Virudhunagar sub-station to a common point AP 45. A newly built and activated transmission line connects the Kayathar sub-station to Thennampatti sub-station through the common point AP 45. Suggestions were reviewed and realignment was made. The acceptable reasons for changing the angle point locations and number of angle points were truly reviewed by TANTRANSCO and verified with the contractor/field engineers before it is approved by TANTRANSCO.

3. The reasons for increase in number of angle points in Route D are: Crossing of existing power lines, National/State Highways, Railway lines and rivers; avoidance of individual residential building, avoidance of restricted areas, such as Civil and Military airfield, air craft landing approaches.

4. The map below shows the Anna University suggested route and the final route alignment approved by TANTRANSCO.

Map A4: 400 kV DC line Virudhunagar – Kayathar (Preliminary and final alignment)



2.1: 400 kV DC line from Kamuthi to Ottapidaram SS

Alternative Routes	Length In Km	Number of Angle Points	Number of Major Crossings					Major Power lines (EHT line crossings)	Remark
			Forest	Built-up/Habitation	River	Road (NH/SH)	Rail Line		
Route B	71.05	43	-	Nil	1	1	Nil	5	Suggested by Anna University
Route C	71.6	48	-	Nil	1	1	1	8	Final route alignment approved by TANTRANSCO

Note: 1. Route B was planned to use Landuse/cover Map prepared using Resourcesat Satellite (5.8m resolution) and Least Cost Path Analysis in an GIS environment. The least cost path route was generalized to minimize the number of angle points and crossings. The route was submitted by Anna University to TANTRANSCO.

2. Route C: The contractor/field engineers from TANTRANSCO surveyed the angle points and tower locations of the route submitted by Anna University and suggestions were provided. Suggestions were reviewed and realignment was made based on requirement. The acceptable reasons for changing the angle point locations and number of angle points were truly reviewed by TANTRANSCO and verified with the contractor/field engineers before it is approved by TANTRANSCO.

3. The map below shows the Anna University suggested route and the final route alignment approved by TANTRANSCO.

Map A5: 400 kV DC line from Kamuthi to Ottapidaram SS (Preliminary and final alignment)



2.1: 400 kV DC line from Udangudi to Ottapidaram SS

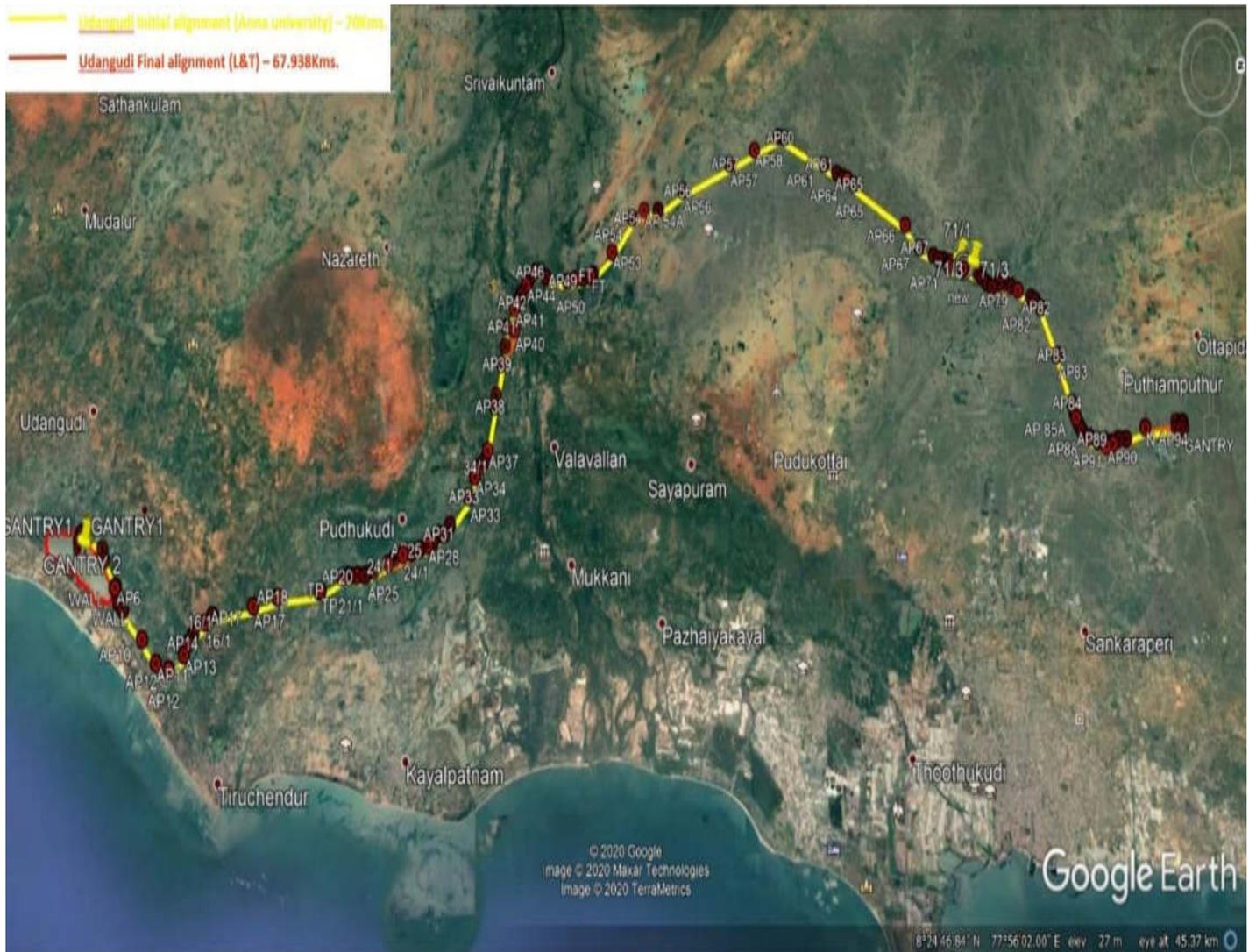
Alternative Routes	Length In Km	Number of Angle Points	Number of Major Crossings					Major Power lines (EHT line crossings)	Remark
			Forest	Built-up/Habitation	River	Road (NH/SH)	Rail Line		
Route A	68.0	68	-	Nil	1	1	1	8	Suggested by Anna University
Route B	67.9	81	-	Nil	1	1	2	9	Final route alignment approved by TANTRANSCO

Note: 1. Route A was planned to use Landuse/cover Map prepared using Resourcesat Satellite (5.8m resolution) and Least Cost Path Analysis in an GIS environment. The least cost path route was generalized to minimize the number of angle points and crossings. The route was submitted by Anna University to TANTRANSCO.

2. Route B: The contractor/field engineers from TANTRANSCO surveyed the angle points and tower locations of the route submitted by Anna University and suggestions were provided. Suggestions were reviewed and realignment was made based on requirement. The acceptable reasons for changing the angle point locations and number of angle points were truly reviewed by TANTRANSCO and verified with the contractor/field engineers before it is approved by TANTRANSCO.

3. The map below shows the Anna University suggested route and the final route alignment approved by TANTRANSCO.

Map A6: 400 kV DC line from Udangudi to Ottapidaram SS (Preliminary and final alignment)



2.3 A: 230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS

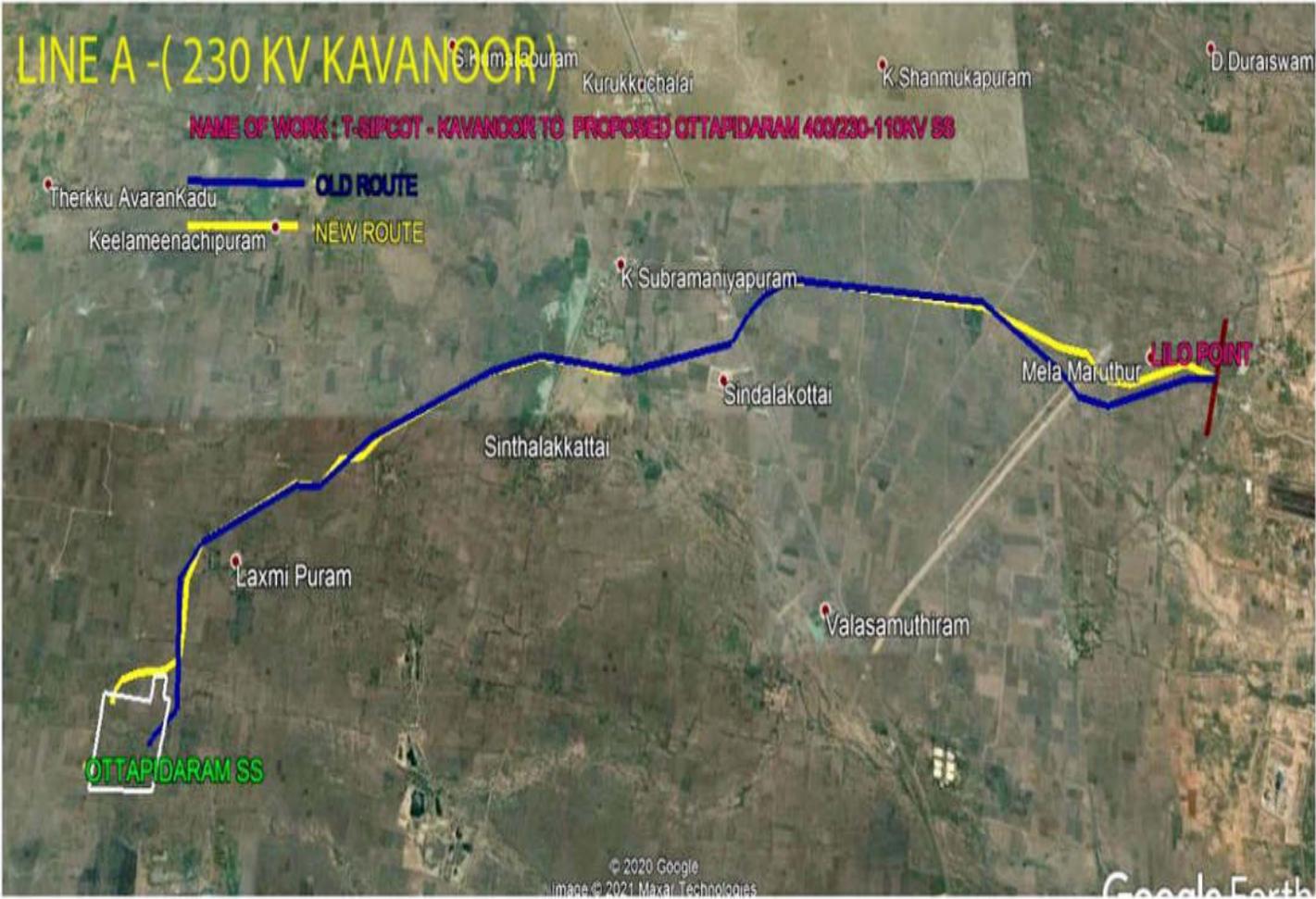
Alternative Routes	Length In Km	Number of Angle Points	Number of Major Crossings						Remark
			Forest	Built-up/Habitation	River	Road (NH/SH)	Rail Line	Major Power lines (EHT line crossings)	
Route A	9.9	10	-	Nil	Nil	1	Nil	4	Suggested by Anna University
Route B	10.88	29	-	Nil	Nil	1	1	6	Final route alignment approved by TANTRANSCO

Note: 1. Route A was planned to use Landuse/cover Map prepared using Resourcesat Satellite (5.8m resolution) and Least Cost Path Analysis in an GIS environment. The least cost path route was generalized to minimize the number of angle points and crossings. The route was submitted by Anna University to TANTRANSCO.

2. Route B: The contractor/field engineers from TANTRANSCO surveyed the angle points and tower locations of the route submitted by Anna University and suggestions were provided. Suggestions were reviewed and realignment was made based on requirement. The acceptable reasons for changing the angle point locations and number of angle points were truly reviewed by TANTRANSCO and verified with the contractor/field engineers before it is approved by TANTRANSCO.

3. The map below shows the Anna University suggested route and the final route alignment approved by TANTRANSCO.

Map A7: 230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS (Preliminary and final alignment)



2.3 B: 230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram

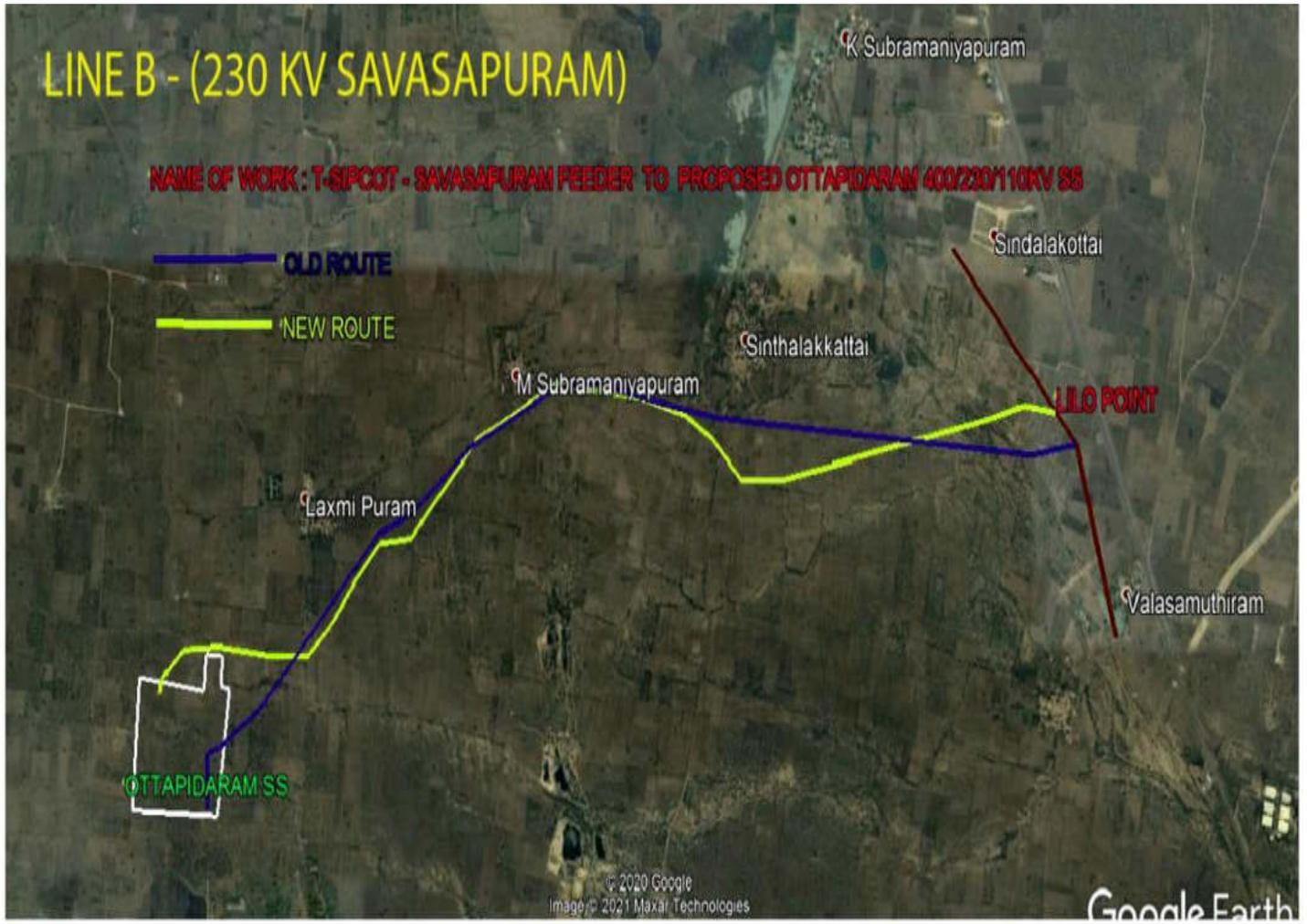
Alternative Routes	Length In Km	Number of Angle Points	Number of Major Crossings					Major Power lines (EHT line crossings)	Remark
			Forest	Built-up/Habitation	River	Road (NH/SH)	Rail Line		
Route A	5.58	6	-	Nil	Nil	Nil	Nil	2	Suggested by Anna University
Route B	6.23	19	-	Nil	Nil	Nil	Nil	5	Final route alignment approved by TANTRANSCO

Note: 1. Route A was planned to use Landuse/cover Map prepared using Resourcesat Satellite (5.8m resolution) and Least Cost Path Analysis in an GIS environment. The least cost path route was generalized to minimize the number of angle points and crossings. The route was submitted by Anna University to TANTRANSCO.

2. Route B: The contractor/field engineers from TANTRANSCO surveyed the angle points and tower locations of the route submitted by Anna University and suggestions were provided. Suggestions were reviewed and realignment was made based on requirement. The acceptable reasons for changing the angle point locations and number of angle points were truly reviewed by TANTRANSCO and verified with the contractor/field engineers before it is approved by TANTRANSCO.

3. The map below shows the Anna University suggested route and the final route alignment approved by TANTRANSCO.

Map A8: 230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram (Preliminary and final alignment)



2.3 C: 110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS

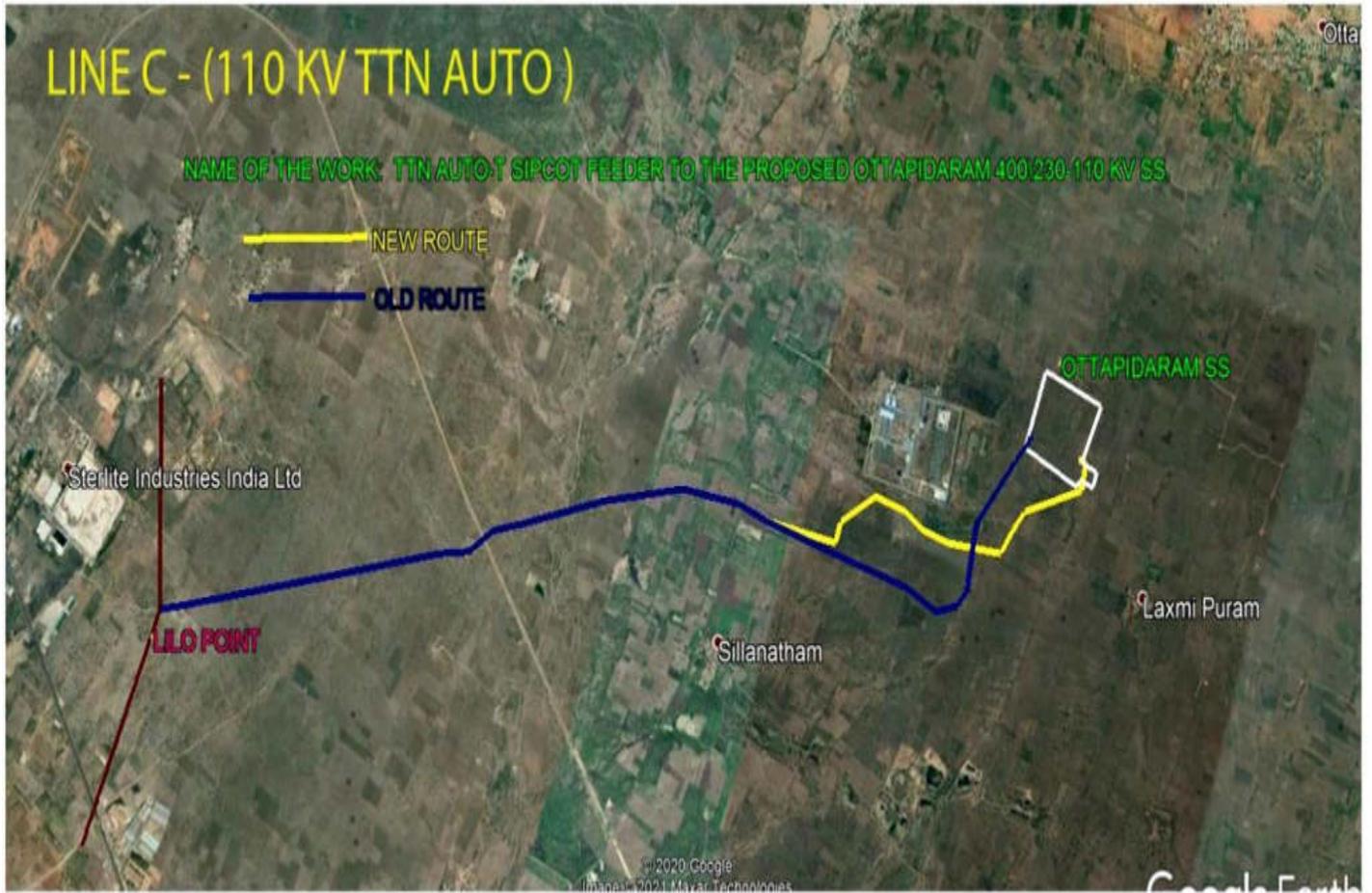
Alternative Routes	Length In Km	Number of Angle Points	Number of Major Crossings					Major Power lines (EHT line crossings)	Remark
			Forest	Built-up/Habitation	River	Road (NH/SH)	Rail Line		
Route A	10.27	10	-	Nil	Nil	Nil	Nil	2	Suggested by Anna University
Route B	8.95	26	-	Nil	Nil	1	1	3	Final route alignment approved by TANTRANSCO

Note: 1. Route A was planned to use Landuse/cover Map prepared using Resourcesat Satellite (5.8m resolution) and Least Cost Path Analysis in an GIS environment. The least cost path route was generalized to minimize the number of angle points and crossings. The route was submitted by Anna University to TANTRANSCO.

2. Route B: The contractor/field engineers from TANTRANSCO surveyed the angle points and tower locations of the route submitted by Anna University and suggestions were provided. Suggestions were reviewed and realignment was made based on requirement. The acceptable reasons for changing the angle point locations and number of angle points were truly reviewed by TANTRANSCO and verified with the contractor/field engineers before it is approved by TANTRANSCO.

3. The map below shows the Anna University suggested route and the final route alignment approved by TANTRANSCO.

Map A9: 230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram (Preliminary and final alignment)



2.3 D:110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS

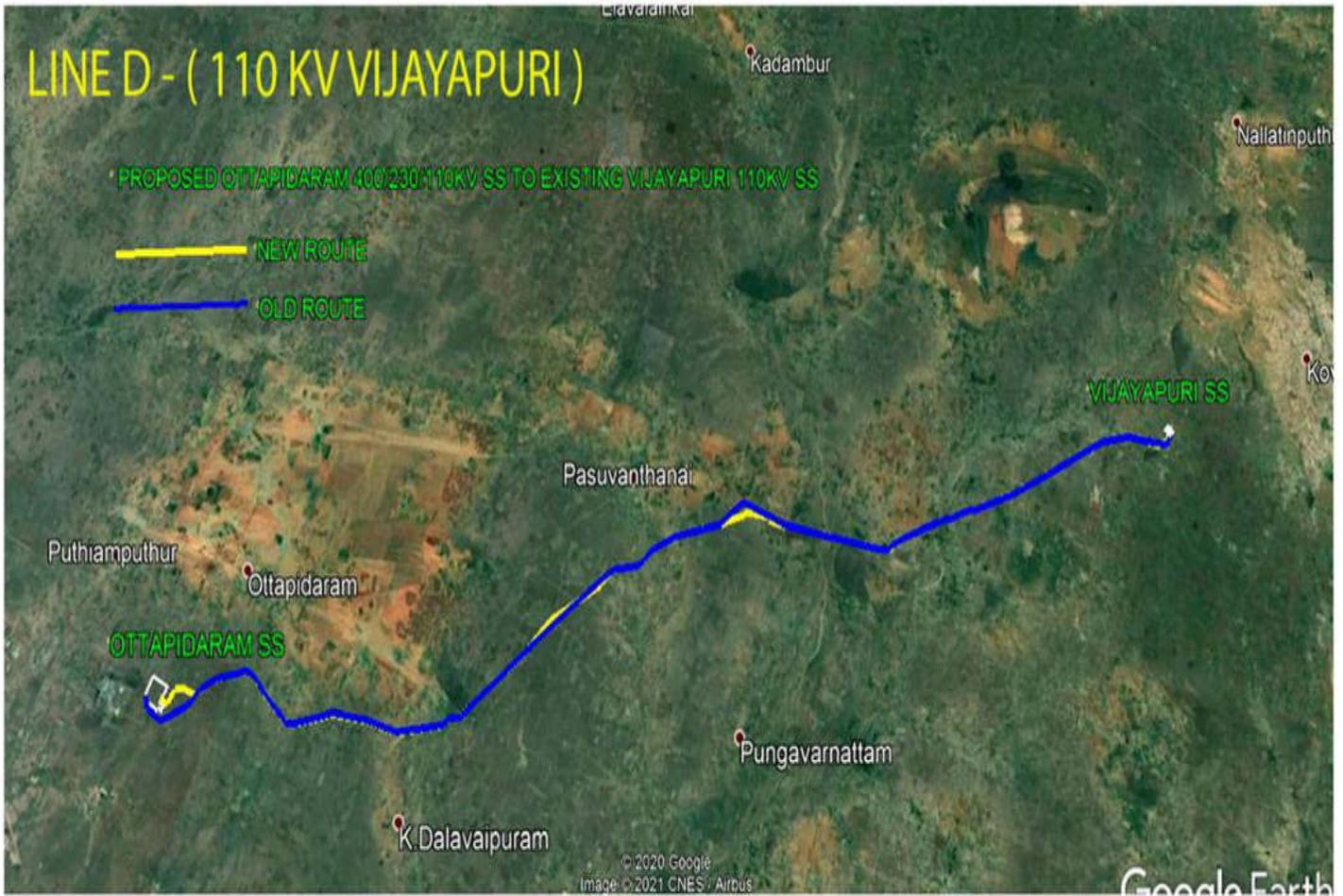
Alternative Routes	Length In Km	Number of Angle Points	Number of Major Crossings					Major Power lines (EHT line crossings)	Remark
			Forest	Built-up/Habitation	River	Road (NH/SH)	Rail Line		
Route B	34.43	30	-	Nil	Nil	Nil	Nil	3	Suggested by Anna University
Route C	34.41	66	-	Nil	Nil	1	1	9	Final route alignment approved by TANTRANSCO

Note: 1. Route B was planned to use Landuse/cover Map prepared using Resourcesat Satellite (5.8m resolution) and Least Cost Path Analysis in an GIS environment. The least cost path route was generalized to minimize the number of angle points and crossings. The route was submitted by Anna University to TANTRANSCO.

2. Route C: The contractor/field engineers from TANTRANSCO surveyed the angle points and tower locations of the route submitted by Anna University and suggestions were provided. Suggestions were reviewed and realignment was made based on requirement. The acceptable reasons for changing the angle point locations and number of angle points were truly reviewed by TANTRANSCO and verified with the contractor/field engineers before it is approved by TANTRANSCO.

3. The map below shows the Anna University suggested route and the final route alignment approved by TANTRANSCO.

Map A10: 110 kV SC line on DC tower from proposed Ottapidaram to Vijayapuri SS (Preliminary and final alignment)



2.3 E: 110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS

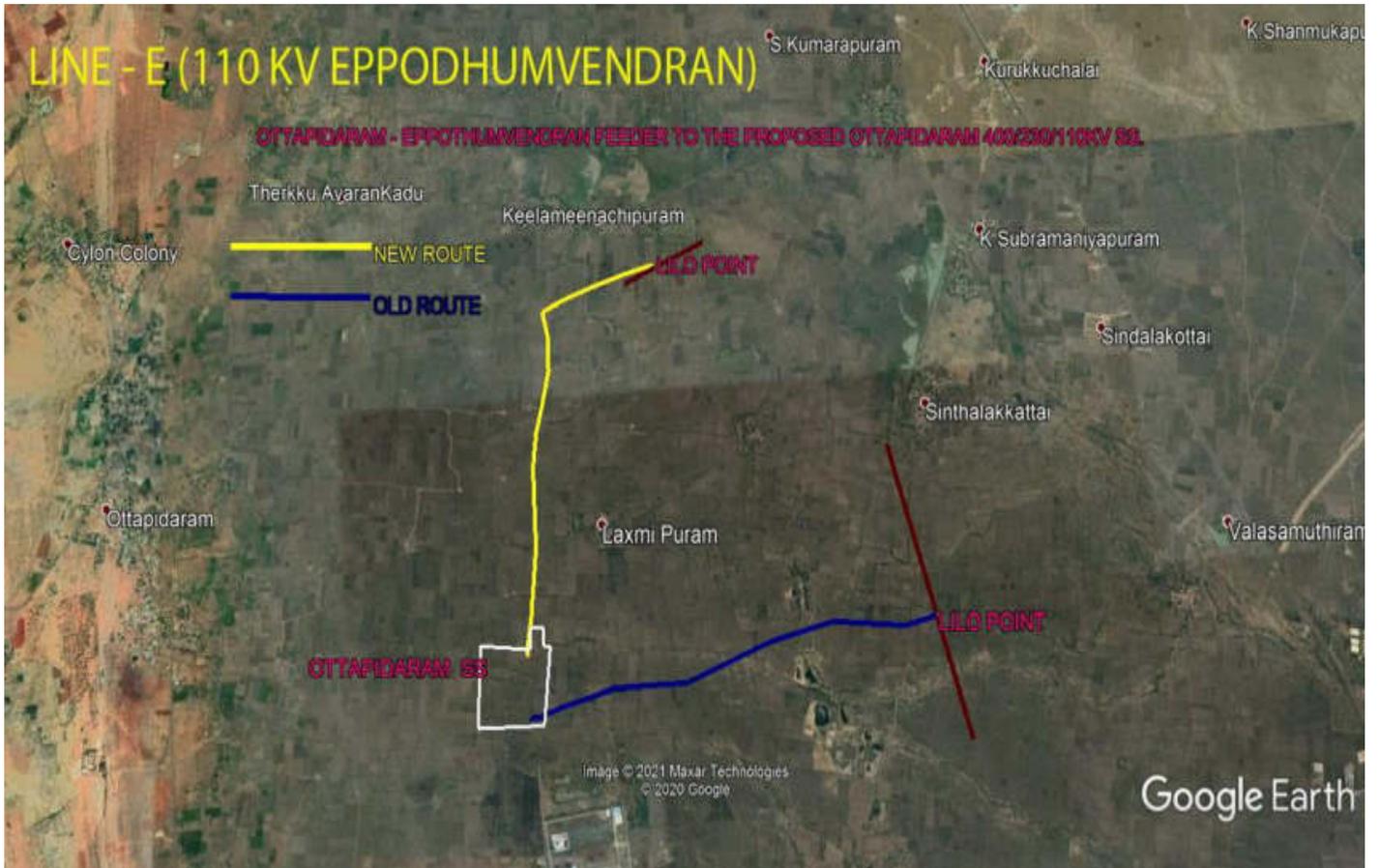
Alternative Routes	Length In Km	Number of Angle Points	Number of Major Crossings					Major Power lines (EHT line crossings)	Remark
			Forest	Built-up/Habitation	River	Road (NH/SH)	Rail Line		
Route A	3.56	3	-	Nil	Nil	Nil	Nil	2	Suggested by Anna University
Route B	3.31	13	-	Nil	Nil	Nil	Nil	1	Final route alignment approved by TANTRANSCO

Note: 1. Route A was planned to use Landuse/cover Map prepared using Resourcesat Satellite (5.8m resolution) and Least Cost Path Analysis in an GIS environment. The least cost path route was generalized to minimize the number of angle points and crossings. The route was submitted by Anna University to TANTRANSCO.

2. Route B: The Anna University suggested route was prepared when the layout of the substation was not finalized. Due to the change in position of 110 kV line Gantry Point in the final layout of substation, realignment of the route was required for operational feasibility. Suggestions were reviewed and realignment was made based on requirement of final layout of substation. The acceptable reasons for changing the angle point locations and number of angle points were truly reviewed by TANTRANSCO and verified with the contractor/field engineers before it is approved by TANTRANSCO.

3. The map below shows the Anna University suggested route and the final route alignment approved by TANTRANSCO.

Map A11: 110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS (Preliminary and final alignment)



ANNEXURE 2: INVENTORISATION ALONG THE TRANSMISSION LINES

From Tower No. to Tower No.	From Km to Km	Name of Village (Taluk/District)	Distance of line from nearby village/ho using (m)	Ownership of Land (Private, Govt., Forest)	Use of Land (Cultivation, plantation, barren)	Name of Crops	No. of trees under cutting/trimming	Types (Names) of trees to be cut
765 kV DC Line Virudhunagar – Coimbatore, Reach 1								
1A/0 to 1H/4	0 to 5	Valayapatti, Archanapuram, Koilvirarpatti, Endapul (Virudhunagar Taluk, Virudhunagar District)	125	Private lands (100%)	Cultivation (100%)	Cotton, Maize, Dhoor dal, Palmyrah	686	Neem, Morinda sp. (Manjanathi), Palmyrah, Tamarind, Drumstick, Teak, Others
1H/4 to 8/1	5 to 10	Kuppampatti, Kalangaperi, Minakshipuram, Maruluthu, Vaypputtanpatti (Virudhunagar Taluk, Virudhunagar District)	150	Private lands (93%), Government land (7%)	Cultivation (80%), Barren lands (13%), Pond (7%)	Cotton, Maize, Paddy	648	Neem, Coconut, Palmyrah, Pithecellobium (Kodikai), Others
8/1 to 12/1	10 to 15	Vaypputtanpatti, Maruluthu, Kasireddiapatti, Inam Reddiarpatti, Valavanthalpuram, Chinnathathampatti, Vadakkoor, M. Sevalpatti, Thathampatti, Periyathatampatti (Virudhunagar Taluk, Virudhunagar District)	115	Private lands (93%), Government barren land (7%)	Cultivation (64%), Barren lands (36%)	Cotton, Maize, Paddy	472	Neem, Coconut, Palmyrah, Pithecellobium (Kodikai), Teak, Banana, Others
12/1 to 15/3	15 to 20	Meesalur, Kavulur, Kumaralingapuram (Virudhunagar Taluk, Virudhunagar District)	200	Private lands (100%)	Cultivation (85%), Barren lands (15%)	Cotton, Lemon, Maize	511	Neem, Marinda sp (Manjanathi), Palmyrah, Tarmarind, Lemon, Guava, Others
15/3 to 18/3	20 to 25	Chandragiripuram, Chokkalingapuram, Seeniyapuram, Elakaipatti, Vadamalaikurichi (Virudhunagar Taluk, Virudhunagar District)	85	Private lands (77%), Government lands (23%)	Cultivation (54%), Barren lands (23%), Pond (23%)	Cotton, Maize	87	Neem, <i>Morinda</i> sp. (Manjanathi), Palmyrah, Tamarind, Others

From Tower No. to Tower No.	From Km to Km	Name of Village (Taluk/District)	Distance of line from nearby village/ho using (m)	Ownership of Land (Private, Govt., Forest)	Use of Land (Cultivation, plantation, barren)	Name of Crops	No. of trees under cutting/trimming	Types (Names) of trees to be cut
18/3 to 20/9	25 to 30	M. Pothanathi, Aadhanur, Thennamannalur (Thirumangalam Taluk, Madurai District),	250	Private lands (100%)	Cultivation (86%), Barren lands (14)	Coconut, Cotton, Maize	534	<i>Albizia</i> sp. (Vagai), Coconut, Drumstick, Guamuchil (<i>Pithecellobium</i> sp.), Guava, Lemon, <i>Morinda</i> sp. (Manjanathi), Neem, Palmyrah, Gum arabic (Karuvelam), Teak, Tamarind, <i>Zizphus</i> sp. (Ilanthai), Others
20/9 to 27/2	30 to 35	Thennamannalur, Muniyandipuram, Lalapuram (Thirumangalam Taluk, Madurai District),	85	Private lands (83), Government land (7%)	Cultivation (86%), Barren lands (14)	Brinjal, Sugar Cane, Paddy, Maize, Cotton	173	<i>Albizia</i> sp., Coconut, Drumstick, Fig, Guamuchil, Mango, <i>Morinda</i> sp., <i>Syzygium</i> sp., Neem, Palmyrah, Teak, Others
27/2 to 30/0	35 to 40	Puliyampatti, Genjampatti (Thirumangalam Taluk, Madurai District),	870	Private lands (100%)	Cultivation (100%)	Maize, Cotton	100	Neem, Palmyrah, Others
30/0 to 36/1	40 to 45	Gopalapuram, T. Pudhupatti, Thottiyapatti, Naduvakkotai (Thirumangalam Taluk, Madurai District),	380	Private lands (100%)	Cultivation (100%)	Coconut, Sapota, Maize, Palmyrah, Sunflower	704	<i>Albizia</i> sp. (Vagai), Coconut, Date Palm, Gooseberry, Guava, Gum arabic (Babul), Lemon, Mango, <i>Morinda</i> sp. (Manjanathi), Neem, Palmyrah, Pine, <i>Sesbania</i> sp. (Agathi), Teak, Yellow tree, Others
36/1 to 40/2	45 to 50	Naduvakkotai, Ponnampatti, Valaiyapatti, Ammapatti	250	Private lands (100%)	Cultivation (64%), Barren lands (36%)	Cotton, Maize	250	Coconut, Gum arabic (Babul), Neem, Palmyrah, Rose apple,

From Tower No. to Tower No.	From Km to Km	Name of Village (Taluk/District)	Distance of line from nearby village/ho using (m)	Ownership of Land (Private, Govt., Forest)	Use of Land (Cultivation, plantation, barren)	Name of Crops	No. of trees under cutting/trimming	Types (Names) of trees to be cut
		(Thirumangalam Taluk, Madurai District),						Sapota, <i>Sesbania</i> sp. (Agathi), Tamarind, Yellow tree, Others
40/2 to 47/6	50 to 55	Pannikundu, Puliyur, Kangayanattam (Thirumangalam Taluk, Madurai District),	120	Private lands (86%), Government lands (14%)	Cultivation (50%), Barren lands (50%)	Maize, Cotton, Paddy	367	Almonds, Coconut, Drumstick, Gum arabic (Babul), Mango, Neem, Palmyrah, Rose apple, <i>Sesbania</i> sp, Tamarind, Teak, Yellow tree, Others
47/6 to 53/1	55 to 60	P. Vagaikulam, Poruppumettupatti, (Thirumangalam Taluk, Madurai District); Thidiyan, Valangakulam (Usilampatti Taluk, Madurai District)	235	Private lands (73%), Government lands (27%)	Cultivation (73%), Pond (20%), Barren land (7%)	Maize, Cotton, Paddy	270	Coconut, Drumstick, Flag tree, Gooseberry, Guava, Gum arabic, Lemon, Neem, Sapota, <i>Sesbania</i> sp., Teak, Palmyrah, Tamarind, Yellow tree, Others
53/1 to 60/3	60 to 65	Paloothupatty, Nattamangalam, Uchapatti, Valandur, Sakkarapatti, Chokkathavanpatti, Kattakaruppanpatti, K. Nattupatti (Usilampatti Taluk, Madurai District)	62	Private lands (62.5%), Government lands (37.5%)	Cultivation (62.5%), Pond (21.25%), Barren land (6.25%)	Paddy, Sugarcane	3263	Almonds, Bhir, Casuarina, Coconut, Cotton, Drumstick, Flag tree, Gum arabic, Lemon, Mango, Neem, Tamarind, Teak, Yellow tree, Others,
60/3 to 62/0	65 to 70	Kattakaruppanpatti, K. Nattupatti, Sadachipatti, Sirupatti, Pudupatti, Pasukkarapatti, Thimanam (Usilampatti Taluk, Madurai District)	210	Private (86%), Government lands (14%)	Cultivation (86%), Barren land (7%), pond (7%)	Coconut, Cotton, Maize, Paddy	295	Almonds, Babul, Bhir, Coconut, Drumstick, King tree, Neem, Yellow tree, Others
62/0 to 69/2	70 to 75	Thimanam, Duraichampuram Pudhur, Puthukottai, Mondikundu, Kulathupatti, Ayyankovilpatti, Kamarajapuram (Usilampatti Taluk, Madurai District)	89	Private lands (100%)	Cultivation (100%)	Cotton, Jasmine, Maize, Paddy	491	Coconut, Banana, Drumstick, Lemon, Palmyrah, Tamarind, Mango, Teak, Neam, Babul, Others

From Tower No. to Tower No.	From Km to Km	Name of Village (Taluk/District)	Distance of line from nearby village/ho using (m)	Ownership of Land (Private, Govt., Forest)	Use of Land (Cultivation, plantation, barren)	Name of Crops	No. of trees under cutting/trimming	Types (Names) of trees to be cut
69/2 to 79/0	75 to 80	Kamarajapuram, Uthappanaickanoor, Paraipatti, Vadipatti (Usilampatti Taluk, Madurai District); Dharmarajapuram, Gopalpuram (Nilakkottai Taluk, Dindigul District)	25	Private lands (100%)	Cultivation (50%), Barren lands (50%)	Coconut, Drumstick, Jasmine, Maize	1535	Drumstick, Palmyrah, Coconut, Neam, Papaya, Teak, Guava, Babul, Others
79/0 to 83/1	80 to 85	Gopalpuram, Tharumathupatti, Nagainagar, Viralimayanpatti, Koniampatti, Viruveedu, Vatthalpatti, Ganapathipatti, Nadakottai (Nilakkottai Taluk, Dindigul District)	78	Private lands (93%), Government land (7%)	Cultivation (73%), Barren lands (27%)	Coconut, Cotton, Jasmine, Maize	1872	Babul, Bhir, Coconut, Drumstick, Flag tree, Gooseberry, Guava, Lemon, Neem, <i>Sesbania</i> , Tamarind, Teak, Yellow tree, Others
83/1 to 85/0	85 to 87	Nadakottai, Kullichettipatti, K. Lakshmipuram, Vadipatti (Nilakkottai Taluk, Dindigul District)	66	Private lands (100%)	Cultivation (100%)	Jasmine, Paddy	405	Babul, Coconut, Neem, Tamarind, Yellow tree, Others

765 kV DC line Virudhunagar – Coimbatore, Reach 2

AP 1 - 15	0-10	<ul style="list-style-type: none"> Lakshmipuram/ Nilakottai/ Dindigul Kullichettipatti/ Nilakottai/ Dindigul Pillayarnatham/ Nilakottai/ Dindigul 	200-400m	Private	Cultivable & Plantation	Maize Red gram Paddy	3679	Coconut, Neem Palmyra, Mango Guava, Swamp pea White Gulmohar Tamarind
AP 15 - 34	10-20	<ul style="list-style-type: none"> Silkvarpatti/ Nilakottai/ Dindigul Kattunayakanpatti/ Nilakottai/ Dindigul 	250-500m	Private	Cultivable	Maize Red gram	2063	Coconut, Neem Indian Gooseberry Palmyra, Gulmohar Tree of heaven Drumstick
AP 34 - 52	20-30	<ul style="list-style-type: none"> Sakkanayakanur/ Nilakottai/ Dindigul Kendichempatti/ Athoor/ Dindigul 	200-500m	Private	Cultivable	Paddy Maize Cotton	2752	Coconut, Teak Palmyra, Neem Indian Gooseberry DrumStick, Guava

From Tower No. to Tower No.	From Km to Km	Name of Village (Taluk/District)	Distance of line from nearby village/ho using (m)	Ownership of Land (Private, Govt., Forest)	Use of Land (Cultivation, plantation, barren)	Name of Crops	No. of trees under cutting/trimming	Types (Names) of trees to be cut
								Madras thorn White Gulmohar Mango
AP 52 - 65	30-40	<ul style="list-style-type: none"> Veerakal/ Athoor/ Dindigul Koothampatti/ Athoor/ Dindigul Konur/ Dindigul/ Dindigul 	200-500m	Private & Govt.	Cultivable & Barren	Paddy Maize Cotton	2141	Coconut, Palmyra Neem, Mango Tamarind White Gulmohar Guava
AP 65 - 74	40-50	<ul style="list-style-type: none"> Nettiyapatti/ Dindigul/ Dindigul Vadipatti/ Dindigul/ Dindigul Ramagoundan Patti/ Dindigul/ Dindigul 	400-600m	Private & Govt.	Cultivable & Barren	Maize	1394	Palmyra, Coconut Mango, Teak Tree of heaven Tamarind
AP 74 - 87	50-60	<ul style="list-style-type: none"> Muthunayanpatti/ Oddanchatram/ Dindigul Nadupatti/ Oddanchatram/ Dindigul 	200-400m	Private	Cultivable	Pumpkin Tobacco Maize	1867	Guava, Neem Coconut, Palmyra Tamarind Swamp pea Tree of heaven
AP 87 - 96	60-70	<ul style="list-style-type: none"> Nagappanpatti/ Oddanchatram/ Dindigul Nachiyappangoundan Valasu/ Oddanchatram/ Dindigul 	250-400m	Private & Govt.	Cultivable & Barren	Maize Rice Snake guard	1552	Coconut, Neem Tamarind, Palmyra DrumStick, Banyan
AP 96 - 109	70-80	<ul style="list-style-type: none"> Chinnaiyagoundan Valasu/ Oddanchatram/ Dindigul Kaligoundanpatti/ Oddanchatram/ Dindigul 	300-700m	Private	Cultivable	Sorgham Red gram Jasmine	1761	Banyan, Coconut Indian Gooseberry Tamarind, Neem Mango, Guava Palmyra
AP 109 - 120	80-95	<ul style="list-style-type: none"> Perumal Koil Valasu/ Oddanchatram/ Dindigul 	300-600m	Private	Cultivable & Barren	Sorgham Jasmine	1497	Coconut, Neem Drumstick, Tamarind Madras thorn Gulmohar, Mango
765 kV DC line Virudhunagar – Coimbatore, Reach 3								
AP 1 to 7/1	0 to 5	Salakkadai, Koneripatti, Ponnivadi (Dharapuram Taluk, Tiruppur District)	245	Private (93.3%), Government (6.7%)	Cultivation (40%), Plantation (53.3%), Barren (6.7%)	Drumstick, Oleander or Nerium, Chilly, Onion, Coconut,	755	Palmyrah, Mango, Coconut, Drumstick, Bamboo

From Tower No. to Tower No.	From Km to Km	Name of Village (Taluk/District)	Distance of line from nearby village/ho using (m)	Ownership of Land (Private, Govt., Forest)	Use of Land (Cultivation, plantation, barren)	Name of Crops	No. of trees under cutting/trimming	Types (Names) of trees to be cut
						Maize		
7/1 to AP 12	5 to 10	Karungalivalasu, Kolathupalayam, Nallampalayam, Alampalayam (Dharapuram Taluk, Tiruppur District)	145	Private (100%)	Cultivation (57%), Plantation (43%)	Drumstick, Chilly, Onion, Maize, Oleander, Brinjal, Cucumber, Paddy	1130	Coconut, Palmyrah, Tamarind, Drumstick, Gum Arabic tree
AP 12 to 17/1	10 to 15	Alampalayam, Sankarandampalayam, Aathukaal Pudur (Dharapuram Taluk, Tiruppur District),	450	Private (93%), Government (7%)	Cultivation (29%), Plantation (64%), Barren (7%)	Coconut, Paddy, Mango, Chilly, Drumstick, Brinjal	1724	Coconut, Mango, Bamboo, Palmyrah
17/1 to 22/1	15 to 20	Sankarandampalayam, Chirukinar, S. Aalampalayam (Dharapuram Taluk, Tiruppur District)	115	Private (100%)	Cultivation (93%), Plantation (7%)	Brinjal, Chilly, Mango	639	Palmyrah, Coconut, Mango
22/1 to AP 28	20 to 25	Bongandurai (Dharapuram Taluk, Tiruppur District), Mudalipalayam, Vanavarayan Nallur (Kangayam Taluk, Tiruppur District)	78	Private (86.7%), Government (13.3%)	Cultivation (73.4%), Plantation (13.3%), Barren (13.3%)	Chilly, Maize, Coconut, Brinjal, Onion, Coconut	694	Gum Arabic tree, Tamarind, Palmyrah, Coconut, Neem, Drumstick
AP 28 to AP 36	25 to 30	Mudalipalayam, Uthiyur, Theethanvalasu, Mookkanankottai, Nagarasunallur (Kangayam Taluk, Tiruppur District)	225	Private (86.7%), Government (13.3%)	Cultivation (100%)	Maize	606	Coconut, Tamarind
AP 36 to 41/2	30 to 35	Uthiyur, Vattamalai (Kangayam Taluk, Tiruppur District)	65	Private (86%), Government (14%)	Cultivation (64%), Plantation (22%), Barren (14%)	Maize, Coconut	1255	Coconut, Gum Arabic tree, Neem
41/2 to AP 52	35 to 40	Vattamalai, Vadachinnaripalayam, Kadaiyur (Kangayam Taluk, Tiruppur District)	57	Private (100%)	Cultivation (19%), Plantation (62%), Barren (19%)	Maize, Coconut, Green gram	2101	Neem, Coconut, Gum Arabic tree
AP 52 to AP 59	40 to 45	Kadaiyur, Sambandampalayam, Sivanmalai, Sikkarasampalayam (Kangayam Taluk, Tiruppur District)	163	Private (100%)	Cultivation (93%), Plantation (7%)	Maize, Green gram, Coconut	782	Coconut, Tamarind, Neem, Gum Arabic tree

From Tower No. to Tower No.	From Km to Km	Name of Village (Taluk/District)	Distance of line from nearby village/ho using (m)	Ownership of Land (Private, Govt., Forest)	Use of Land (Cultivation, plantation, barren)	Name of Crops	No. of trees under cutting/trimming	Types (Names) of trees to be cut
AP 59 to AP 73	45 to 55	Note: The tower locations between AP 59 to AP 73 are not yet approved						
AP 73 to 75/9	55 to 60	Kathankanni, Vadugapalayam (Kangeyam Taluk, Tiruppur District), Pallavarayanpalayam (Avanashi Taluk, Tiruppur District),	65	Private (100%)	Cultivation (85%), Plantation (15%)	Maize, Green gram	1487	Coconut, Neem, Gum Arabic tree
75/9 to AP 80	60 to 65	Theneeswaran Palayam, Punjai Uthukuli, Reddipalayam (Avanashi Taluk, Tiruppur District)	250	Private (100%)	Cultivation (88%), Plantation (12%)	Maize, Green gram, Coconut	722	Coconut, Neem, Gum Arabic tree
AP 80 to 92 (Includes some unapproved tower location)	65 to 70	Puthur Pallapalayam, Sengalipalayam, Attavanai Pallagoundanpalayam, (Avanashi Taluk, Tiruppur District)	220	Private Government (AP 91 and AP 92 falls on both govt & private land)	Plantation (29%), Barren (71%)	Coconut	1240	Coconut, Neem, Gum Arabic tree
AP 92 to Coimbatore SS	70 to 72	The tower locations between AP 92 to SS are not yet approved						
400 kV DC line Virudhunagar - Kayathar								
1/0 to 4/5	0 km to 5 km	Kottur, Appayyanayakkanpatti (Virudhunagar taluk, Virudhungan District)	1030	Private (94%), Government open land (covered of shrubs and herbs-6%)	Cultivation (81%) and barren (19%) lands	Black gram	2	<i>Acacia nilotica</i> (Babul)
5/0 to 8/8	5 km to 10 km	Nallamanayakanpatti, Kundalakuttu (Sattur taluk, Virudhungan District)	800	Private (100%)	Cultivation (86%) and barren (14%) lands	Black gram	12	Neem
9/0 to	10 km	Nathathupatti, Melamadai,	360	Private (71%)	Cultivation (59%),	Black gram	30	Guava, Lemon,

From Tower No. to Tower No.	From Km to Km	Name of Village (Taluk/District)	Distance of line from nearby village/ho using (m)	Ownership of Land (Private, Govt., Forest)	Use of Land (Cultivation, plantation, barren)	Name of Crops	No. of trees under cutting/trimming	Types (Names) of trees to be cut
12/6	to 15 km	Irukkandkudi (Sattur taluk, Virudhungar District)		and Government land (ponds and river bank-29%)	barren (12%) lands, ponds and river bank (29%)			Papaya
13/0 to 14/2	15 km to 20 km	Irukkangudi, Ayyampatti (Sattur taluk, Virudhungar District)	500	Private (85%) and Government open land (covered of shrubs and herbs, lake – 15%)	Cultivation (77%), barren (15%) lands and lake (8%)	Eucalyptus, Maize	84	Eucalyptus
15/0 to 18/4	20 km to 25 km	Nallamuthanpatti, Uppaththur (Sattur taluk, Virudhungar District)	350	Private (100%)	Cultivation lands (100%)	Black gram, Sesbania, Cotton, Maize, Coconut	7	Coconut
19/0 to 29/0	25 km to 30 km	Kadalaiyur, Urulaikudi, Varathampatti (Ettayapuram taluk, Thoothukudi District)	310	Private (100%)	Cultivation (94%) and barren (6%) lands	Maize, Black gram, Cotton, Sesame, Pearl millet,	11	Coconut, Palm
30/0 to 34/10	30 km to 35 km	Kadalaiyur, Sinnamalaikundru, K. Pudhur (Ettayapuram taluk, Thoothukudi District)	560	Private (100%)	Cultivation (91%) and barren (9%) lands	Maize, Black gram, Green gram, Castor, Cotton, Palm, Coconut	10	Coconut, Palm
35/0 to 35/5	35 km to 40 km	Kodukkamparai (Kovilpatti taluk, Thoothukudi District)	660	Private (100%)	Cultivation lands (100%)	Maize, Black gram, Sorghum	2	Neem, <i>Acacia nilotica</i> (Babul)
36/0 to 40/5	40 km to 45 km	Kodukkamparai, Elanthapatti, Theethanpatti, Koppampatti (Kovilpatti taluk, Thoothukudi District)	600	Private (100%)	Cultivation (89%) and barren (11%) lands	Black gram, Maize, Palmyrah, Coconut	12	Palm, Coconut
41/0 to 43/2	45 km to 50 km	Pudhupatti, TherkuVandanam (Kovilpatti taluk, Thoothukudi District)	380	Private (89%) and Government land (near	Cultivation (78%), barren (11%) lands and canal (11%)	Maize, Palmyrah, Blackgram	0	

From Tower No. to Tower No.	From Km to Km	Name of Village (Taluk/District)	Distance of line from nearby village/ho using (m)	Ownership of Land (Private, Govt., Forest)	Use of Land (Cultivation, plantation, barren)	Name of Crops	No. of trees under cutting/trimming	Types (Names) of trees to be cut
				canal-11%)				
44/0 to 45/5	50 km to 55 km	Kadambur, Chokkalingapuram (Kovilpatti taluk, Thoothukudi District)	500	Private (100%)	Cultivation lands (100%)	Black gram	13	<i>Acacia nilotica</i> (Babul)
46/0 to 50/2	55 km to 60 km	Kodangal, Onmakulam, Elavalainkal (Ottapidaram taluk, Thoothukudi District)	1600	Private (100%)	Cultivation (86%) and barren (14%) lands	Black gram, Cotton	5	Neem
51/0 to 58/1	60 km to 65 km	Iravanpatti, Malaipatti, Parivilikottai, Thennampatti (Ottapidaram taluk, Thoothukudi District)	900	Private (92%) and Government land (pond-8%)	Cultivation lands (92%), and pond (8%)	Black gram, Maize, Papaya, Palmyrah	5	Palm
59/0 to 73/0	65 km to 70 km	Kottali, Thennampatti, Govindapuram (Ottapidaram taluk, Thoothukudi District)	670	Private (100%)	Cultivation (93%) and barren (7%) lands	Black gram, Sesbania, Palmyrah, Maize, Casuarina plantation, Banana	15	Palm, Casuarina
400 kV DC line Kamuthi – Ottapidaram								
AP 1 - 13	0 – 10 km	Mudhainadu/ Kamuthi / Ramanathapuram Kallakari/ Aruppukottai / Virudhunagar Seemanendal/ Kamuthi/ Ramanathapuram Purasalur/ Aruppukottai/ Virudhunagar	230m	Private	Cultivation	Chilli, Onion,	8	Coconut Tree
AP 13 – 20	10 – 20 km	Kallakari/ Aruppukottai/ Virudhunagar Keelkudi/ Aruppukottai/ Virudhunagar Thimmanathapuram/ Kamuthi/ Ramanathapuram	600m	Private	Cultivation	Onion, Chilli, Maize, Black gram	5	Coconut Tree
AP 20 –	20 –	Thimmanathapuram/ Kamuthi/	330m	Private	Cultivation	Chilli,	0	-

From Tower No. to Tower No.	From Km to Km	Name of Village (Taluk/District)	Distance of line from nearby village/ho using (m)	Ownership of Land (Private, Govt., Forest)	Use of Land (Cultivation, plantation, barren)	Name of Crops	No. of trees under cutting/trimming	Types (Names) of trees to be cut
26	30 km	Ramanathapuram P.M puram/ Kamuthi/ Ramanathapuram Chinnoor/ Vilathikulam/ Thoothukudi Inam Vadamalapuram/ Vilathikulam/ Thoothukudi Sundarapachaiyapuram/ Vilathikulam/ Thoothukudi				Cotton, Maize		
AP 26 – 33	30 – 40 km	Sundarapachaiyapuram/ Vilathikulam/ Thoothukudi Ramachandrapuram/ Vilathikulam/ Thoothukudi Keelavilathikulam/ Vilathikulam/ Thoothukudi Vilathikulam/ Vilathikulam/ Thoothukudi	550m	Private	Cultivation	Maize, Jasmine	15	Coconut Tree Palm Tree
AP 33 – 43	40 – 50 km	Kottanatham/ Vilathikulam/ Thoothukudi Keelavilathikulam/ Vilathikulam/ Thoothukudi Mandhikulam/ Vilathikulam/ Thoothukudi Ayan Sengalpadai/Vilathikulam/ Thoothukudi Marthandampatti/ Vilathikulam/ Thoothukudi	300m	Private	Cultivation	Maize, Jasmine	93	Coconut Tree Palm Tree
AP 43 – 48	50 – 60 km	Marthandampatti/ Vilathikulam/ Thoothukudi Sakkammal Puram/ Vilathikulam/ Thoothukudi T.Subbaiahpuram / Vilathikulam/ Thoothukudi Veerapandiyapuram/ Vilathikulam/	450m	Private	Cultivation	Maize, Jasmine	10	Palm Tree

From Tower No. to Tower No.	From Km to Km	Name of Village (Taluk/District)	Distance of line from nearby village/ho using (m)	Ownership of Land (Private, Govt., Forest)	Use of Land (Cultivation, plantation, barren)	Name of Crops	No. of trees under cutting/trimming	Types (Names) of trees to be cut
		Thoothukudi Mullur Muthukumarapuram/ Ottapidaram/ Thoothukudi Kollam Parumpu/ Ottapidaram/ Thoothukudi Chandragiri/ Ottapidaram/ Thoothukudi						
AP 48 - Gantry	60 – 71 km	Chandragiri/ Ottapidaram/ Thoothukudi S.Kumarapuram/ Ottapidaram/ Thoothukudi Kakkarampatti/ Ottapidaram/ Thoothukudi Mella Lakshmpuram/ Ottapidaram/ Thoothukudi	450m	Private	Cultivation	Maize, Jasmine, Blackgram	59	Palm Tree, Coconut Tree
400 kV DC line Udangudi – Ottapidaram								
AP 1 - 16	0 – 10 km	Kallamoli/ Tiruchendur/ Thoothukudi Ganeshapuram/ Tiruchendur/ Thoothukudi Mela Tiruchendur/ Tiruchendur/ Thoothukudi	450m	Private	Cultivation	Rice	0	
AP 16 – 29	10 – 20 km	Ammanpuram/ Tiruchendur/ Thoothukudi Vannimanagaram/ Eral/ Thoothukudi	170m	Private	Plantation	Rice	535	Banana
AP 29 – 44	20 – 30 km	Kurukattoor/ Eral/ Thoothukudi Puraiyur/ Eral/ Thoothukudi Rajapathy/ Eral/ Thoothukudi MaavadiPannai/ Eral/ Thoothukudi	200m	Private	Plantation	Jasmine, Chilli	2416	Banana Coconut
AP 44 – 56	30 – 40 km	Mangalakurichi/ Eral/ Thoothukudi Srimoolakarai/ Srivaikundam/ Thoothukudi	230m	Private	Plantation & Cultivation	Maize	2466	Banana Coconut Tree Palm Tree

From Tower No. to Tower No.	From Km to Km	Name of Village (Taluk/District)	Distance of line from nearby village/ho using (m)	Ownership of Land (Private, Govt., Forest)	Use of Land (Cultivation, plantation, barren)	Name of Crops	No. of trees under cutting/trimming	Types (Names) of trees to be cut
AP 56 – 65	40 – 50 km	Chettimallanpatti/ Srivaikundam/ Thoothukudi Varthagareddipatti/ Thoothukudi/ Thoothukudi Ellainayakkanpatti/ Srivaikundam/ Thoothukudi Thimmarajapuram/ Thoothukudi/ Thoothukudi	300m	Private	Cultivation	Maize	26	Coconut Tree Palm Tree
AP 65 – 81	50 – 60 km	Thimmarajapuram/ Thoothukudi/ Thoothukudi Ramasampuram/ Thoothukudi/ Thoothukudi Umarikottai/ Thoothukudi/ Thoothukudi	480m	Private	Cultivation	Maize, Black gram Pearl Millet	78	Coconut Tree Palm Tree
AP 81 - Gantry	60 – 68 km	Umarikottai/ Thoothukudi/ Thoothukudi Puthiyamputhur/ Ottapidaram/ Thoothukudi Saminatham/ Ottapidaram/ Thoothukudi	140m	Private	Cultivation	Maize	13	Coconut Tree Palm Tree

230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS

AP 1 to AP 4	0 to 1	Melmaruthur (Ottapidaram Taluk, Thoothukkudi District)	182	Private (100%)	Cultivation (80%), barren land (20%)	Pearl millet, Sesame, Maize	1	Neem
AP 4 to 6/2	1 to 2	Melmaruthur (Ottapidaram Taluk, Thoothukkudi District)	2200	Private (100%)	Cultivation (100%)	Pearl millet, Maize	Nil	
6/2 to 7/3	2 to 3	Melmaruthur, Kurukkusalai (Ottapidaram Taluk, Thoothukkudi District)	1236	Private (100%)	Barren lands (100%)	Nil	Nil	
7/3 to AP 9	3 to 4	Kurukkusalai(Ottapidaram Taluk, Thoothukkudi District)	645	Private (100%)	Cultivation (25%), barren lands (75%)	Pearl millet	1	Neem
AP 9 to 12/1	4 to 5	Kurukkusalai (Ottapidaram Taluk, Thoothukkudi District)	200	Private (100%)	Cultivation (25%), barren lands (75%)	Maize	Nil	
12/1 to	5 to 6	Kurukkusalai, Perianatham	176	Private	Cultivation (75%),	Sesame, Pearl	Nil	

From Tower No. to Tower No.	From Km to Km	Name of Village (Taluk/District)	Distance of line from nearby village/ho using (m)	Ownership of Land (Private, Govt., Forest)	Use of Land (Cultivation, plantation, barren)	Name of Crops	No. of trees under cutting/trimming	Types (Names) of trees to be cut
AP 14		(Ottapidaram Taluk, Thoothukkudi District)		(100%)	barren lands (25%)	millet, Paddy		
AP 14 to AP 18	6 to 7	Perianatham, Sinthalakattai (Ottapidaram Taluk, Thoothukkudi District)	193	Private (50%), Government (50%, pond)	Cultivation (25%), barren lands (25%), pond (50%)	Paddy	Nil	
AP 18 to AP 19	7 to 8	Sinthalakattai, M. Subramaniapuram (Ottapidaram Taluk, Thoothukkudi District)	238	Private (100%)	Cultivation (100%)	Pearl millet	5	Neem, Palmyrah
AP 19 to AP 21	8 to 9	M. Subramaniapuram, Laxmipuram (Ottapidaram Taluk, Thoothukkudi District)	180	Private (100%)	Cultivation (100%)	Pearl millet	1	Neem
AP 21 to AP 23	9 to 10	Laxmipuram (Ottapidaram Taluk, Thoothukkudi District)	102	Private (100%)	Cultivation (100%)	Pearl millet, Cotton	2	Neem, Palmyrah
AP 23 to AP 29	10 to 11	Laxmipuram (Ottapidaram Taluk, Thoothukkudi District)	190	Private (100%)	Cultivation (100%)	Pearl millet	4	Neem, Palmyrah
230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram								
AP 1 to AP 3	0 to 1	Sindalakattai (Ottapidaram Taluk, Thoothukkudi District)	486	Private (100%)	Cultivation (100%)	Pearl millet	10	Prosopis juliflora
AP 3 to AP 7	1 to 2	Sindalakattai (Ottapidaram Taluk, Thoothukkudi District)	209	Private (100%)	Cultivation (100%)	Pearl millet, Cotton, Maize	24	Neem, Palmyrah, Prosopis juliflora
AP 7 to AP 9	2 to 3	M. Subramaniapuram (Ottapidaram Taluk, Thoothukkudi District)	52	Private (100%)	Cultivation (100%)	Pearl millet, Black gram	8	Prosopis juliflora
AP 9 to AP 13	3 to 4	Lakshmpuram (Ottapidaram Taluk, Thoothukkudi District)	240	Private (100%)	Cultivation (80%), barren (20%)	Pearl millet, Maize	3	Neem, Prosopis juliflora
AP 13 to AP 16	4 to 5	Lakshmpuram (Ottapidaram Taluk, Thoothukkudi District)	238	Private (100%)	Cultivation (71%), barren lands (29%)	Pearl millet, Maize	15	Prosopis juliflora, Palmyrah
AP 16 to AP 19	5 to 6	Lakshmpuram (Ottapidaram Taluk, Thoothukkudi District)	658	Private (100%)	Cultivation (100%)	Maize, Pearl millet, Black gram	3	Palmyrah
110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS								
AP 1 to	0 to 1	Sangaraperi (Ottapidaram Taluk,	775	Private	Barren lands	--	18	Palmyrah, Prosopis

From Tower No. to Tower No.	From Km to Km	Name of Village (Taluk/District)	Distance of line from nearby village/ho using (m)	Ownership of Land (Private, Govt., Forest)	Use of Land (Cultivation, plantation, barren)	Name of Crops	No. of trees under cutting/trimming	Types (Names) of trees to be cut
3/2		Thoothukkudi District)		(60%), Government (40%, SIPCOT land)	(100%)			juliflora
3/2 to 4/2	1 to 2	Sillanatham (Ottapidaram Taluk, Thoothukkudi District)	1558	Government (100%, SIPCOT land)	Barren lands (100%)	--	13	Prosopis juliflora
4/2 to AP 7	2 to 3	Sillanatham (Ottapidaram Taluk, Thoothukkudi District)	1328	Private (75%), Government (25%, SIPCOT land)	Barren lands (100%)	--	7	Palmyrah, Prosopis juliflora, Kattumaram
AP 7 to AP 9	3 to 4	Sillanatham (Ottapidaram Taluk, Thoothukkudi District)	900	Private (100%)	Cultivation (25%), barren lands (75%)	Pearl millet	10	Prosopis juliflora
AP 9 to 10/1	4 to 5	Sillanatham, Saminatham (Ottapidaram Taluk, Thoothukkudi District)	856	Private (100%)	Cultivation (100%)	Pearl millet	5	Palmyrah, Kattumaram, Neem
10/1 to 12/2	5 to 6	Saminatham (Ottapidaram Taluk, Thoothukkudi District)	167	Private (100%)	Cultivation (100%)	Pearl millet, Black gram	10	Prosopis juliflora, Neem
12/2 to AP 17	6 to 7	Saminatham (Ottapidaram Taluk, Thoothukkudi District)	145	Private (100%)	Barren lands (100%)	--	21	Prosopis juliflora, Palmyrah
AP 17 to AP 22	7 to 8	Saminatham (Ottapidaram Taluk, Thoothukkudi District)	246	Private (100%)	Barren lands (100%)	--	33	Prosopis juliflora, Neem
AP 22 to AP 26	8 to 9	Saminatham (Ottapidaram Taluk, Thoothukkudi District)	700	Private (100%)	Barren land (16.7%), Cultivation (83.3%)	Pearl millet, Maize, Black gram	16	Prosopis juliflora, Neem, Palmyrah
110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS								
AP 1 to 17/1	0 to 5	Lakshmpuram, Ottapidaram, Therkkku Avarankadu, Governerkiri (Ottapidaram Taluk, Thoothukkudi	161	Private lands (96%), Government	Cultivation (96%), barren land (4%)	Pearl millet, Black gram, Maize	53	Eucalyptus, Prosopis juliflora, Neem, Palmyrah,

From Tower No. to Tower No.	From Km to Km	Name of Village (Taluk/District)	Distance of line from nearby village/ho using (m)	Ownership of Land (Private, Govt., Forest)	Use of Land (Cultivation, plantation, barren)	Name of Crops	No. of trees under cutting/trimming	Types (Names) of trees to be cut
		District)		lands (4%)				Tamarind
17/1 to 24/1	5 to 10	Governerkiri, Vellaram (Ottapidaram Taluk, Thoothukkudi District)	320	Private lands (84%), Government lands (16%)	Cultivation (84%), barren lands (16%)	Pearl millet, Maize	39	Eucalyptus, Prosopis juliflora, Neem, Palmyrah
24/1 to 27/5	10 to 15	Vellaram, B. Duraisampuram, Pasuvanathanai (Ottapidaram Taluk, Thoothukkudi District)	1190	Private lands (84%), Government lands (16%)	Cultivation (84%), barren lands (16%)	Groundnut, pearl millet, Maize	32	Prosopis juliflora, Neem, Palmyrah
27/5 to 38/1	15 to 20	Pasuvanathanai (Ottapidaram Taluk, Thoothukkudi District), Bommaipuram, Sevalpatti (Kayathar Taluk, Thoothukkudi District)	318	Private lands (95%), Government lands (5%)	Cultivation (95%), barren lands (5%)	Maize, Paddy, Black gram	38	Coconut, Prosopis juliflora, Lemon, Neem, Palmyrah, Tamarind
38/1 to AP 47	20 to 25	Sevalpatti, Tottampatti, Salnayakkan patti, Ettunayakkanpatti (Kayathar Taluk, Thoothukkudi District)	250	Private lands (62%), Government lands (38%)	Private lands (62%), Government lands (38%)	Pearl millet, Black gram	49	Prosopis juliflora, Neem, Palmyrah
AP 47 to 53/4	25 to 30	Kamanaickenpatti, Ettunayakkanpatti, Duraiyur (Kayathar Taluk, Thoothukkudi District), Erachi (Kovilpatti Taluk, Thoothukkudi District)	308	Private lands (84%), Government lands (16%)	Cultivation (84%), barren lands (16%)	Pearl millet, Black gram, Groundnut	51	Coconut, Drumstick, Prosopis juliflora, Neem, Palmyrah
53/4 to AP 60	30 to 35	Duraiyur, Kodukamparai, Vijayapuri (Kovilpatti Taluk, Thoothukkudi District)	515	Private lands (85%), Government lands (15%)	Cultivation (85%), barren lands (15%)	Pearl millet	38	Eucalyptus, Prosopis juliflora, Neem, Palmyrah, Tamarind
110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS								
AP 1/0 to AP 5/0	0 km to 1.0 km	K. Meenatchipuram	318	Private land (100%)	Cultivation (100%)	Black gram, Maize	10	Palmyrah, Neem, Prosopis juliflora

From Tower No. to Tower No.	From Km to Km	Name of Village (Taluk/District)	Distance of line from nearby village/ho using (m)	Ownership of Land (Private, Govt., Forest)	Use of Land (Cultivation, plantation, barren)	Name of Crops	No. of trees under cutting/trimming	Types (Names) of trees to be cut
AP 5/0 to AP 9/0	1.0 to 2.0 km	K. Meenatchipuram	89	Private land (100%)	Cultivation (100%)	Maize, Pearl millet	9	Palmyrah, Prosopis juliflora
AP 9 to 11/1	2.0 to 3.0 km	Lakshmipuram	320	Private land (100%)	Cultivation (100%)	Pearl millet	8	Palmyrah, Neem, Prosopis juliflora
11/1 to AP 13/0	3.0 to 3.3 km	Lakshmipuram	560	Private land (100%)	Cultivation (100%)	Pearl millet, maize	7	Palmyrah, Neem, Prosopis juliflora

ANNEXURE 3: GPS COORDINATES OF LOCATIONS OF TOWERS

765 kV DC line Virudhunagar – Coimbatore, Reach 1

Sl. No.	Loc. No.	Type of Tower	Span (mtrs)	UTM Coordinate (Zone - 43P)		Spherical Coordinates	
				Easting	Northing	Longitude	Latitude
0		GANTRY		829572.03	1046515.87	78°00'03.55"E	9°27'16.07"N
			150				
1	AP1	DDS+0		829573.75	1046665.87	78°00'03.65"E	9°27'20.95"N
			300				
2	AP2	DDS+0		829515.73	1046960.2	78°00'01.84"E	9°27'30.54"N
			380				
3	AP3	DCS+0		829182.93	1047143.63	77°59'50.99"E	9°27'36.59"N
			280				
4	3/1	DAS+3		828816.273	1047205.271	77°59'39.00"E	9°27'38.70"N
			410				
5	AP4	DDS+25		828502.81	1047257.97	77°59'28.75"E	9°27'40.50"N
			217				
6	AP5	DDS+25		828285.53	1047251.134	77°59'21.63"E	9°27'40.34"N
			371				
7	AP6	DDS+18		827946.99	1047403.56	77°59'10.58"E	9°27'45.39"N
			398				
8	6/1	DAS+6		827578.885	1047554.883	77°58'58.57"E	9°27'50.41"N
			362				
9	6/2	DAS+3		827244.073	1047692.524	77°58'47.64"E	9°27'54.98"N
			372				
10	AP7	DDS+0		826899.92	1047834	77°58'36.41"E	9°27'59.68"N
			399				
11	AP8	DDS+18		826672.02	1048161.46	77°58'29.04"E	9°28'10.39"N
			283				
12	AP9	DCS+9		826612.1	1048437.79	77°58'27.15"E	9°28'19.39"N
			370				
13	9/1	DAS+0		826398.099	1048739.621	77°58'20.23"E	9°28'29.27"N
			310				
14	9/2	DAS+0		826218.802	1048992.51	77°58'14.43"E	9°28'37.54"N
			330				
15	9/3	DAS+0		826027.938	1049261.714	77°58'08.25"E	9°28'46.35"N
			330				
16	9/4	DAS+0		825837.074	1049530.918	77°58'02.08"E	9°28'55.15"N
			360				
17	AP10	DCS+3		825628.89	1049824.56	77°57'55.34"E	9°29'04.76"N
			370				
18	10/1	DAS+0		825342.064	1050058.291	77°57'46.01"E	9°29'12.44" N
			380				
19	10/2	DAS+3		825047.488	1050298.344	77°57'36.43"E	9°29'20.33"N
			377				

20	AP11	DDS+0		824755.536	1050536.259	77°57'26.93"E	9°29'28.15"N
			360				
21	11/1	DAS+3		824607.969	1050864.6	77°57'22.19"E	09°29'38.79"N
			319				
22	11/2	DAS+3		824477.684	1051155.78	77°57'18.00"E	09°29'48.27"N
			345				
23	11/3	DAS+0		824336.78	1051470.7	77°57'13.48"E	09°29'58.55"N
			340				
24	11/4	DAS+0		824197.918	1051781.277	77°57'9.01"E	09°30'8.69"N
			340				
25	AP12	DDS+0		824057.106	1052096.001	77°57'4.49"E	09°30'18.96"N
			297				
26	AP13	DCS+9		823789.968	1052226.431	77°56'55.78"E	09°30'23.28"N
			268				
27	AP14	DDS+9		823582.586	1052395.95	77°56'49.03"E	09°30'28.85"N
			235				
28	AP15	DDS+9		823349.732	1052429.589	77°56'41.41"E	09°30'30.00"N
			265				
29	AP16	DDS+6		823097.365	1052510.922	77°56'33.17"E	09°30'32.72"N
			243				
30	AP17	DDS+6		822868.472	1052592.596	77°56'25.69"E	09°30'35.44"N
			390				
31	17/1	DAS+6		822609.222	1052882.744	77°56'17.28"E	09°30'44.95"N
			385				
32	17/2	DAS+0		822356.346	1053173.052	77°56'9.08"E	09°30'54.46"N
			225				
33	AP18	DCS+6		822208.571	1053342.702	77°56'4.29"E	09°31'0.01"N
			207				
34	AP19	DCS+9		822056.596	1053482.529	77°55'59.35"E	09°31'4.60"N
			399				
35	19/1	DAS+0		821810.349	1053796.477	77°55'51.37"E	09°31'14.88"N
			371				
36	19/2	DAS+3		821581.382	1054088.393	77°55'43.95"E	09°31'24.44"N
			390				
37	19/3	DAS+3		821340.698	1054395.247	77°55'36.15"E	09°31'34.48"N
			370				
38	19/4	DAS+6		821112.339	1054686.389	77°55'28.75"E	09°31'44.01"N
			395				
39	19/5	DAS+0		820868.561	1054997.19	77°55'20.85"E	09°31'54.19"N
			400				
40	19/6	DAS+6		820621.696	1055311.924	77°55'12.85"E	09°32'4.49"N
			400				
41	19/7	DAS+0		820374.832	1055626.659	77°55'4.85"E	09°32'14.79"N
			375				
42	19/8	DAS+3		820143.396	1055921.723	77°54'57.35"E	09°32'24.45"N
			394				
43	AP20	DDS+9		819894.162	1056239.478	77°54'49.27"E	09°32'34.85"N

			219				
44	AP21	DDS+9		819786.189	1056407.05	77°54'45.78"E	09°32'40.33"N
			380				
45	21/1	DAS+3		819542.501	1056711.544	77°54'37.78"E	09°32'50.30"N
			380				
46	21/2	DAS+0		819305.062	1057008.23	77°54'30.18"E	09°33'0.01"N
			372				
47	21/3	DAS+3		819072.622	1057298.67	77°54'22.65"E	09°33'9.52"N
			364				
48	AP22	DDS+0		818845.312	1057582.699	77°54'15.28"E	09°33'18.82"N
			380				
49	22/1	DAS+3		818850.055	1057962.669	77°54'15.54"E	09°33'31.18"N
			380				
50	22/2	DAS+0		818854.797	1058342.64	77°54'15.80"E	09°33'43.53"N
			380				
51	22/3	DAS+3		818859.54	1058722.61	77°54'16.06"E	09°33'55.89"N
			380				
52	22/4	DAS+0		818864.283	1059102.581	77°54'16.32"E	09°34'8.24"N
			399				
53	22/5	DAS+6		818869.263	1059501.55	77°54'16.59"E	09°34'21.21"N
			399				
54	AP23	DBS+3		818874.243	1059900.518	77°54'16.87"E	09°34'34.19"N
			342				
55	AP24	DBS+3		818878.515	1060242.808	77°54'17.10"E	09°34'45.32"N
			370				
56	24/1	DAS+3		818953.978	1060605.031	77°54'19.67"E	09°34'57.07"N
			389				
57	24/2	DAS+0		819033.316	1060985.854	77°54'22.38"E	09°35'9.44"N
			393				
58	24/3	DAS+3		819113.47	1061370.594	77°54'25.11"E	09°35'21.93"N
			397				
59	24/4	DAS+3		819194.44	1061759.249	77°54'27.87"E	09°35'34.54"N
			394				
60	24/5	DAS+3		819274.798	1062144.967	77°54'30.61"E	09°35'47.06"N
			400				
61	AP25	DDS+3		819356.367	1062536.501	77°54'33.39"E	09°35'59.77"N
			389				
62	25/1	DAS+3		819224.075	1062902.315	77°54'29.16"E	09°36'11.70"N
			399				
63	25/2	DAS+6		819088.382	1063277.533	77°54'24.82"E	09°36'23.94"N
			400				
64	AP26	DBS+3		818952.502	1063653.267	77°54'20.47"E	09°36'36.20"N
			392				
65	26/1	DAS+3		818867.944	1064036.038	77°54'17.81"E	09°36'48.67"N
			392				
66	26/2	DAS+3		818783.387	1064418.81	77°54'15.14"E	09°37'1.14"N
			392				

67	26/3	DAS+3		818698.829	1064801.581	77°54'12.48"E	09°37'13.61"N
			390				
68	AP27	DDS+3		818614.622	1065182.764	77°54'9.82"E	09°37'26.03"N
			386				
69	27/1	DAS+3		818759.742	1065540.446	77°54'14.68"E	09°37'37.62"N
			386				
70	27/2	DAS+0		818904.862	1065898.127	77°54'19.53"E	09°37'49.21"N
			390				
71	27/3	DAS+3		819051.485	1066259.516	77°54'24.44"E	09°38'0.93"N
			393				
72	27/4	DAS+3		819199.237	1066623.684	77°54'29.38"E	09°38'12.73"N
			376				
73	AP28	DCS+0		819340.41	1066971.638	77°54'34.11"E	09°38'24.00"N
			343				
74	28/1	DAS+0		819579.982	1067217.105	77°54'42.03"E	09°38'31.92"N
			342				
75	28/2	DAS+6		819818.856	1067461.857	77°54'49.92"E	09°38'39.81"N
			399				
76	AP29	DCS+0		820097.811	1067747.677	77°54'59.14"E	09°38'49.03"N
			365				
77	29/1	DAS+0		820231.781	1068087.202	77°55'3.63"E	09°39'0.03"N
			365				
78	29/2	DAS+0		820365.752	1068426.726	77°55'8.11"E	09°39'11.03"N
			340				
79	29/3	DAS+0		820490.546	1068742.996	77°55'12.29"E	09°39'21.28"N
			370				
80	29/4	DAS+3		820626.352	1069087.171	77°55'16.84"E	09°39'32.44"N
			375				
81	29/5	DAS+3		820763.992	1069435.998	77°55'21.45"E	09°39'43.74"N
			375				
82	29/6	DAS+3		820901.633	1069784.825	77°55'26.06"E	09°39'55.05"N
			365				
83	29/7	DAS+0		821035.603	1070124.349	77°55'30.54"E	09°40'6.05"N
			365				
84	29/8	DAS+3		821169.574	1070463.874	77°55'35.03"E	09°40'17.05"N
			365				
85	29/9	DAS+0		821303.544	1070803.398	77°55'39.51"E	09°40'28.06"N
			315				
86	29/10	DAS+3		821419.162	1071096.413	77°55'43.39"E	09°40'37.55"N
			383				
87	29/11	DAS+6		821559.739	1071452.681	77°55'48.09"E	09°40'49.10"N
			391				
88	AP30	DCS+6		821703.303	1071816.518	77°55'52.90"E	09°41'0.89"N
			208				
89	AP31	DCS+6		821791.023	1072005.072	77°55'55.83"E	09°41'7.00"N
			377				
90	31/1	DAS+3		821950.99	1072346.451	77°56'1.17"E	09°41'0.89"N

			363				
91	31/2	DAS+3		822105.016	1072675.153	77°56'6.31"E	09°41'28.70"N
			391				
92	31/3	DAS+3		822270.923	1073029.209	77°56'11.85"E	09°41'40.16"N
			377				
93	AP32	DDS+3		822430.889	1073370.588	77°56'17.19"E	09°41'51.22"N
			390				
94	AP33	DDS+6		822374.915	1073756.633	77°56'15.46"E	09°42'3.79"N
			422				
95	AP34	DBS+9		822633.051	1074090.045	77°56'24.02"E	09°42'14.56"N
			436				
96	AP35	DDS+6		822956.175	1074382.238	77°56'34.69"E	09°42'23.97"N
			373				
97	AP36	DDS+0		823071.752	1074738.231	77°56'38.58"E	09°42'35.51"N
			271				
98	36/1	DAS+0		822958.526	1074984.444	77°56'34.94"E	09°42'43.55"N
			382				
99	36/2	DAS+0		822798.923	1075331.505	77°56'29.81"E	09°42'54.88"N
			359				
100	36/3	DAS+0		822648.93	1075657.669	77°56'24.98"E	09°43'5.53"N
			376				
101	36/4	DAS+0		822491.835	1075999.278	77°56'19.93"E	09°43'16.68"N
			378				
102	36/5	DAS+0		822333.903	1076342.705	77°56'14.85"E	09°43'27.89"N
			399				
103	36/6	DAS+9		822167.198	1076705.21	77°56'9.49"E	09°43'39.73"N
			399				
104	AP37	DBS+0		822000.493	1077067.716	77°56'4.13"E	09°43'51.56"N
			375				
105	37/1	DAS+0		821843.815	1077408.417	77°55'59.09"E	09°44'2.69"N
			376				
106	37/2	DAS+0		821686.719	1077750.026	77°55'54.04"E	09°44'13.84"N
			385				
107	37/3	DAS+0		821525.863	1078099.812	77°55'48.86"E	09°44'25.26"N
			367				
108	37/4	DAS+0		821372.527	1078433.244	77°55'43.93"E	09°44'36.15"N
			363				
109	37/5	DAS+0		821220.863	1078763.043	77°55'39.06"E	09°44'46.91"N
			369				
110	37/6	DAS+0		821066.692	1079098.292	77°55'34.10"E	09°44'57.86"N
			368				
111	37/7	DAS+0		820912.939	1079432.633	77°55'29.15"E	09°45'8.77"N
			387				
112	AP38	DCS+3		820750.85	1079785.1	77°55'23.94"E	09°45'20.28"N
			182				
113	AP39	DDS+18		820622.431	1079913.655	77°55'19.76"E	09°45'24.50"N
			399				

114	39/1	DAS+3		820465.211	1080280.374	77°55'14.72"E	09°45'36.47"N
			399				
115	39/2	DAS+3		820307.99	1080647.093	77°55'9.67"E	09°45'48.44"N
			399				
116	39/3	DAS+3		820150.77	1081013.812	77°55'4.62"E	09°46'0.41"N
			366				
117	AP40	DDS+18		820006.582	1081350.133	77°54'59.98"E	09°46'11.38"N
			215				
118	AP41	DDS+3		819855.766	1081503.1	77°54'55.083"E	9°46'16.497"N
			320				
119	AP42	DDS+3		819856.081	1081823.1	77°54'55.184"E	9°46'26.903"N
			232				
120	AP43	DDS+3		819861.419	1082055.038	77°54'55.425"E	9°46'34.444"N
			378				
121	AP44	DBS+3		819854.264	1082432.62	77°54'55.297"E	9°46'46.724"N
			397				
122	44/1	DAS+3		819805.894	1082826.662	77°54'53.823"E	9°46'59.552"N
			398				
123	44/2	DAS+3		819757.402	1083221.697	77°54'52.345"E	9°47'12.411"N
			400				
124	44/3	DAS+6		819708.666	1083618.717	77°54'50.860"E	9°47'25.335"N
			382				
125	44/4	DAS+0		819662.124	1083997.871	77°54'49.442"E	9°47'37.678"N
			379				
126	AP45	DBS+3		819615.938	1084374.113	77°54'48.035"E	9°47'49.926"N
			372				
127	45/1	DAS+0		819598.742	1084745.715	77°54'47.576"E	9°48'02.015"N
			358				
128	45/2	DAS+0		819582.193	1085103.333	77°54'47.135"E	9°48'13.648"N
			312				
129	45/3	DAS+0		819567.77	1085414.999	77°54'46.751"E	9°48'23.787"N
			378				
130	45/4	DAS+3		819550.296	1085792.595	77°54'46.285"E	9°48'36.071"N
			373				
131	45/5	DAS+0		819533.053	1086165.196	77°54'45.826"E	9°48'48.192"N
			380				
132	45/6	DAS+0		819515.487	1086544.79	77°54'45.358"E	9°49'00.541"N
			378				
133	45/7	DAS+3		819498.013	1086922.386	77°54'44.893"E	9°49'12.825"N
			382				
134	45/8	DAS+0		819480.355	1087303.978	77°54'44.422"E	9°49'25.239"N
			370				
135	45/9	DAS+0		819463.251	1087673.582	77°54'43.967"E	9°49'37.263"N
			379				
136	AP46	DBS+3		819445.731	1088052.177	77°54'43.500"E	9°49'49.579"N
			398				
137	AP47	DDS+18		819427.316	1088450.114	77°54'43.009"E	9°50'02.524"N

			220				
138	AP48	DDS+18		819270.353	1088604.26	77°54'37.907"E	9°50'07.581"N
			353				
139	AP49	DBS+0		819258.995	1088957.077	77°54'37.635"E	9°50'19.058"N
			321				
140	49/1	DAS+0		819248.667	1089277.911	77°54'37.387"E	9°50'29.494"N
			337				
141	49/2	DAS+0		819237.823	1089614.737	77°54'37.128"E	9°50'40.450"N
			336				
142	AP50	DBS+0		819227.016	1089950.452	77°54'36.869"E	9°50'51.370"N
			355				
143	AP51	DBS+3		819174.424	1090301.624	77°54'35.245"E	9°51'02.804"N
			371				
144	AP52	DBS+0		819119.49	1090668.445	77°54'33.548"E	9°51'14.748"N
			399				
145	AP53	DDS+25		819060.35	1091063.35	77°54'31.722"E	9°51'27.607"N
			208				
146	AP54	DDS+25		818882.51	1091170.8	77°54'25.921"E	9°51'31.151"N
			400				
147	AP55	DBS+3		818606.567	1091460.378	77°54'16.954"E	9°51'40.646"N
			400				
148	55/1	DAS+6		818330.624	1091749.956	77°54'07.988"E	9°51'50.140"N
			400				
149	AP56	DCS+3		818054.681	1092039.534	77°53'59.022"E	9°51'59.635"N
			400				
150	56/1	DAS+3		817957.834	1092422.478	77°53'55.955"E	9°52'12.115"N
			359				
151	56/2	DAS+0		817872.266	1092760.825	77°53'53.245"E	9°52'23.142"N
			370				
152	56/3	DAS+0		817781.548	1093119.532	77°53'50.373"E	9°52'34.832"N
			374				
153	56/4	DAS+3		817689.85	1093482.116	77°53'47.469"E	9°52'46.649"N
			325				
154	56/5	DAS+0		817610.166	1093797.196	77°53'44.945"E	9°52'56.918"N
			375				
155	56/6	DAS+3		817517.335	1094164.263	77°53'42.005"E	9°53'08.880"N
			392				
156	56/7	DAS+3		817421.223	1094544.298	77°53'38.962"E	9°53'21.266"N
			395				
157	AP57	DBS+0		817321.848	1094937.239	77°53'35.814"E	9°53'34.072"N
			399				
158	57/1	DAS+9		817159.053	1095301.517	77°53'30.579"E	9°53'45.964"N
			365				
159	57/2	DAS+0		817010.13	1095634.754	77°53'25.790"E	9°53'56.842"N
			314				
160	57/3	DAS+0		816882.015	1095921.43	77°53'21.670"E	9°54'06.201"N
			346				

161	57/4	DAS+0		816740.844	1096237.32	77°53'17.130"E	9°54'16.513"N
			356				
162	57/5	DAS+0		816595.593	1096562.34	77°53'12.459"E	9°54'27.124"N
			346				
163	57/6	DAS+0		816454.422	1096878.231	77°53'07.919"E	9°54'37.436"N
			344				
164	AP58	DCS+6		816314.268	1097191.877	77°53'03.411"E	9°54'47.675"N
			223				
165	AP59	DCS+3		816255.96	1097407.277	77°53'01.560"E	9°54'54.696"N
			325				
166	59/1	DAS+0		816123.107	1097703.883	77°52'57.287"E	9°55'04.379"N
			347				
167	AP60	DCS+9		815981.496	1098020.042	77°52'52.733"E	9°55'14.700"N
			231				
168	AP61	DDS+18		815966.093	1098250.561	77°52'52.293"E	9°55'22.201"N
			395				
169	AP62	DBS+0		815817.453	1098616.527	77°52'47.522"E	9°55'34.143"N
			265				
170	62/1	DAS+0		815717.733	1098862.049	77°52'44.321"E	9°55'42.156"N
			340				
171	62/2	DAS+0		815589.79	1099177.058	77°52'40.214"E	9°55'52.436"N
			278				
172	62/3	DAS+3		815485.177	1099434.624	77°52'36.856"E	9°56'00.841"N
			289				
173	AP63	DBS+3		815376.426	1099702.381	77°52'33.365"E	9°56'09.579"N
			399				
174	AP64	DDS+18		815226.226	1100072.188	77°52'28.544"E	9°56'21.647"N
			220				
175	AP65	DCS+9		815059.179	1100215.253	77°52'23.105"E	9°56'26.347"N
			342				
176	65/1	DAS+0		814833.222	1100471.977	77°52'15.767"E	9°56'34.759"N
			332				
177	65/2	DAS+0		814613.871	1100721.195	77°52'08.642"E	9°56'42.925"N
			316				
178	65/3	DAS+0		814405.092	1100958.402	77°52'01.861"E	9°56'50.698"N
			360				
179	65/4	DAS+0		814167.242	1101228.638	77°51'54.136"E	9°56'59.552"N
			361				
180	AP66	DDS+3		813929.075	1101499.234	77°51'46.401"E	9°57'08.419"N
			226				
181	AP67	DDS+9		813888.774	1101721.772	77°51'45.142"E	9°57'15.667"N
			203				
182	AP68	DDS+9		813927.091	1101921.146	77°51'46.455"E	9°57'22.140"N
			244				
183	AP69	DBS+3		813810.16	1102135.303	77°51'42.680"E	9°57'29.137"N
			270				
184	69/1	DAS+0		813680.769	1102372.279	77°51'38.503"E	9°57'36.880"N

			366				
185	69/2	DAS+3		813505.372	1102693.514	77°51'32.841"E	9°57'47.376"N
			374				
186	69/3	DAS+3		813326.141	1103021.771	77°51'27.054"E	9°57'58.101"N
			396				
187	69/4	DAS+3		813136.367	1103369.336	77°51'20.928"E	9°58'09.457"N
			387				
188	69/5	DAS+6		812950.906	1103709.003	77°51'14.940"E	9°58'20.555"N
			399				
189	69/6	DAS+0		812759.695	1104059.202	77°51'08.766"E	9°58'31.997"N
			384				
190	69/7	DAS+6		812575.672	1104396.235	77°51'02.825"E	9°58'43.009"N
			399				
191	69/8	DAS+0		812384.461	1104746.434	77°50'56.651"E	9°58'54.451"N
			329				
192	AP70	DBS+0		812227.001	1105034.817	77°50'51.567"E	9°59'03.874"N
			371				
193	70/1	DAS+3		812033.862	1105351.579	77°50'45.321"E	9°59'14.229"N
			394				
194	70/2	DAS+3		811828.75	1105687.979	77°50'38.687"E	9°59'25.226"N
			399				
195	70/3	DAS+3		811621.034	1106028.648	77°50'31.969"E	9°59'36.363"N
			331				
196	70/4	DAS+0		811448.719	1106311.258	77°50'26.396"E	9°59'45.602"N
			356				
197	70/5	DAS+3		811263.389	1106615.214	77°50'20.401"E	9°59'55.538"N
			374				
198	70/6	DAS+0		811068.689	1106934.537	77°50'14.104"E	10°00'05.977"N
			291				
199	70/7	DAS+0		810917.197	1107182.995	77°50'09.204"E	10°00'14.100"N
			357				
200	AP71	DDS+0		810731.119	1107488.177	77°50'03.185"E	10°00'24.076"N
			345				
201	71/1	DAS+3		810396.602	1107572.577	77°49'52.23"E	10°00'26.91"N
			375				
202	AP72	DBS+9		810032.997	1107664.317	77°49'40.33"E	10°00'30.00"N
			450				
203	AP73	DBS+6		809596.67	1107774.404	77°49'26.05"E	10°00'33.70"N
			325				
204	AP74	DBS+0		809281.653	1107853.885	77°49'15.73"E	10°0'36.37"N
			390				
205	74/1	DAS+9		808919.747	1107999.227	77°49'3.9"E	10°0'41.2"N
			388				
206	AP75	DDS+3		808559.749	1108143.803	77°48'52.13"E	10°0'46"N
			373				
207	75/1	DAS+6		808368.371	1108463.965	77°48'45.94"E	10°0'56.47"N
			377				

208	75/2	DAS+0		808174.941	1108787.56	77°48'39.68"E	10°1'7.05"N
			278				
209	75/3	DAS+0		808032.306	1109026.179	77°48'35.07"E	10°1'14.85"N
			271				
210	AP76	DBS+0		807893.262	1109258.79	77°48'30.57"E	10°1'22.45"N
			219				
211	AP77	DDS+0		807780.948	1109446.684	77°48'26.94"E	10°01'28.59"N
			290				
212	77/1	DAS+0		807526.611	1109586.013	77°48'18.64"E	10°01'33.19"N
			353				
213	AP78	DDS+0		807216.685	1109755.795	77°48'08.51"E	10°01'38.80"N
			303				
214	78/1	DAS+0		807085.985	1110029.157	77°48'04.30"E	10°01'47.73"N
			282				
215	78/2	DAS+0		806964.344	1110283.572	77°48'00.38"E	10°01'56.03"N
			323				
216	AP79	DDS+0		806825	1110575.014	77°47'55.89"E	10°02'05.55"N
			362				
217	79/1	DAS+3		806875.22	1110933.514	77°47'57.64"E	10°02'17.20"N
			388				
218	AP80	DDS+3		806929.023	1111317.589	77°47'59.51"E	10°02'29.67"N
			393				
219	AP81	DDS+9		806676.698	1111618.328	77°47'51.32"E	10°02'39.52"N
			430				
220	81/1	DAS+9		806250.103	1111668.651	77°47'37.33"E	10°2'41.28"N
			350				
221	AP82	DCS+0		805902.309	1111709.679	77°47'25.93"E	10°02'42.71"N
			260				
222	82/1	DAS+0		805649.88	1111647.391	77°47'17.63"E	10°2'40.75"N
			304				
223	AP83	DDS+6		805354.522	1111574.51	77°47'7.92"E	10°2'38.46"N
			453				
224	AP84	DDS+9		804943.512	1111764.267	77°46'54.49"E	10°2'44.75"N
			331				
225	AP85	DDS+18		804866.485	1112086.057	77°46'52.05"E	10°2'55.23"N
			363				
226	AP86	DDS+18		804830.479	1112446.819	77°46'50.97"E	10°3'6.98"N
			385				
227	AP87	DBS+0		804851.623	1112831.238	77°46'51.77"E	10°3'19.47"N
			365				
228	87/1	DAS+3		804871.669	1113195.687	77°46'52.53"E	10°3'31.32"N
			402				
229	AP88	DDS+3		804893.773	1113597.559	77°46'53.36"E	10°3'44.38"N
			317				
230	88/1	DAS+3		805075.314	1113857.774	77°46'59.39"E	10°3'52.79"N
			340				
231	88/2	DAS+0		805269.987	1114136.812	77°47'5.86"E	10°4'1.82"N

			342				
232	88/3	DAS+6		805465.434	1114416.96	77°47'12.35"E	10°4'10.87"N
			378				
233	AP89	DCS+0		805681.84	1114727.149	77°47'19.54"E	10°04'20.90"N
			305				
234	89/1	DAS+0		805777.473	1115016.768	77°47'22.76"E	10°04'30.29"N
			318				
235	89/2	DCTS+0		805877.182	1115318.732	77°47'26.12"E	10°04'40.09"N
			297				
236	89/3	DAS+0		805970.306	1115600.755	77°47'29.25"E	10°04'49.23"N
			321				
237	89/4	DAS+3		806070.955	1115905.568	77°47'32.64"E	10°04'59.12"N
			263				
238	AP90	DDS+3		806153.484	1116155.502	77°47'35.42"E	10°05'07.22"N
			397				
239	AP91	DCS+3		806509.283	1116332.675	77°47'47.14"E	10°05'12.88"N
			379				
240	91/1	DAS+6		806887.022	1116363.566	77°47'59.55"E	10°05'13.78"N
			355				
241	91/2	DAS+0		807240.841	1116392.502	77°48'11.17"E	10°05'14.63"N
			406				
242	91/3	DAS+9		807645.49	1116425.594	77°48'24.46"E	10°05'15.59"N
			360				
243	AP92	DBS+0		808004.014	1116454.914	77°48'36.23"E	10°05'16.44"N
			282				
244	92/1	DAS+0		808282.813	1116497.28	77°48'45.39"E	10°05'17.74"N
			282				
245	92/2	DAS+0		808561.613	1116539.646	77°48'54.55"E	10°05'19.04"N
			282				
246	92/3	DAS+0		808840.412	1116582.012	77°49'03.72"E	10°05'20.34"N
			282				
247	AP93	DCS+3		809118.987	1116624.344	77°49'12.87"E	10°05'21.64"N
			391				
248		DDS+0		809458.414	1116819.038	77°49'24.06"E	10°05'27.88"N
Total length			86998				

765 kV DC line Virudhunagar – Coimbatore, Reach 2

Sl. No	Loc. No	Tower Type	Span (m)	UTM Coordinate (Zone - 43P)		Spherical Coordinate	
				Easting	Northing	Longitude	Latitude
1	AP1	DDS+0		809458.414	1116819.038	77°49'24.06" E	10°05'27.88" N
			400				
2	AP2	DBS+6		809815.777	1116998.736	77°49'35.84" E	10°05'33.62" N
			354				
3	AP3	DCS+3		810146.527	1117125.584	77°49'46.73" E	10°05'37.65" N
			380				
4	3/1	DAS+6		810452.888	1117350.402	77°49'56.85" E	10°05'44.88" N
			400				
5	3/2	DAS+3		810775.372	1117587.054	77°50'07.50" E	10°05'52.48" N
			345				
6	AP4	DDS+3		811053.508	1117791.160	77°50'16.69" E	10°05'59.04" N
			355				
7	4/1	DAS+3		811161.959	1118129.189	77°50'20.34" E	10°06'10.00" N
			333				
8	4/2	DAS+3		811263.598	1118445.986	77°50'23.77" E	10°06'20.28" N
			339				
9	4/3	DAS+0		811367.161	1118768.779	77°50'27.26" E	10°06'30.74" N
			350				
10	AP5	DCS+0		811469.803	1119088.701	77°50'30.72" E	10°06'41.12" N
			271				
11	5/1	DAS+0		811643.210	1119291.292	77°50'37.10" E	10°06'48.38" N
			293				
12	5/2	DAS+0		811836.873	1119517.549	77°50'42.89" E	10°06'54.96" N
			386				
13	5/3	DAS+0		812087.614	1119810.490	77°50'51.20" E	10°07'04.42" N
			274				
14	5/4	DAS+0		812255.982	1120007.195	77°50'56.78" E	10°07'10.77" N
			355				
15	AP6	DDS+3		812470.570	1120257.898	77°51'03.90" E	10°07'18.86" N
			365				
16	6/1	DAS+3		812834.781	1120233.848	77°51'15.85" E	10°07'17.97" N
			345				
17	AP7	DBS+3		813179.334	1120211.097	77°51'27.15" E	10°07'17.13" N
			402				
18	AP8	DDS+9		813568.526	1120236.190	77°51'39.93" E	10°07'17.84" N
			395				
19	AP9	DDS+6		813886.669	1120451.238	77°51'50.43" E	10°07'24.74" N
			418				
20	AP10	DDS+6		814023.197	1120835.244	77°51'55.02" E	10°07'37.19" N

			365				
21	10/1	DAS+0		813928.651	1121187.786	77°51'52.02" E	10°07'48.68" N
			380				
22	10/2	DAS+6		813830.220	1121554.817	77°51'48.90" E	10°08'00.64" N
			370				
23	10/3	DAS+3		813734.378	1121912.188	77°51'45.85" E	10°08'12.29" N
			380				
24	AP11	DDS+0		813641.456	1122258.676	77°51'42.90" E	10°08'23.59" N
			365				
25	AP12	DDS+0		813778.410	1122574.605	77°51'47.49" E	10°08'33.82" N
			272				
26	12/1	DAS+0		814020.027	1122699.362	77°51'56.03" E	10°08'38.10" N
			376				
27	AP13	DDS+18		814354.027	1122871.820	77°52'06.47" E	10°08'43.32" N
			225				
28	AP14	DDS+18		814572.301	1122924.706	77°52'13.65" E	10°08'44.98" N
			370				
29	AP15	DCS+0		814701.540	1123271.921	77°52'17.99" E	10°08'56.23" N
			345				
30	15/1	DAS+6		814956.708	1123504.369	77°52'26.43" E	10°09'03.72" N
			369				
31	AP16	DDS+18		815229.108	1123752.514	77°52'35.45" E	10°09'11.71" N
			317				
32	AP17	DBS+3		815473.006	1123935.448	77°52'43.50" E	10°09'17.59" N
			400				
33	17/1	DAS+6		815728.868	1124242.913	77°52'51.99" E	10°09'27.51" N
			341				
34	17/2	DAS+6		815947.121	1124505.185	77°52'59.23" E	10°09'35.98" N
			365				
35	AP18	DCS+0		816166.791	1124769.160	77°53'06.52" E	10°09'44.50" N
			369				
36	AP19	DDS+6		816298.115	1125114.132	77°53'10.93" E	10°09'55.68" N
			261				
37	AP20	DDS+6		816526.413	1125239.614	77°53'18.46" E	10°09'59.69" N
			395				
38	AP21	DDS+6		816664.346	1125609.528	77°53'23.10" E	10°10'11.68" N
			433				
39	AP22	DCS+9		817003.187	1125878.854	77°53'34.30" E	10°10'20.34" N
			253				
40	AP23	DDS+9		817243.326	1125958.139	77°53'42.20" E	10°10'22.85" N
			460				
41	23/1	DBS+6		817395.857	1126371.222	77°53'47.33" E	10°10'36.24" N
			330				
42	23/2	DAS+0		817517.093	1126699.554	77°53'51.41" E	10°10'46.88" N
			370				
43	AP24	DDS+0		817634.772	1127018.252	77°53'55.36" E	10°10'57.21" N
			348				

44	24/1	DAS+0		817440.447	1127307.073	77°53'49.07" E	10°11'06.66" N
			360				
45	AP25	DCS+3		817256.120	1127581.034	77°53'43.10" E	10°11'15.62" N
			390				
46	AP26	DBS+3		817158.600	1127940.987	77°53'40.00" E	10°11'27.35" N
			365				
47	26/1	DAS+9		817026.070	1128281.076	77°53'35.75" E	10°11'38.45" N
			406				
48	AP27	DCS+3		816878.483	1128659.805	77°53'31.02" E	10°11'50.81" N
			370				
49	AP28	DCS+3		816857.037	1129013.138	77°53'30.42" E	10°12'02.31" N
			350				
50	AP29	DDS+0		816926.979	1129345.123	77°53'32.81" E	10°12'13.08" N
			225				
51	AP30	DDS+18		817081.299	1129508.668	77°53'37.93" E	10°12'18.36" N
			264				
52	AP31	DDS+18		817202.942	1129743.019	77°53'41.99" E	10°12'25.94" N
			397				
53	AP32	DDS+0		817470.915	1130035.788	77°53'50.87" E	10°12'35.38" N
			357				
54	32/1	DAS+6		817401.088	1130386.255	77°53'48.68" E	10°12'46.80" N
			365				
55	AP33	DCS+3		817333.369	1130726.141	77°53'46.56" E	10°12'57.87" N
			396				
56	AP34	DBS+6		817140.942	1131072.238	77°53'40.34" E	10°13'09.18" N
			368				
57	34/1	DAS+3		816991.085	1131408.825	77°53'35.52" E	10°13'20.17" N
			395				
58	AP35	DBS+6		816830.581	1131769.326	77°53'30.36" E	10°13'31.94" N
			422				
59	AP36	DBS+6		816696.821	1132169.204	77°53'26.09" E	10°13'44.98" N
			277				
60	AP37	DBS+0		816614.535	1132415.197	77°53'23.46" E	10°13'53.01" N
			347				
61	AP38	DDS+3		8,16,444.519	11,32,707.125	77°53'17.96" E	10°14'02.55" N
			379				
62	AP39	DDS+3		8,16,665.970	11,33,014.690	77°53'25.32" E	10°14'12.49" N
			369				
63	39/1	DAS+0		8,16,644.068	11,33,383.039	77°53'24.71" E	10°14'24.47" N
			372				
64	AP40	DDS+3		8,16,621.988	11,33,754.390	77°53'24.10" E	10°14'36.55" N
			368				
65	AP41	DDS+0		8,16,309.635	11,33,948.966	77°53'13.90" E	10°14'42.97" N
			399				

66	AP42	DBS+6		8,16,244.004	11,34,342.531	77°53'11.86" E	10°14'55.79" N
			453				
67	AP43	DDS+6		8,16,170.153	11,34,785.388	77°53'09.57" E	10°15'10.21" N
			298				
68	AP44	DDS+3		8,15,963.330	11,35,002.700	77°53'02.84" E	10°15'17.34" N
			364				
69	AP45	DDS+3		8,15,926.386	11,35,364.070	77°53'01.73" E	10°15'29.10" N
			437				
70	AP46	DCS+6		8,16,265.450	11,35,639.764	77°53'12.95" E	10°15'37.97" N
			396				
71	46/1	DAS+9		8,16,424.271	11,36,002.520	77°53'18.27" E	10°15'49.72" N
			393				
72	46/2	DAS+6		8,16,581.888	11,36,362.528	77°53'23.55" E	10°16'01.38" N
			400				
73	AP47	DCS+9		8,16,742.714	11,36,729.863	77°53'28.94" E	10°16'13.27" N
			476				
74	AP48	DDS+18		8,16,738.844	11,37,205.657	77°53'28.95" E	10°16'28.75" N
			199				
75	AP49	DBS+6		8,16,865.085	11,37,358.844	77°53'33.14" E	10°16'33.69" N
			352				
76	AP50	DDS+6		8,17,092.824	11,37,627.145	77°53'40.70" E	10°16'42.35" N
			389				
77	50/1	DAS+3		8,16,974.205	11,37,997.292	77°53'36.92" E	10°16'54.42" N
			307				
78	50/2	DAS+9		8,16,880.670	11,38,289.164	77°53'33.93" E	10°17'03.94" N
			400				
79	AP51	DCS+9		8,16,758.776	11,38,669.530	77°53'30.04" E	10°17'16.34" N
			300				
80	51/1	DAS+6		8,16,804.243	11,38,966.065	77°53'31.62" E	10°17'25.97" N
			360				
81	51/2	DAS+0		8,16,858.804	11,39,321.906	77°53'33.52" E	10°17'37.53" N
			300				
82	51/3	DAS+0		8,16,904.271	11,39,618.441	77°53'35.10" E	10°17'47.16" N
			300				
83	51/4	DAS+0		8,16,949.738	11,39,914.975	77°53'36.68" E	10°17'56.79" N
			336				

84	AP52	DDS+6		8,17,000.440	11,40,245.651	77°53'38.44" E	10°18'07.53" N
			299				
85	AP53	DDS+18		8,16,827.625	11,40,488.743	77°53'32.84" E	10°18'15.48" N
			248				
86	AP54	DDS+0		8,16,714.788	11,40,709.586	77°53'29.20" E	10°18'22.60" N
			267				
87	54/1	DAS+0		8,16,817.634	11,40,955.984	77°53'32.65" E	10°18'30.58" N
			275				
88	AP55	DDS+3		8,16,923.099	11,41,208.657	77°53'36.19" E	10°18'38.86" N
			419				
89	AP56	DDS+6		8,17,267.492	11,41,400.211	77°53'47.56" E	10°18'44.99" N
			352				
90	56/1	DAS+3		8,17,371.097	11,41,733.457	77°53'51.06" E	10°18'55.80" N
			368				
91	AP57	DDS+0		8,17,476.807	11,42,073.471	77°53'54.63" E	10°19'06.82" N
			374				
92	AP58	DBS+6		8,17,394.000	11,42,438.000	77°53'52.02" E	10°19'18.70" N
			390				
93	58/1	DAS+3		8,17,099.521	11,42,693.699	77°53'42.42" E	10°19'27.10" N
			380				
94	58/2	DAS+6		8,16,812.592	11,42,942.841	77°53'33.08" E	10°19'35.29" N
			385				
95	58/3	DAS+6		8,16,536.989	11,43,182.149	77°53'24.10" E	10°19'43.15" N
			372				
96	AP59	DCS+3		8,16,250.059	11,43,431.293	77°53'14.75" E	10°19'51.34" N
			330				
97	AP60	DCS+0		8,15,956.909	11,43,573.101	77°53'05.16" E	10°19'56.04" N
			362				
98	60/1	DAS+6		8,15,738.100	11,43,861.199	77°52'58.06" E	10°20'05.47" N
			359				
99	60/2	DAS+0		8,15,521.328	11,44,146.615	77°52'51.03" E	10°20'14.81" N
			329				
100	60/3	DAS+0		8,15,322.811	11,44,407.997	77°52'44.59" E	10°20'23.37" N
			365				
101	AP61	DCS+6		8,15,105.966	11,44,693.509	77°52'37.55" E	10°20'32.72" N
			206				

102	AP62	DDS+9		8,14,919.155	11,44,780.859	77°52'31.44" E	10°20'35.61" N
			380				
103	62/1	DAS+6		8,14,865.430	11,45,146.652	77°52'29.78" E	10°20'47.53" N
			390				
104	AP63	DCS+0		8,14,807.695	11,45,539.745	77°52'28.01" E	10°21'00.32" N
			367				
105	63/1	DAS+3		8,14,932.796	11,45,884.765	77°52'32.22" E	10°21'11.51" N
			347				
106	63/2	DAS+3		8,15,051.079	11,46,210.983	77°52'36.20" E	10°21'22.08" N
			399				
107	63/3	DAS+6		8,15,187.088	11,46,586.086	77°52'40.78" E	10°21'34.24" N
			399				
108	AP64	DBS+3		8,15,322.751	11,46,960.238	77°52'45.34" E	10°21'46.37" N
			359				
109	64/1	DAS+6		8,15,365.429	11,47,316.246	77°52'46.85" E	10°21'57.93" N
			339				
110	64/2	DAS+0		8,15,405.787	11,47,652.909	77°52'48.28" E	10°22'08.87" N
			326				
111	64/3	DAS+3		8,15,444.637	11,47,976.985	77°52'49.65" E	10°22'19.39" N
			336				
112	64/4	DAS+0		8,15,484.618	11,48,310.501	77°52'51.06" E	10°22'30.23" N
			317				
113	64/5	DAS+3		8,15,522.380	11,48,625.501	77°52'52.39" E	10°22'40.46" N
			384				
114	64/6	DAS+6		8,15,568.045	11,49,006.433	77°52'54.01" E	10°22'52.83" N
			350				
115	64/7	DAS+3		8,15,609.690	11,49,353.825	77°52'55.48" E	10°23'04.12" N
			378				
116	64/8	DAS+3		8,15,654.664	11,49,728.992	77°52'57.07" E	10°23'16.30" N
			373				
117	64/9	DAS+0		8,15,699.030	11,50,099.085	77°52'58.64" E	10°23'28.32" N
			368				
118	64/10	DAS+6		8,15,742.789	11,50,464.108	77°53'00.18" E	10°23'40.18" N
			390				
119	AP65	DBS+3		8,15,787.340	11,50,835.745	77°53'01.76" E	10°23'52.25" N
			381				

120	65/1	DAS+3		8,15,893.088	11,51,201.485	77°53'05.34" E	10°24'04.12" N
			391				
121	65/2	DAS+6		8,16,001.680	11,51,577.060	77°53'09.02" E	10°24'16.30" N
			393				
122	65/3	DAS+3		8,16,110.583	11,51,953.711	77°53'12.71" E	10°24'28.51" N
			396				
123	65/4	DAS+6		8,16,220.571	11,52,334.113	77°53'16.44" E	10°24'40.85" N
			390				
124	65/5	DAS+3		8,16,328.724	11,52,708.169	77°53'20.10" E	10°24'52.98" N
			386				
125	AP66	DDS+3		8,16,435.878	11,53,078.771	77°53'23.73" E	10°25'05.00" N
			242				
126	AP67	DDS+6		8,16,595.524	11,53,259.982	77°53'29.03" E	10°25'10.85" N
			300				
127	AP68	DDS+9		8,16,724.287	11,53,530.943	77°53'33.34" E	10°25'19.62" N
			340				
128	AP69	DBS+0		8,16,716.420	11,53,870.850	77°53'33.18" E	10°25'30.67" N
			305				
129	69/1	DAS+0		8,16,683.638	11,54,174.083	77°53'32.20" E	10°25'40.54" N
			321				
130	69/2	DAS+0		8,16,649.136	11,54,493.224	77°53'31.16" E	10°25'50.93" N
			321				
131	AP70	DDS+3		8,16,614.758	11,54,811.218	77°53'30.13" E	10°26'01.28" N
			366				
132	70/1	DAS+3		8,16,343.438	11,55,056.733	77°53'21.29" E	10°26'09.35" N
			354				
133	AP71	DCS+3		8,16,081.289	11,55,293.951	77°53'12.75" E	10°26'17.14" N
			322				
134	71/1	DAS+0		815915.664	1155569.966	77°53'07.39" E	10°26'26.16" N
			356				
135	71/2	DAS+0		815732.624	1155875.002	77°53'01.47" E	10°26'36.14" N
			306				
136	71/3	DAS+3		815575.182	1156137.380	77°52'56.37" E	10°26'44.72" N
			346				
137	AP72	DDS+3		815397.007	1156434.308	77°52'50.61" E	10°26'54.42" N
			338				
138	72/1	DAS+0		815414.051	1156771.879	77°52'51.27" E	10°27'05.40" N
			309				
139	72/2	DAS+0		815429.632	1157080.486	77°52'51.88" E	10°27'15.43" N

			386				
140	72/3	DAS+6		815449.096	1157465.996	77°52'52.63" E	10°27'27.96" N
			397				
141	72/4	DAS+6		815469.115	1157862.491	77°52'53.41" E	10°27'40.84" N
			400				
142	72/5	DAS+3		815489.285	1158261.983	77°52'54.19" E	10°27'53.83" N
			384				
143	72/6	DAS+6		815508.648	1158645.495	77°52'54.94" E	10°28'06.29" N
			394				
144	AP73	DCS+6		815528.529	1159039.262	77°52'55.71" E	10°28'19.09" N
			399				
145	73/1	DAS+6		815402.376	1159417.787	77°52'51.68" E	10°28'31.44" N
			399				
146	73/2	DAS+3		815276.206	1159796.362	77°52'47.65" E	10°28'43.79" N
			350				
147	AP74	DCS+6		815165.654	1160128.075	77°52'44.12" E	10°28'54.61" N
			399				
148	74/1	DAS+6		815203.626	1160525.264	77°52'45.48" E	10°29'07.51" N
			391				
149	74/2	DAS+6		815240.837	1160914.489	77°52'46.82" E	10°29'20.16" N
			386				
150	74/3	DAS+0		815277.572	1161298.737	77°52'48.15" E	10°29'32.64" N
			389				
151	74/4	DAS+0		815314.592	1161685.972	77°52'49.48" E	10°29'45.22" N
			391				
152	74/5	DAS+6		815351.803	1162075.197	77°52'50.82" E	10°29'57.87" N
			394				
153	74/6	DAS+6		815389.300	1162467.409	77°52'52.17" E	10°30'10.61" N
			333				
154	AP75	DCS+9		815421.030	1162799.310	77°52'53.31" E	10°30'21.39" N
			282				
155	AP76	DCS+9		815321.036	1163062.478	77°52'50.11" E	10°30'29.98" N
			354				
156	AP77	DDS+18		815313.000	1163416.000	77°52'49.95" E	10°30'41.48" N
			245				
157	AP78	DBS+6		815140.545	1163586.536	77°52'44.33" E	10°30'47.08" N
			355				
158	78/1	DAS+3		814888.674	1163837.053	77°52'36.13" E	10°30'55.30" N
			372				
159	78/2	DAS+0		814624.682	1164099.626	77°52'27.54" E	10°31'03.92" N
			386				
160	78/3	DAS+3		814351.210	1164371.628	77°52'18.63" E	10°31'12.84" N
			359				
161	AP79	DDS+0		814096.575	1164624.894	77°52'10.34" E	10°31'21.15" N
			363				
162	79/1	DAS+3		813742.318	1164703.436	77°51'58.72" E	10°31'23.81" N
			343				

163	79/2	DAS+3		813407.604	1164777.646	77°51'47.75" E	10°31'26.33" N
			341				
164	AP80	DCS+9		813074.926	1164851.404	77°51'36.84" E	10°31'28.82" N
			329				
165	AP81	DCS+9		812747.705	1164886.546	77°51'26.10" E	10°31'30.06" N
			329				
166	AP82	DDS+18		812431.046	1164975.288	77°51'15.72" E	10°31'33.04" N
			362				
167	AP83	DDS+55		812080.381	1164885.786	77°51'04.17" E	10°31'30.24" N
			184				
168	AP84	DDS+55		811913.437	1164807.894	77°50'58.66" E	10°31'27.75" N
			251				
169	AP85	DDS+18		811662.804	1164812.694	77°50'50.42" E	10°31'27.98" N
			381				
170	85/1	DAS+9		811313.860	1164965.661	77°50'39.00" E	10°31'33.06" N
			364				
171	85/2	DAS+3		810980.486	1165111.803	77°50'28.09" E	10°31'37.91" N
			311				
172	85/3	DAS+3		810695.652	1165236.665	77°50'18.77" E	10°31'42.06" N
			400				
173	85/4	DAS+0		810329.306	1165397.261	77°50'06.78" E	10°31'47.39" N
			398				
174	AP86	DBS+6		809964.932	1165556.992	77°49'54.85" E	10°31'52.69" N
			399				
175	86/1	DAS+3		809575.939	1165645.790	77°49'42.09" E	10°31'55.69" N
			379				
176	AP87	DBS+3		809205.989	1165730.240	77°49'29.96" E	10°31'58.54" N
			396				
177	87/1	DAS+3		808850.586	1165904.895	77°49'18.33" E	10°32'04.33" N
			252				
178	87/2	DAS+0		808624.420	1166016.039	77°49'10.93" E	10°32'08.01" N
			288				
179	87/3	DAS+0		808365.945	1166143.061	77°49'02.47" E	10°32'12.22" N
			357				
180	87/4	DAS+3		808045.543	1166300.515	77°48'51.99" E	10°32'17.43" N
			282				
181	AP88	DBS+0		807792.066	1166425.081	77°48'43.70" E	10°32'21.55" N
			296				
182	88/1	DAS+0		807557.856	1166605.272	77°48'36.05" E	10°32'27.48" N
			306				
183	88/2	DAS+0		807315.082	1166792.052	77°48'28.13" E	10°32'33.63" N
			281				
184	88/3	DAS+0		807092.487	1166963.307	77°48'20.87" E	10°32'39.26" N
			302				
185	AP89	DCS+0		806853.407	1167147.245	77°48'13.06" E	10°32'45.31" N
			320				
186	89/1	DAS+0		806542.769	1167222.402	77°48'02.88" E	10°32'47.85" N

			290				
187	AP90	DCS+0		806260.659	1167290.657	77°47'53.62" E	10°32'50.15" N
			352				
188	90/1	DAS+0		805959.454	1167473.707	77°47'43.78" E	10°32'56.19" N
			366				
189	90/2	DAS+3		805646.568	1167663.856	77°47'33.55" E	10°33'02.46" N
			395				
190	90/3	DAS+3		805308.668	1167869.206	77°47'22.51" E	10°33'09.24" N
			387				
191	90/4	DAS+3		804978.318	1168069.968	77°47'11.71" E	10°33'15.87" N
			346				
192	AP91	DBS+3		804682.795	1168249.565	77°47'02.05" E	10°33'21.79" N
			394				
193	91/1	DAS+6		804322.072	1168407.676	77°46'50.24" E	10°33'27.04" N
			393				
194	91/2	DAS+6		803962.106	1168565.455	77°46'38.45" E	10°33'32.27" N
			392				
195	AP92	DCS+6		803603.349	1168722.705	77°46'26.71" E	10°33'37.49" N
			432				
196	AP93	DBS+6		803172.449	1168691.767	77°46'12.54" E	10°33'36.61" N
			395				
197	93/1	DAS+6		802778.352	1168713.781	77°45'59.59" E	10°33'37.44" N
			398				
198	AP94	DCS+3		802380.998	1168735.977	77°45'46.54" E	10°33'38.27" N
			359				
199	94/1	DAS+0		802053.659	1168882.469	77°45'35.82" E	10°33'43.13" N
			395				
200	94/2	DAS+3		801693.482	1169043.656	77°45'24.03" E	10°33'48.48" N
			362				
201	AP95	DCS+3		801362.811	1169191.639	77°45'13.20" E	10°33'53.39" N
			376				
202	95/1	DAS+0		800991.486	1169248.455	77°45'01.01" E	10°33'55.34" N
			383				
203	95/2	DAS+3		800613.080	1169306.355	77°44'48.59" E	10°33'57.33" N
			396				
204	95/3	DAS+3		800221.398	1169366.287	77°44'35.74" E	10°33'59.39" N
			368				
205	AP96	DBS+3		799857.478	1169421.970	77°44'23.79" E	10°34'01.31" N
			378				
206	96/1	DAS+0		799480.230	1169407.168	77°44'11.39" E	10°34'00.93" N
			341				
207	96/2	DAS+0		799139.824	1169393.812	77°44'00.20" E	10°34'00.60" N
			357				
208	96/3	DAS+3		798782.721	1169379.800	77°43'48.45" E	10°34'00.24" N
			375				
209	96/4	DAS+0		798407.799	1169365.089	77°43'36.13" E	10°33'59.87" N
			349				

210	96/5	DAS+0		798059.005	1169351.404	77°43'24.66" E	10°33'59.52" N
			339				
211	AP97	DCS+0		797720.139	1169338.108	77°43'13.52" E	10°33'59.19" N
			344				
212	97/1	DAS+0		797405.618	1169477.437	77°43'03.22" E	10°34'03.81" N
			246				
213	AP98	DCS+0		797180.702	1169577.073	77°42'55.85" E	10°34'07.11" N
			400				
214	AP99	DDS+6		796782.087	1169609.874	77°42'42.76" E	10°34'08.29" N
			245				
215	AP100	DDS+3		796540.966	1169566.312	77°42'34.82" E	10°34'06.94" N
			399				
216	100/1	DAS+9		796142.508	1169579.513	77°42'21.73" E	10°34'07.49" N
			399				
217	AP101	DDS+3		795743.770	1169592.723	77°42'08.63" E	10°34'08.03" N
			300				
218	101/1	DAS+3		795498.812	1169765.587	77°42'00.62" E	10°34'13.72" N
			300				
219	101/2	DAS+3		795253.854	1169938.452	77°41'52.62" E	10°34'19.41" N
			215				
220	AP102	DCS+3		795078.091	1170062.486	77°41'46.88" E	10°34'23.49" N
			358				
221	102/1	DAS+0		794726.807	1170131.506	77°41'35.35" E	10°34'25.84" N
			400				
222	102/2	DAS+3		794334.312	1170208.624	77°41'22.47" E	10°34'28.45" N
			248				
223	AP103	DDS+0		794091.385	1170256.354	77°41'14.50" E	10°34'30.07" N
			319				
224	103/1	DAS+0		793858.285	1170473.609	77°41'06.90" E	10°34'37.21" N
			341				
225	103/2	DAS+0		793608.759	1170706.173	77°40'58.76" E	10°34'44.84" N
			332				
226	AP104	DCS+0		793365.860	1170932.560	77°40'50.84" E	10°34'52.27" N
			362				
227	104/1	DCTS+0		793032.696	1171075.110	77°40'39.93" E	10°34'57.00" N
			337				
228	AP105	DCS+9		792722.503	1171207.832	77°40'29.77" E	10°35'01.40" N
			260				
229	AP106	DDS+18		792474.989	1171287.368	77°40'21.66" E	10°35'04.06" N
			413				
230	AP107	DDS+3		792105.997	1171473.888	77°40'09.58" E	10°35'10.23" N
			400				
231	AP108	DCS+6		792018.003	1171864.487	77°40'06.80" E	10°35'22.96" N
			330				
232	108/1	DAS+0		792039.471	1172193.331	77°40'07.59" E	10°35'33.65" N
			323				
233	108/2	DAS+0		792060.529	1172515.894	77°40'08.38" E	10°35'44.13" N

			346				
234	108/3	DAS+0		792083.054	1172860.920	77°40'09.22" E	10°35'55.35" N
			367				
235	108/4	DAS+6		792106.976	1173227.350	77°40'10.11" E	10°36'07.26" N
			357				
236	AP109	DDS+0		792130.221	1173583.416	77°40'10.97" E	10°36'18.83" N
			311				
237	109/1	DAS+0		791979.616	1173855.627	77°40'06.10" E	10°36'27.73" N
			331				
238	109/2	DAS+3		791819.457	1174145.106	77°40'00.91" E	10°36'37.19" N
			315				
239	AP110	DCS+3		791667.015	1174420.638	77°39'55.98" E	10°36'46.19" N
			381				
240	AP111	DCS+6		791372.974	1174663.381	77°39'46.38" E	10°36'54.17" N
			366				
241	AP112	DDS+0		791161.184	1174961.963	77°39'39.50" E	10°37'03.94" N
			230				
242	112/1	DAS+3		790953.144	1175060.040	77°39'32.69" E	10°37'07.18" N
			330				
243	112/2	DAS+0		790654.651	1175200.759	77°39'22.91" E	10°37'11.84" N
			300				
244	112/3	DAS+3		790383.293	1175328.686	77°39'14.03" E	10°37'16.08" N
			222				
245	AP113	DDS+6		790182.523	1175423.335	77°39'07.46" E	10°37'19.21" N
			399				
246	113/1	DAS+3		790005.777	1175780.614	77°39'01.74" E	10°37'30.88" N
			396				
247	113/2	DAS+6		789830.391	1176135.145	77°38'56.08" E	10°37'42.46" N
			392				
248	113/3	DAS+3		789656.712	1176486.225	77°38'50.47" E	10°37'53.93" N
			374				
249	AP114	DDS+3		789490.934	1176821.333	77°38'45.11" E	10°38'04.87" N
			386				
250	114/1	DAS+3		789163.725	1177026.213	77°38'34.41" E	10°38'11.63" N
			390				
251	AP115	DCS+6		788832.835	1177233.397	77°38'23.59" E	10°38'18.46" N
			371				
252	115/1	DAS+0		788582.455	1177507.153	77°38'15.43" E	10°38'27.43" N
			370				
253	AP116	DCS+6		788332.758	1177780.163	77°38'07.30" E	10°38'36.38" N
			379				
254	116/1	DAS+3		788014.137	1177985.938	77°37'56.88" E	10°38'43.16" N
			377				
255	116/2	DAS+0		787697.417	1178190.486	77°37'46.52" E	10°38'49.90" N
			377				
256	116/3	DAS+6		787380.318	1178395.278	77°37'36.15" E	10°38'56.65" N
			361				

257	116/4	DAS+0		787076.946	1178591.206	77°37'26.23" E	10°39'03.11" N
			357				
258	AP117	DBS+0		786777.301	1178784.726	77°37'16.43" E	10°39'09.48" N
			373				
259	117/1	DAS+0		786509.062	1179044.367	77°37'07.69" E	10°39'18.00" N
			380				
260	AP118	DDS+3		786236.264	1179308.421	77°36'58.79" E	10°39'26.67" N
			380				
261	118/1	DAS+0		786164.755	1179681.823	77°36'56.54" E	10°39'38.83" N
			383				
262	118/2	DAS+3		786092.730	1180057.918	77°36'54.28" E	10°39'51.08" N
			386				
263	AP119	DDS+3		786020.170	1180436.811	77°36'52.00" E	10°40'03.43" N
			332				
264	119/1	DAS+0		785762.456	1180646.113	77°36'43.58" E	10°40'10.30" N
			360				
265	119/2	DAS+0		785483.007	1180873.067	77°36'34.45" E	10°40'17.76" N
			400				
266	119/3	DAS+6		785170.955	1181126.499	77°36'24.26" E	10°40'26.09" N
			393				
267	119/4	DAS+0		784867.442	1181372.997	77°36'14.35" E	10°40'34.19" N
			314				
268	119/5	DAS+0		784623.700	1181570.951	77°36'06.39" E	10°40'40.70" N
			347				
	AP120			784353.964	1181790.017	77°35'57.58" E	10°40'47.90" N
Total			94544				

765 kV DC line Virudhunagar – Coimbatore, Reach 3*

Sl. No	Tower Loc No.	Tower type	Span (m)	Cumulative span	UTM Coordinates (Zone-43P)		Spherical Coordinates	
					Easting	Northing	Longitude	Latitude
1	AP 1/0	DDS+0		0	784354	1181790	77° 35' 57.582"	10° 40' 47.895"
			291	291				
2	1/1	DAS+0			784267	1182068	77° 35' 54.798"	10° 40' 56.961"
			338	629				
3	1/2	DAS+0			784166	1182390	77° 35' 51.566"	10° 41' 7.462"
			342	971				
4	1/3	DAS+0			784063	1182716	77° 35' 48.269"	10° 41' 18.093"
			352	1,323				
5	AP 2/0	DDS+0			783958	1183051	77° 35' 44.909"	10° 41' 29.018"
			197	1,520				
6	AP 3/0	DDS+6			784055	1183222	77° 35' 48.146"	10° 41' 34.553"
			398	1,918				
7	3/1	DAS+3			784017	1183618	77° 35' 47.006"	10° 41' 47.444"
			391	2,309				
8	3/2	DAS+0			783979	1184007	77° 35' 45.864"	10° 42' 0.107"
			400	2,709				
9	AP 4/0	DCS+3			783940	1184405	77° 35' 44.691"	10° 42' 13.062"
			406	3,115				
10	4/1	DAS+6			783779	1184778	77° 35' 39.500"	10° 42' 25.239"
			375	3,490				
11	AP 5/0	DDS+6			783631	1185121	77° 35' 34.727"	10° 42' 36.435"
			239	3,729				
12	AP 6/0	DDS+1 8			783533	1185339	77° 35' 31.565"	10° 42' 43.553"
			400	4,129				
13	6/1	DAS+9			783396	1185715	77° 35' 27.163"	10° 42' 55.820"
			395	4,524				
14	AP 7/0	DBS+0			783260	1186085	77° 35' 22.792"	10° 43' 7.891"
			376	4,900				
15	7/1	DAS+0			783070	1186410	77° 35' 16.633"	10° 43' 18.514"
			389	5,289				
16	AP 8/0	DDS+6			782875	1186746	77° 35' 10.313"	10° 43' 29.496"
			392	5,681				
17	8/1	DAS+6 m			782879	1187138	77° 35' 10.553"	10° 43' 42.245"
			398	6,079				

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18	8/2	DAS+0 m			782884	1187536	77° 35' 10.827"	10° 43' 55.189"
			398	6,477				
19	AP9	DBS+0 m			782888	1187933	77° 35' 11.069"	10° 44' 8.101"
			300	6,777				
20	9/1	DAS+0 m			782875	1188233	77° 35' 10.724"	10° 44' 17.862"
			300	7,077				
21	9/2	DAS+6 m			782860	1188532	77° 35' 10.314"	10° 44' 27.591"
			380	7,457				
22	9/3	DAS+3 m			782841	1188912	77° 35' 9.794"	10° 44' 39.956"
			364	7,821				
23	9/4	DAS+0 m			782823	1189275	77° 35' 9.302"	10° 44' 51.768"
			344	8,165				
24	9/5	DAS+0 m			782806	1189619	77° 35' 8.838"	10° 45' 2.961"
			349	8,514				
25	9/6	DAS+0 m			782789	1189968	77° 35' 8.376"	10° 45' 14.317"
			344	8,858				
26	AP10	DCS+0 m			782772	1190311	77° 35' 7.912"	10° 45' 25.478"
			398	9,256				
27	10/1	DAS+6 m			782874	1190696	77° 35' 11.374"	10° 45' 37.973"
			399	9,655				
28	AP11	DDS+0 m			782974	1191082	77° 35' 14.770"	10° 45' 50.500"
			242	9,897				
29	AP12	DDS+0 m			782904	1191312	77° 35' 12.532"	10° 45' 58.000"
			294	10,191				
30	AP12A	DBS+0 m			782979	1191596	77° 35' 15.078"	10° 46' 7.217"
			273	10,464				
31	AP13	DDS+2 5m			783048	1191861	77° 35' 17.421"	10° 46' 15.817"
			300	10,764				
32	AP14	DDS+2 5m			783159	1192139	77° 35' 21.149"	10° 46' 24.829"
			400	11,164				
33	AP 14A	DBS+6 m			783151	1192539	77° 35' 20.998"	10° 46' 37.841"
			398	11,562				
34	14A/1	DAS+0 m			783143	1192937	77° 35' 20.845"	10° 46' 50.788"
			358	11,920				
35	AP15	DBS+0 m			783136	1193295	77° 35' 20.714"	10° 47' 2.434"

			253	12,173				
36	15/1	DAS+0 m			783130	1193548	77° 35' 20.588"	10° 47' 10.665"
			315	12,488				
37	15/2	DAS+0 m			783122	1193863	77° 35' 20.412"	10° 47' 20.913"
			348	12,836				
38	AP16	DDS+0 m			783114	1194210	77° 35' 20.246"	10° 47' 32.201"
			397	13,233				
39	16/1	DAS+6 m			782820	1194476	77° 35' 10.648"	10° 47' 40.934"
			397	13,630				
40	16/2	DAS+3 m			782525	1194742	77° 35' 1.017"	10° 47' 49.667"
			397	14,027				
41	16/3	DAS+3 m			782231	1195009	77° 34' 51.419"	10° 47' 58.432"
			398	14,425				
42	AP17	DBS+0 m			781935	1195275	77° 34' 41.755"	10° 48' 7.165"
			397	14,822				
43	17/1	DAS+6 m			781719	1195608	77° 34' 34.742"	10° 48' 18.055"
			400	15,222				
44	AP18	DDS+9 m			781501	1195943	77° 34' 27.662"	10° 48' 29.011"
			235	15,457				
45	AP19	DCS+9 m			781531	1196176	77° 34' 28.714"	10° 48' 36.582"
			377	15,834				
46	19/1	DAS+0 m			781416	1196534	77° 34' 25.030"	10° 48' 48.257"
			360	16,194				
47	19/2	DAS+3 m			781305	1196876	77° 34' 21.473"	10° 48' 59.412"
			350	16,544				
48	19/3	DAS+3 m			781198	1197210	77° 34' 18.045"	10° 49' 10.304"
			365	16,909				
49	19/4	DAS+0 m			781086	1197557	77° 34' 14.457"	10° 49' 21.622"
			331	17,240				
50	19/5	DAS+0 m			780984	1197872	77° 34' 11.188"	10° 49' 31.895"
			344	17,584				
51	AP19A	DBS+0 m			780878	1198200	77° 34' 7.791"	10° 49' 42.593"
			342	17,926				
52	AP20	DDS+2 5m			780772	1198528	77° 34' 4.395"	10° 49' 53.290"
			233	18,159				

53	AP21	DDS+2 5m			780765	1198758	77° 34' 4.228"	10° 50' 0.773"
			399	18,558				
54	AP21A	DBS+6 m			780864	1199145	77° 34' 7.593"	10° 50' 13.334"
			399	18,957				
55	21A/1	DAS+3 m			780961	1199532	77° 34' 10.892"	10° 50' 25.894"
			399	19,356				
56	AP22	DDS+3 m			781059	1199919	77° 34' 14.224"	10° 50' 38.455"
			350	19,706				
57	22/1	DAS+6 m			780916	1200239	77° 34' 9.608"	10° 50' 48.903"
			356	20,062				
58	AP22A	DDS+1 8m			780772	1200563	77° 34' 4.960"	10° 50' 59.480"
			271	20,333				
59	AP22B	SPT+4 0m			780586	1200759	77° 33' 58.894"	10° 51' 5.907"
			310	20,643				
60	AP22C	SPT+4 0m			780431	1201027	77° 33' 53.868"	10° 51' 14.666"
			320	20,963				
61	AP23	DDS+1 8m			780422	1201347	77° 33' 53.661"	10° 51' 25.077"
			236	21,199				
62	AP24	DDS+6 m			780391	1201579	77° 33' 52.705"	10° 51' 32.631"
			375	21,574				
63	24/1	DAS+0 m			780371	1201956	77° 33' 52.152"	10° 51' 44.899"
			325	21,899				
64	24/2	DAS+0 m			780353	1202280	77° 33' 51.650"	10° 51' 55.442"
			325	22,224				
65	24/3	DAS+0 m			780335	1202605	77° 33' 51.147"	10° 52' 6.018"
			329	22,553				
66	AP25	DDS+0 m			780317	1202932	77° 33' 50.646"	10° 52' 16.659"
			295	22,848				
67	25/1	DAS+0 m			780447	1203197	77° 33' 54.998"	10° 52' 25.243"
			306	23,154				
68	AP26	DCS+0 m			780582	1203469	77° 33' 59.516"	10° 52' 34.053"
			379	23,533				
69	26/1	DAS+3 m			780651	1203843	77° 34' 1.890"	10° 52' 46.198"
			400	23,933				
70	26/2	DAS+3 m			780723	1204236	77° 34' 4.369"	10° 52' 58.961"

			400	24,333				
71	AP27	DDS+1 8m			780795	1204629	77° 34' 6.848"	10° 53' 11.724"
			261	24,594				
72	AP28	SPT+4 0m			780686	1204865	77° 34' 3.327"	10° 53' 19.430"
			351	24,945				
73	AP29	SPT+5 5m			780439	1205114	77° 33' 55.268"	10° 53' 27.597"
			333	25,278				
74	AP30	DDS+2 5m			780374	1205438	77° 33' 53.219"	10° 53' 38.153"
			191	25,469				
75	AP31	DDS+1 8m			780210	1205532	77° 33' 47.848"	10° 53' 41.256"
			281	25,750				
76	AP32	DDS+1 8m			779978	1205687	77° 33' 40.256"	10° 53' 46.361"
			336	26,086				
77	AP33	DDS+9 m			779698	1205879	77° 33' 31.095"	10° 53' 52.683"
			394	26,480				
78	33/1	DAS+0 m			779353	1206066	77° 33' 19.793"	10° 53' 58.860"
			398	26,878				
79	AP34	DDS+3 m			779004	1206254	77° 33' 8.360"	10° 54' 5.071"
			330	27,208				
80	34/1	DAS+0 m			778838	1206541	77° 33' 2.977"	10° 54' 14.452"
			340	27,548				
81	34/2	DAS+0 m			778667	1206835	77° 32' 57.430"	10° 54' 24.061"
			335	27,883				
82	34/3	DAS+0 m			778499	1207125	77° 32' 51.982"	10° 54' 33.540"
			345	28,228				
83	34/4	DAS+0 m			778326	1207423	77° 32' 46.371"	10° 54' 43.280"
			325	28,553				
84	34/5	DAS+0 m			778163	1207704	77° 32' 41.084"	10° 54' 52.464"
			330	28,883				
85	34/6	DAS+6 m			777998	1207990	77° 32' 35.733"	10° 55' 1.812"
			386	29,269				
86	AP35	DDS+1 8m			777803	1208322	77° 32' 29.407"	10° 55' 12.664"
			204	29,473				
87	AP36	DDS+9 m			777630	1208425	77° 32' 23.741"	10° 55' 16.062"
			246	29,719				

88	AP36A	DBS+0 m			777607	1208670	77° 32' 23.052"	10° 55' 24.037"
			290	30,009				
89	AP37	DCS+0 m			777579	1208960	77° 32' 22.211"	10° 55' 33.477"
			375	30,384				
90	37/1	DAS+0 m			777705	1209313	77° 32' 26.456"	10° 55' 44.925"
			387	30,771				
91	37/2	DAS+0 m			777836	1209677	77° 32' 30.868"	10° 55' 56.728"
			335	31,106				
92	37/3	DAS+0 m			777949	1209993	77° 32' 34.675"	10° 56' 6.976"
			339	31,445				
93	AP38	DDS+0 m			778063	1210312	77° 32' 38.516"	10° 56' 17.320"
			389	31,834				
94	38/1	DAS+3 m			777904	1210667	77° 32' 33.381"	10° 56' 28.911"
			398	32,232				
95	AP39	DDS+0 m			777742	1211030	77° 32' 28.149"	10° 56' 40.762"
			367	32,599				
96	39/1	DAS+0 m			777802	1211392	77° 32' 30.225"	10° 56' 52.520"
			364	32,963				
97	AP40	DDS+0 m			777861	1211752	77° 32' 32.267"	10° 57' 4.214"
			340	33,303				
98	40/1	DAS+9 m			777660	1212026	77° 32' 25.726"	10° 57' 13.181"
			396	33,699				
99	AP41	DBS+0 m			777425	1212345	77° 32' 18.080"	10° 57' 23.621"
			365	34,064				
100	41/1	DAS+3 m			777253	1212667	77° 32' 12.507"	10° 57' 34.142"
			307	34,371				
101	41/2	DAS+0 m			777109	1212938	77° 32' 7.842"	10° 57' 42.996"
			307	34,678				
102	AP 42/0	DDS+0 m			776965	1213207	77° 32' 3.177"	10° 57' 51.785"
			383	35,061				
103	42/1	DAS+6 m			776586	1213263	77° 31' 50.717"	10° 57' 53.710"
			358	35,419				
104	AP 43/0	DDS+0 m			776233	1213314	77° 31' 39.111"	10° 57' 55.466"
			248	35,667				
105	AP 43A/0	DDS+1 8m			776057	1213489	77° 31' 33.366"	10° 58' 1.206"

			375	36,042				
106	AP 44/0	SPT+4 0m			775792	1213752	77° 31' 24.715"	10° 58' 9.833"
			220	36,262				
107	AP 45/0	SPT+4 0m			775673	1213936	77° 31' 20.848"	10° 58' 15.850"
			373	36,635				
108	AP 45A/0	DBS+9 m			775614	1214304	77° 31' 19.008"	10° 58' 27.836"
			347	36,982				
109	AP 46/0	DDS+0 m			775557	1214645	77° 31' 17.226"	10° 58' 38.943"
			244	37,226				
110	46/1	DAS+9 m			775683	1214853	77° 31' 21.431"	10° 58' 45.674"
			370	37,596				
111	AP 47/0	DDS+1 8m			775874	1215169	77° 31' 27.806"	10° 58' 55.901"
			284	37,880				
112	AP48	DDS+9 m			775806	1215444	77° 31' 25.643"	10° 59' 4.864"
			272	38,152				
113	48/1	DAS+3 m			775969	1215662	77° 31' 31.070"	10° 59' 11.910"
			237	38,389				
114	AP49	DDS+0 m			776110	1215850	77° 31' 35.763"	10° 59' 17.987"
			230	38,619				
115	AP50	DDS+3 m			776102	1216080	77° 31' 35.564"	10° 59' 25.470"
			386	39,005				
116	AP51	DDS+3 m			776096	1216466	77° 31' 35.473"	10° 59' 38.027"
			379	39,384				
117	AP52	DCS+3 m			775858	1216761	77° 31' 27.720"	10° 59' 47.687"
			355	39,739				
118	AP53	DDS+0 m			775568	1216965	77° 31' 18.229"	10° 59' 54.402"
			235	39,974				
119	AP53A	DBS+0 m			775476	1217181	77° 31' 15.260"	11° 0' 1.453"
			328	40,302				
120	AP54	DDS+2 5m			775347	1217482	77° 31' 11.096"	11° 0' 11.279"
			241	40,543				
121	AP55	DDS+2 5m			775142	1217608	77° 31' 4.382"	11° 0' 15.433"
			400	40,943				
122	55/1	DAS+9 m			775045	1217996	77° 31' 1.296"	11° 0' 28.080"
			342	41,285				

123	55/2	DAS+0 m			774961	1218329	77° 30' 58.622"	11° 0' 38.934"	
			342	41,627					
124	55/3	DAS+0 m			774877	1218661	77° 30' 55.948"	11° 0' 49.756"	
			344	41,971					
125	AP56	DDS+3 m			774794	1218993	77° 30' 53.307"	11° 1' 0.578"	
			389	42,360					
126	AP57	DCS+6 m			774935	1219355	77° 30' 58.050"	11° 1' 12.314"	
			385	42,745					
127	AP58	DDS+0 m			774929	1219740	77° 30' 57.959"	11° 1' 24.838"	
			386	43,131					
128	58/1	DAS+0 m			774636	1219991	77° 30' 48.381"	11° 1' 33.083"	
			385	43,516					
129	58/2	DAS+3 m			774344	1220242	77° 30' 38.836"	11° 1' 41.327"	
			387	43,903					
130	58/3	DAS+0 m			774049	1220492	77° 30' 29.192"	11° 1' 49.539"	
			390	44,293					
131	AP59	DDS+0 m			773753	1220741	77° 30' 19.515"	11° 1' 57.719"	
			1180	45,473					
132	AP60	DCS+0 0			772798	1221434	77°29' 48.2615"	11°2' 20.5198"	Route map approved; Detailed survey not completed
			387	45,860					
133	AP61	DCS+0 0			772577	1221752	77° 29' 41.072"	11° 2' 30.923"	
			194	46,054					
134	AP62	DDS+0 0			772408	1221846	77° 29' 35.533"	11° 2' 34.027"	
			397	46,451					
135	AP63	DDS+0 0			772370	1222241	77° 29' 34.390"	11° 2' 46.885"	
			755	47,206					
136	AP64	DDS+0 0			771854	1222793	77° 29' 17.551"	11° 3' 4.980"	
			399	47,605					
137	AP65	DCS+0 0			771834	1223192	77° 29' 17.002"	11° 3' 17.964"	
			758	48,363					
138	AP66	DDS+0 0			771563	1223900	77° 29' 8.272"	11° 3' 41.067"	
			375	48,738					
139	AP 67	DCS+0 0			771771	1224212	77° 29' 15.207"	11° 3' 51.159"	
			768	49,506					
140	AP 68	DDS+0 0			771951	1224959	77° 29' 21.340"	11° 4' 15.409"	

			331	49,837				
141	AP 69	DCS+0 0			771804	1225256	77° 29' 16.581"	11° 4' 25.109"
			1503	51,340				
142	AP 70	DDS+0 0			770698	1226274	77° 28' 40.438"	11° 4' 58.522"
			666	52,006				
143	AP 71	DBS+0 0			770534	1226920	77° 28' 35.214"	11° 5' 19.579"
			1285	53,291				
144	AP 72	DCS+0 0			770505	1228205	77° 28' 34.611"	11° 6' 1.385"
			1571	54,862				
145	AP73	DDS+0 m			769956	1229677	77° 28' 16.934"	11° 6' 49.414"
			371	55,233				
146	AP74	DCS+0 m			769974	1230047	77° 28' 17.628"	11° 7' 1.445"
			390	55,623				
147	74/1	DAS+0 m			769813	1230402	77° 28' 12.422"	11° 7' 13.035"
			370	55,993				
148	74/2	DAS+0 m			769661	1230739	77° 28' 7.508"	11° 7' 24.038"
			351	56,344				
149	AP75	DCS+0 m			769517	1231056	77° 28' 2.852"	11° 7' 34.389"
			361	56,705				
150	75/1	DAS+0 m			769513	1231417	77° 28' 2.819"	11° 7' 46.132"
			366	57,071				
151	75/2	DAS+0 m			769509	1231783	77° 28' 2.788"	11° 7' 58.039"
			380	57,451				
152	75/3	DAS+0 m			769505	1232163	77° 28' 2.760"	11° 8' 10.400"
			338	57,789				
153	75/4	DAS+0 m			769502	1232501	77° 28' 2.754"	11° 8' 21.395"
			361	58,150				
154	75/5	DAS+6 m			769498	1232862	77° 28' 2.721"	11° 8' 33.139"
			361	58,511				
155	75/6	DAS+6 m			769494	1233223	77° 28' 2.689"	11° 8' 44.883"
			361	58,872				
156	75/7	DAS+0 m			769490	1233584	77° 28' 2.656"	11° 8' 56.626"
			361	59,233				
157	75/8	DAS+0 m			769487	1233945	77° 28' 2.656"	11° 9' 8.370"
			361	59,594				

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158	75/9	DAS+0 m			769483	1234306	77° 28' 2.624"	11° 9' 20.113"	
			361	59,955					
159	75/10	DAS+0 m			769479	1234667	77° 28' 2.591"	11° 9' 31.857"	
			359	60,314					
160	75/11	DAS+0 m			769475	1235026	77° 28' 2.558"	11° 9' 43.535"	
			355	60,669					
161	AP 76/0	DDS+0 m			769472	1235378	77° 28' 2.556"	11° 9' 54.986"	
			379	61,048					
162	AP 77/0	DCS+3 m			769266	1235696	77° 27' 55.857"	11° 10' 5.385"	
			396	61,444					
163	AP 78/0	DDS+6 m			769223	1236091	77° 27' 54.549"	11° 10' 18.246"	
			248	61,692					
164	AP 79/0	DDS+6 m			769119	1236314	77° 27' 51.185"	11° 10' 25.528"	
			300	61,992					
165	79/1	DAS+3 m			769017	1236596	77° 27' 47.902"	11° 10' 34.728"	
			285	62,277					
166	AP 80/0	DDS+0 m			768920	1236864	77° 27' 44.780"	11° 10' 43.472"	
			298	62,575					
167	AP 81	DCS+0 0			768671	1237011	77° 27' 36.617"	11° 10' 48.321"	
			210	62,785					
168	AP 82	DBS+0 0			768546	1237186	77° 27' 32.548"	11° 10' 54.047"	
			882	63,667					
169	AP 83	DCS+0 0			767988	1237882	77° 27' 14.356"	11° 11' 16.838"	
			214	63,881					
170	AP 84	DCS+0 0			767927	1238087	77° 27' 12.402"	11° 11' 23.522"	
			297	64,178					
171	AP 85	DDS+0 0			767942	1238383	77° 27' 12.977"	11° 11' 33.147"	
			735	64,913					
172	AP 86	DCS+0 0			768537	1238815	77° 27' 32.698"	11° 11' 47.037"	
			778	65,691					
173	AP 87	DDS+0 0			768937	1239483	77° 27' 46.060"	11° 12' 8.657"	
			396	66,087					
174	AP 88	DCS+0 m			768885	1239876	77° 27' 44.455"	11° 12' 21.455"	
			199	66,286					
175	AP 89/0	DDS+9 m			768769	1240038	77° 27' 40.678"	11° 12' 26.756"	

Route map
approved;
Detailed survey
not completed

			448	66,734					
176	89/1	DAS+3 m			768792	1240485	77° 27' 41.559"	11° 12' 41.290"	Route map & Detailed survey approved
			271	67,005					
177	89/2	DAS+0 m			768806	1240756	77° 27' 42.095"	11° 12' 50.101"	
			271	67,276					
178	89/3	DAS+0 m			768820	1241027	77° 27' 42.631"	11° 12' 58.912"	
			340	67,616					
179	AP 90/0	DCS+0 m			768838	1241365	77° 27' 43.317"	11° 13' 9.901"	
			408	68,024					
180	AP 91/0	DDS+6 m			768658	1241729	77° 27' 37.487"	11° 13' 21.790"	
			247	68,271					
181	AP 92/0	DDS+6 m			768502	1241922	77° 27' 32.400"	11° 13' 28.111"	Route map & Detailed survey not completed
			1276	69,547					
182	AP 93	DCS+0 0			767711	1243199	77° 27' 6.688"	11° 14' 9.864"	
			344	69,891					
183	AP 94	DCS+0 0			767874	1243543	77° 27' 12.154"	11° 14' 21.009"	
			732	70,623					
184	AP 95	DDS+0 0			767963	1244085	77° 27' 15.236"	11° 14' 38.615"	
			387	71,010					
185	AP 96	DDS+0 0			767902	1244273	77° 27' 13.277"	11° 14' 44.747"	
			325	71,335					
186	AP 97	DDS+0 0			767583	1244588	77° 27' 2.853"	11° 14' 55.080"	
			115	71,450					
	COIMBA TORE SS				767503	1244665	77° 27' 0.238"	11° 14' 57.606"	
	Total route length		71,450	71,450					

Summary

Route Map approved		AP 01 to AP 92	
Route Map not approved		AP 92 to AP 97	(Due to SS Gantry not finalised for a length of 3.191Km)
Detailed survey approved		AP 01 to AP 59, AP 73 to AP 80, AP 89 to AP92	
Total route length		71.450Km	
Approved route map length		68.259 Km	
	Balance	3.191 Km	
Approved detailed survey length		53.693 Km	

*Approved coordinates are available for 135 towers only. Detailed survey is yet to be undertaken in 16.6 km of line.

400 kV DC line Virudhunagar – Kayathar

Sl. No	Location No	Type of Tower	Span (Mtr)	UTM Coordinate (Zone 43& 44)		Spherical Coordinates (Zone 43& 44)	
				Easting	Northing	Latitude	Longitude
0	DDE			1,70,660.000	10,45,741.000	9°26' 50.9411"N	78°0' 4.2631"E
			94				
1	AP 1/0	DD+0		1,70,663.640	10,45,650.500	9°26' 47.9994"N	78°0' 4.4077"E
			273				
2	AP2/0	DB+0		1,70,685.930	10,45,377.880	9°26' 39.1409"N	78°0' 5.2145"E
			364				
3	AP3/0	DB+0		1,70,783.360	10,45,028.700	9°26' 27.814"N	78°0' 8.5034"E
			373				
4	3/1	DA+00		1,70,924.600	10,44,675.920	9°26' 16.3822"N	78°0' 13.228"E
			379				
5	3/2	DA+00		1,71,065.850	10,44,323.150	9°26' 4.9506"N	78°0' 17.9528"E
			382				
6	3/3	DA+00		1,71,207.090	10,43,970.370	9°25' 53.5187"N	78°0' 22.6771"E
			379				
7	3/4	DA+00		1,71,348.330	10,43,617.600	9°25' 42.0871"N	78°0' 27.4013"E
			379				
8	3/5	DA+00		1,71,482.140	10,43,283.390	9°25' 31.2569"N	78°0' 31.8769"E
			372				
9	3/6	DA+00		1,71,623.390	10,42,930.620	9°25' 19.8252"N	78°0' 36.6013"E
			386				
10	3/7	DA+00		1,71,764.630	10,42,577.840	9°25' 8.3931"N	78°0' 41.3251"E
			385				
11	AP4	DC+00		1,71,908.366	10,42,218.864	9°24' 56.7602"N	78°0' 46.1324"E
			370.0				
12	4/1	DA+00		1,71,872.478	10,41,850.613	9°24' 44.7758"N	78°0' 45.0601"E
			360.0				
13	4/2	DA+00		1,71,837.573	10,41,492.317	9°24' 33.1154"N	78°0' 44.0173"E
			400.0				
14	4/3	DA+03		1,71,798.788	10,41,094.211	9°24' 20.1594"N	78°0' 42.8585"E
			350.0				
15	4/4	DA+00		1,71,764.848	10,40,745.869	9°24' 8.8229"N	78°0' 41.8444"E
			370.0				
16	4/5	DA+00		1,71,728.979	10,40,377.617	9°23' 56.8385"N	78°0' 40.7727"E

			381.0				
17	AP5	DC+03		1,71,692.045	10,39,998.421	9°23' 44.4979"N	78°0' 39.6692"E
			290.0				
18	5/1	DA+09		1,71,570.525	10,39,735.116	9°23' 35.9024"N	78°0' 35.7636"E
			417.0				
19	AP6	DD+31		1,71,395.765	10,39,356.406	9°23' 23.5394"N	78°0' 30.147"E
			231.0				
20	AP7	DD+31		1,71,191.150	10,39,250.081	9°23' 20.0253"N	78°0' 23.4768"E
			425.0				
21	7/1	DA+09		1,71,061.185	10,38,845.448	9°23' 6.8318"N	78°0' 19.3343"E
			262.0				
22	AP8	DB+03		1,70,981.134	10,38,596.191	9°22' 58.7046"N	78°0' 16.7828"E
			370.0				
23	8/1	DA+00		1,70,937.322	10,38,228.799	9°22' 46.746"N	78°0' 15.4509"E
			370.0				
24	8/2	DA+00		1,70,893.501	10,37,861.397	9°22' 34.787"N	78°0' 14.1187"E
			370.0				
25	8/3	DA+00		1,70,849.692	10,37,494.004	9°22' 22.8284"N	78°0' 12.7869"E
			370.0				
26	8/4	DA+00		1,70,805.886	10,37,126.610	9°22' 10.8698"N	78°0' 11.4551"E
			360.0				
27	8/5	DA+00		1,70,763.272	10,36,769.147	9°21' 59.2344"N	78°0' 10.1596"E
			360.0				
28	8/6	DA+00		1,70,720.649	10,36,411.674	9°21' 47.5987"N	78°0' 8.8638"E
			370.0				
29	8/7	DA+00		1,70,676.849	10,36,044.278	9°21' 35.64"N	78°0' 7.5322"E
			360.0				
30	8/8	DA+00		1,70,634.231	10,35,686.814	9°21' 24.0046"N	78°0' 6.2365"E
			327.0				
31	AP9	DC+06		1,70,595.500	10,35,361.888	9°21' 13.4283"N	78°0' 5.059"E
			390.0				
32	9/1	DA+09		8,29,555.550	10,35,007.940	9°21' 1.8773"N	77°59' 59.7877"E
			390.0				
33	9/2	DA+00		8,29,397.570	10,34,651.370	9°20' 50.3265"N	77°59' 54.5161"E
			380.0				
34	9/3	DA+00		8,29,243.650	10,34,303.940	9°20' 39.0717"N	77°59' 49.3801"E
			340.0				

35	9/4	DA+03		8,29,105.930	10,33,993.080	9°20' 29.0016"N	77°59' 44.7848"E
			385.0				
36	AP10	DC+00		8,28,949.980	10,33,641.080	9°20' 17.5987"N	77°59' 39.5813"E
			370.0				
37	10/1	DA+00		8,28,957.860	10,33,271.160	9°20' 5.5678"N	77°59' 39.7365"E
			370.0				
38	10/2	DA+00		8,28,965.730	10,32,901.250	9°19' 53.5373"N	77°59' 39.8914"E
			350.0				
39	AP11	DB+00		8,28,973.190	10,32,550.870	9°19' 42.1419"N	77°59' 40.0383"E
			345.0				
40	11/1	DA+00		8,29,055.210	10,32,215.760	9°19' 31.2225"	83°59' 42.6305"
			352.0				
41	AP12	DC+00		8,29,139.02	10,31,873.38	9°19' 20.0663"	83°59' 45.2791"
			390				
42	12/1	DA+03		8,29,064.00	10,31,490.66	9°19' 7.642"	83°59' 42.717"
			330				
43	12/2	DA+00		8,29,000.52	10,31,166.82	9°18' 57.1292"	83°59' 40.5491"
			370				
44	12/3	DA+00		8,28,929.35	10,30,803.73	9°18' 45.3422"	83°59' 38.1186"
			380				
45	12/4	DA+03		8,28,856.26	10,30,430.83	9°18' 33.2367"	83°59' 35.6226"
			380				
46	12/5	DA+00		8,28,783.17	10,30,057.92	9°18' 21.1309"	83°59' 33.1267"
			390				
47	12/6	DA+03		8,28,708.15	10,29,675.21	9°18' 8.7069"	83°59' 30.565"
			384				
48	AP13	DB+00		828634.240	1029298.110	9°17' 56.4649"N	77°59' 28.0412"E
			370				
49	13/1	DA+03		828556.860	1028957.307	9°17' 45.4042"N	77°59' 25.414"E
			370				
50	13/2	DA+00		828470.410	1028576.470	9°17' 33.0442"N	77°59' 22.4789"E
			360				
51	13/3	DA+00		828390.710	1028225.410	9°17' 21.6506"N	77°59' 19.7731"E
			380				
52	13/4	DA+00		828306.580	1027854.840	9°17' 9.6237"N	77°59' 16.9169"E
			370				
53	13/5	DA+00		828224.660	1027494.020	9°16' 57.9132"N	77°59' 14.1359"E
			370				
54	13/6	DA+00		828142.750	1027133.200	9°16' 46.2028"N	77°59' 11.3553"E
			360				
55	13/7	DA+00		828063.050	1026782.130	9°16' 34.8087"N	77°59' 8.6498"E
			380				
56	13/8	DA+00		827978.920	1026411.560	9°16' 22.7817"N	77°59' 5.794"E
			360				

57	13/9	DA+03		827899.220	1026060.500	9°16' 11.3879"N	77°59' 3.0886"E
			393	827899.220			
58	AP14	DC+00		827812.220	1025677.320	9°15' 58.9517"N	77°59' 0.1356"E
			390				
59	14/1	DA+03		827628.080	1025333.530	9°15' 47.8227"N	77°58' 54.0139"E
			390				
60	14/2	DA+00		827443.930	1024989.740	9°15' 36.6937"N	77°58' 47.8919"E
			395				
61	AP15	DD+06		827257.350	1024641.420	9°15' 25.418"N	77°58' 41.6894"E
			204				
62	AP16	DD+06		827127.240	1024484.400	9°15' 20.3475"N	77°58' 37.3876"E
			335				
63	AP17	DB+03		826897.850	1024240.130	9°15' 12.4667"N	77°58' 29.8125"E
			340				
64	17/1	DA+03		826730.630	1023944.090	9°15' 2.8856"N	77°58' 24.2582"E
			340				
65	17/2	DA+00		826563.410	1023648.060	9°14' 53.3048"N	77°58' 18.704"E
			320				
66	17/3	DA+00		826406.030	1023369.430	9°14' 44.287"N	77°58' 13.4767"E
			379				
67	AP18	DC+03		826219.810	1023039.750	9°14' 33.617"N	77°58' 7.2916"E
			380				
68	18/1	DA+03		826129.800	1022670.570	9°14' 21.6364"N	77°58' 4.2449"E
			380				
69	18/2	DA+03		826039.790	1022301.380	9°14' 9.6554"N	77°58' 1.1983"E
			380				
70	18/3	DA+03		825949.780	1021932.190	9°13' 57.6744"N	77°57' 58.1518"E
			370				
71	18/4	DA+03		825862.150	1021572.720	9°13' 46.0089"N	77°57' 55.1859"E
			377				
72	AP19	DB+00		825772.800	1021206.250	9°13' 34.1161"N	77°57' 52.1619"E
			319				
73	AP20	DD+00		8,25,622.62	1020924.49	9°13' 24.9944"	77°57' 47.1701"
			101				
74	AP21	D-3		8,25,529.43	10,20,885.47	9°13' 23.7506"	77°57' 44.1094"
			120				
75	AP22	D-3		8,25,418.17	10,20,841.54	9°13' 22.3521"	77°57' 40.4561"
			112				
76	AP23	D-3		8,25,557.22	10,20,827.77	9°13' 21.8668"	77°57' 45.0033"
			126				
77	AP24	D-3		8,25,441.86	10,20,778.05	9°13' 20.2812"	77°57' 41.2142"
			99				
78	AP25	DD+00		8,25,345.30	10,20,756.93	9°13' 19.6204"	77°57' 38.0482"
			305				
79	AP26	DC+00		8,25,149.67	10,20,523.52	9°13' 12.083"N	77°57' 31.5821"E
			330				
80	26/1	DA+00		825025.570	1020217.750	9°13' 2.1733"N	77°57' 27.4376"E

			340				
81	26/2	DA+00		824897.720	1019902.710	9°12' 51.9632"N	77°57' 23.1679"E
			325				
82	AP27	DC+00		824775.410	1019601.330	9°12' 42.1957"N	77°57' 19.0834"E
			360				
83	27/1	DA+00		824758.850	1019241.720	9°12' 30.5062"N	77°57' 18.4441"E
			375				
84	27/2	DA+03		824741.590	1018867.120	9°12' 18.3294"N	77°57' 17.778"E
			375				
85	27/3	DA+00		824724.330	1018492.510	9°12' 6.1523"N	77°57' 17.1119"E
			352				
86	AP28	DB+03		824708.130	1018140.720	9°11' 54.717"N	77°57' 16.4867"E
			400				
87	28/1	DA+06		824615.110	1017751.690	9°11' 42.0913"N	77°57' 13.3374"E
			380				
88	AP29	DB+06		824526.740	1017382.130	9°11' 30.0975"N	77°57' 10.3457"E
			402				
89	AP30	DD+25		824417.560	1016995.110	9°11' 17.5414"N	77°57' 6.6683"E
			206				
90	AP31	DD+25		824508.590	1016810.360	9°11' 11.5093"N	77°57' 9.5976"E
			344				
91	AP32	DC+09		824568.000	1016471.730	9°11' 0.4816"N	77°57' 11.4506"E
			360				
92	32/1	DA+03		824449.960	1016131.630	9°10' 49.4537"N	77°57' 7.496"E
			360				
93	32/2	DA+03		824331.920	1015791.530	9°10' 38.4257"N	77°57' 3.5416"E
			380				
94	32/3	DA+00		824207.320	1015432.540	9°10' 26.7852"N	77°56' 59.3675"E
			340				
95	32/4	DA+00		824095.840	1015111.340	9°10' 16.37"N	77°56' 55.633"E
			360				
96	32/5	DA+00		823977.800	1014771.240	9°10' 5.3419"N	77°56' 51.6788"E
			360				
97	32/6	DA+00		823859.750	1014431.140	9°9' 54.3137"N	77°56' 47.7244"E
			370				
98	32/7	DA+00		823738.430	1014081.600	9°9' 42.9795"N	77°56' 43.6606"E
			360				
99	32/8	DA+00		823620.390	1013741.500	9°9' 31.9513"N	77°56' 39.7067"E
			363				
100	AP33	DB+06		823501.420	1013398.700	9°9' 20.8355"N	77°56' 35.7218"E
			343				
101	AP34	DC+03		823356.010	1013087.840	9°9' 10.7654"N	77°56' 30.8803"E
			380				
102	34/1	DA+00		823090.778	1012808.793	9°9' 1.7615"N	77°56' 22.1264"E
			380				
103	34/2	DA+03		822825.512	1012529.743	9°8' 52.7575"N	77°56' 13.3716"E
			380				

104	34/3	DA+00		822560.266	1012250.694	9°8' 43.7534"N	77°56' 4.6175"E
			380				
105	34/4	DA+03		822295.014	1011971.647	9°8' 34.7493"N	77°55' 55.8634"E
			380				
106	34/5	DA+00		822029.775	1011692.598	9°8' 25.745"N	77°55' 47.1098"E
			380				
107	34/6	DA+03		821764.516	1011413.550	9°8' 16.7407"N	77°55' 38.3556"E
			380				
108	34/7	DA+00		821502.719	1011138.115	9°8' 7.8528"N	77°55' 29.7159"E
			380				
109	34/8	DA+03		821240.908	1010862.701	9°7' 58.9655"N	77°55' 21.0758"E
			380				
110	34/9	DA+00		820979.041	1010587.293	9°7' 50.0784"N	77°55' 12.434"E
			380				
111	34/10	DA+03		820717.338	1010311.859	9°7' 41.1902"N	77°55' 3.7977"E
			369				
112	AP35	DC+00		820459.757	1010040.911	9°7' 32.4468"N	77°54' 55.2976"E
			365				
113	35/1	DA+03		820296.866	1009725.479	9°7' 22.2318"N	77°54' 49.8842"E
			365				
114	35/2	DA+00		820133.982	1009410.062	9°7' 12.0172"N	77°54' 44.4712"E
			355				
115	35/3	DA+03		819971.095	1009094.637	9°7' 1.8024"N	77°54' 39.0581"E
			365				
116	35/4	DA+00		819808.208	1008779.213	9°6' 51.5875"N	77°54' 33.6452"E
			365				
117	35/5	DA+03		819640.732	1008454.903	9°6' 41.0848"N	77°54' 28.0799"E
			378				
118	AP36	DD+03		819468.840	1008122.040	9°6' 30.305"N	77°54' 22.368"E
			360				
119	36/1	DA+06		819555.730	1007772.690	9°6' 18.9215"N	77°54' 25.1192"E
			390				
120	36/2	DA+00		819649.860	1007394.220	9°6' 6.589"N	77°54' 28.0996"E
			357				
121	AP37	DC+00		819736.010	1007047.840	9°5' 55.3023"N	77°54' 30.8273"E
			360				
122	37/1	DA+00		819936.350	1006748.740	9°5' 45.5232"N	77°54' 37.3036"E
			360				
123	37/2	DA+03		820136.690	1006449.640	9°5' 35.7442"N	77°54' 43.7798"E
			360				
124	37/3	DA+00		820337.030	1006150.530	9°5' 25.9648"N	77°54' 50.256"E
			350				
125	37/4	DA+03		820531.800	1005859.740	9°5' 16.4574"N	77°54' 56.552"E
			390				
126	AP38	DC+03		820748.750	1005535.850	9°5' 5.8678"N	77°55' 3.5649"E
			340				
127	38/1	DA+03		820802.730	1005200.160	9°4' 54.9372"N	77°55' 5.2426"E

			361				
128	AP39	DD+00		820860.000	1004844.000	9°4' 43.34"N	77°55' 7.0226"E
			350				
129	39/1	DA+03		820702.100	1004531.640	9°4' 33.2234"N	77°55' 1.7744"E
			370				
130	39/2	DA+03		820535.170	1004201.440	9°4' 22.529"N	77°54' 56.2261"E
			396				
131	AP40	DB+03		820356.730	1003848.460	9°4' 11.0967"N	77°54' 50.2955"E
			385				
132	40/1	DA+03		820211.930	1003491.730	9°3' 59.5337"N	77°54' 45.4645"E
			385				
133	40/2	DA+00		820067.130	1003135.000	9°3' 47.9706"N	77°54' 40.6337"E
			385				
134	40/3	DA+03		819922.330	1002778.270	9°3' 36.4075"N	77°54' 35.803"E
			385				
135	40/4	DA+03		819777.530	1002421.540	9°3' 24.8443"N	77°54' 30.9723"E
			385				
136	40/5	DA+03		819632.730	1002064.800	9°3' 13.2808"N	77°54' 26.1418"E
			395				
137	AP41	DB+03		819484.220	1001698.940	9°3' 1.4215"N	77°54' 21.1877"E
			390				
138	41/1	DA+03		819422.270	1001313.900	9°2' 48.9161"N	77°54' 19.0605"E
			350				
139	41/2	DA+03		819366.660	1000968.340	9°2' 37.6929"N	77°54' 17.151"E
			370				
140	41/3	DA+00		819307.880	1000603.040	9°2' 25.8285"N	77°54' 15.1328"E
			350				
141	41/4	DA+06		819252.280	1000257.490	9°2' 14.6056"N	77°54' 13.2238"E
			402				
142	AP42	DD+25		819188.400	999860.540	9°2' 1.7132"N	77°54' 11.0306"E
			253				
143	AP43	DD+18		819323.950	999646.460	9°1' 54.7162"N	77°54' 15.4091"E
			400				
144	43/1	DA+06		819432.510	999261.470	9°1' 42.1681"N	77°54' 18.8602"E
			380				
145	43/2	DA+00		819535.630	998895.730	9°1' 30.2475"N	77°54' 22.1383"E
			359				
146	AP44	DC+00		819633.060	998550.180	9°1' 18.9849"N	77°54' 25.2354"E
			380				
147	44/1	DA+03		819553.320	998178.630	9°1' 6.9227"N	77°54' 22.5302"E
			380				
148	44/2	DA+03		819473.580	997807.100	9°0' 54.8611"N	77°54' 19.825"E
			380				
149	44/3	DA+06		819393.840	997435.560	9°0' 42.7992"N	77°54' 17.12"E
			360				
150	44/4	DA+00		819318.300	997083.570	9°0' 31.3719"N	77°54' 14.5575"E
			380				

151	44/5	DA+03		819238.560	996712.030	9°0' 19.31"N	77°54' 11.8526"E
			370				
152	44/6	DA+06		819160.920	996350.270	9°0' 7.5655"N	77°54' 9.219"E
			400				
153	44/7	DA+06		819076.980	995959.180	8°59' 54.8688"N	77°54' 6.3718"E
			374				
154	AP45	DC+06		818998.560	995593.780	8°59' 43.006"N	77°54' 3.7119"E
			370				
155	45/1	DA+03		818773.910	995299.790	8°59' 33.5032"N	77°53' 56.2874"E
			370				
156	45/2	DA+00		818549.260	995005.800	8°59' 24.0004"N	77°53' 48.8631"E
			370				
157	45/3	DA+03		818324.610	994711.810	8°59' 14.4974"N	77°53' 41.4388"E
			370				
158	45/4	DA+03		818099.960	994417.810	8°59' 4.994"N	77°53' 34.0147"E
			370				
159	45/5	DA+06		817875.310	994123.820	8°58' 55.4909"N	77°53' 26.5906"E
			361				
160	AP46	DC+03		817656.180	993837.060	8°58' 46.2214"N	77°53' 19.3492"E
			380				
161	46/1	DA+03		817534.980	993476.900	8°58' 34.5398"N	77°53' 15.2921"E
			380				
162	46/2	DA+03		817413.780	993116.750	8°58' 22.8585"N	77°53' 11.2351"E
			380				
163	46/3	DA+00		817292.580	992756.600	8°58' 11.1771"N	77°53' 7.1782"E
			381				
164	AP47	DB+03		817170.980	992395.280	8°57' 59.4577"N	77°53' 3.1081"E
			385				
165	47/1	DA+00		817105.410	992015.900	8°57' 47.1367"N	77°53' 0.866"E
			371				
166	AP48	DD+06		817042.250	991650.490	8°57' 35.2693"N	77°52' 58.7064"E
			283				
167	AP49	DD+09		817110.670	991376.110	8°57' 26.3288"N	77°53' 0.8739"E
			380				
168	49/1	DA+03		817006.810	991010.580	8°57' 14.4679"N	77°52' 57.3832"E
			380				
169	49/2	DA+06		816902.960	990645.040	8°57' 2.6066"N	77°52' 53.8929"E
			380				
170	49/3	DA+00		816799.110	990279.510	8°56' 50.7457"N	77°52' 50.4027"E
			367				
171	AP50	DB+00		816698.880	989926.740	8°56' 39.2987"N	77°52' 47.0343"E
			350				
172	50/1	DA+03		816622.360	989585.200	8°56' 28.211"N	77°52' 44.4443"E
			340				
173	50/2	DA+00		816548.010	989253.430	8°56' 17.4403"N	77°52' 41.9278"E
			318				
174	AP51	DD+03		816478.450	988942.980	8°56' 7.3618"N	77°52' 39.5735"E

			339				
175	AP52	DD+09		816250.910	988692.010	8°55' 59.2577"N	77°52' 32.0676"E
			218				
176	AP53	DD+09		816046.750	988614.450	8°55' 56.7872"N	77°52' 25.3707"E
			334				
177	AP54	DB+03		815879.940	988324.700	8°55' 47.4064"N	77°52' 19.8413"E
			264				
178	54/1	DA+09		815749.700	988095.060	8°55' 39.9712"N	77°52' 15.5233"E
			363				
179	AP55	DD+18		815570.644	987779.363	8°55' 29.7496"N	77°52' 9.587"E
			285				
180	AP56	DD+18		815465.660	987514.060	8°55' 21.1481"N	77°52' 6.0861"E
			384				
181	56/1	DA+06		815126.710	987333.600	8°55' 15.3649"N	77°51' 54.955"E
			364				
182	AP57	DC+03		814805.530	987162.590	8°55' 9.8844"N	77°51' 44.4076"E
			365				
183	57/1	DA+03		814576.640	986878.280	8°55' 0.6959"N	77°51' 36.8498"E
			344				
184	57/2	DA+03		814360.910	986610.330	8°54' 52.036"N	77°51' 29.7266"E
			350				
185	AP58	DC+00		814141.200	986337.410	8°54' 43.2154"N	77°51' 22.4722"E
			370				
186	58/1	DA+03		813815.390	986162.060	8°54' 37.5946"N	77°51' 11.7726"E
			396				
187	AP59	DD+18		813467.020	985974.560	8°54' 31.5841"N	77°51' 0.3322"E
			200				
188	AP60	DD+18		813346.760	985814.530	8°54' 26.4098"N	77°50' 56.3589"E
			184				
189	AP61	DD+18		813285.670	985641.450	8°54' 20.7962"N	77°50' 54.3174"E
			214				
190	AP62	DD+09		813381.540	985449.900	8°54' 14.5426"N	77°50' 57.4045"E
			235				
191	AP63	DD+25		813572.660	985313.800	8°54' 10.0684"N	77°51' 3.6204"E
			214				
192	AP64	DD+31		813609.110	985102.460	8°54' 3.1861"N	77°51' 4.7592"E
			350				
193	AP65	DB+06		813455.960	984787.740	8°53' 52.9892"N	77°50' 59.6714"E
			327				
194	AP66	DD+18		813313.000	984493.970	8°53' 43.471"N	77°50' 54.9223"E
			272				
195	AP67	DD+25		813140.990	984283.160	8°53' 36.658"N	77°50' 49.2441"E
			303				
196	AP68	DD+35		812967.400	984034.480	8°53' 28.6138"N	77°50' 43.5047"E
			212				
197	AP69	DD+35		812988.920	983823.300	8°53' 21.7404"N	77°50' 44.1554"E
			231				

198	AP70	DD+09		812869.410	983626.160	8°53' 15.3589"N	77°50' 40.1977"E
			409				
199	AP71	DB+06		812464.440	983570.040	8°53' 13.6347"N	77°50' 26.9402"E
			333				
200	AP72	DB+00		812131.670	983577.210	8°53' 13.9509"N	77°50' 16.0596"E
			246				
201	AP73	DD+00		811891.410	983631.860	8°53' 15.788"N	77°50' 8.2162"E
			167				
	Common Point 45			811742.340	983706.800	8°53' 18.2623"N	77°50' 3.36"E
Total length			70215				

400 kV DC line Kamuthi – Ottapidaram

Sl. No	Location No	Tower Type	Span (m)	UTM Coordinate (Zone - 44P)		Spherical Coordinate	
				Easting	Northing	Longitude	Latitude
	GANTRY			213905.704	1034778.881	78.395399	9.351575
			51				
1	A P 1	DD+9		213905.714	1034828.799	78.395396	9.352026
			115				
2	A P 2	QD+0		213981.869	1034914.678	78.396083	9.352807
			192				
3	A P 3	QD+3		214047.266	1035094.089	78.396666	9.354432
			381				
4	A P 4	QD+6		214198.000	1035444.000	78.398013	9.357604
			382				
5	AP 5	QD+3		214232.997	1035824.000	78.398306	9.361040
			363				
6	5/1	QA+0		214022.110	1036119.195	78.396368	9.363693
			380				
7	5/2	QA+3		213801.248	1036428.316	78.394338	9.366471
			372				
8	AP 6	QD+0		213584.815	1036731.142	78.392348	9.369193
			355				
9	6/1	QA+0		213317.279	1036964.435	78.389898	9.371283
			355				
10	6/2	QA+3		213049.718	1037197.751	78.387448	9.373373
			355				
11	6/3	QA+0		212782.158	1037431.066	78.384998	9.375463
			345				
12	AP 7	QD+0		212522.322	1037657.646	78.382619	9.377493
			308				
13	AP 7A	QD+0		212223.016	1037731.007	78.379891	9.378136
			201				
14	AP 8	QD+0		212026.000	1037692.006	78.378101	9.377770
			153				

15	AP 9	DD+9		211887.817	1037627.651	78.376848	9.377179
			390				
16	9/1	DA+3		211582.509	1037385.000	78.374087	9.374966
			390				
17	AP 10	DC+0		211277.186	1037142.352	78.371326	9.372753
			362				
18	10/1	DA+0		211109.033	1036821.780	78.369818	9.369845
			362				
19	10/2	DA+0		210940.867	1036501.220	78.368309	9.366938
			362				
20	10/3	DA+0		210772.718	1036180.654	78.366802	9.364030
			362				
21	10/4	DA+3		210604.561	1035860.085	78.365294	9.361122
			364				
22	10/5	DA+3		210435.472	1035537.730	78.363777	9.358198
			362				
23	10/6	DA+0		210267.307	1035217.162	78.362269	9.355290
			362				
24	10/7	DA+0		210099.160	1034896.576	78.360761	9.352382
			362				
25	AP 11	DB+0		209931.000	1034576.000	78.359253	9.349474
			386				
26	11/1	DA+3		209797.954	1034213.653	78.358068	9.346192
			386				
27	11/2	DA+0		209664.907	1033851.307	78.356882	9.342909
			386				
28	AP 12	DB+3		209531.230	1033489.129	78.355691	9.339627
			413				
29	AP 12A	DD+18		209373.450	1033107.671	78.354281	9.336170
			307				
30	AP 13	DD+25		209310.508	1032807.172	78.353729	9.333451
			425				
31	AP 14	DB+3		209113.891	1032430.388	78.351967	9.330033
			340				
32	14/1	DA+0		209011.734	1032106.097	78.351059	9.327096
			340				
33	14/2	DA+0		208909.578	1031781.806	78.350152	9.324159
			337				
34	14/3	DA+0		208808.297	1031460.296	78.349253	9.321247
			345				
35	14/4	DA+0		208704.639	1031131.237	78.348332	9.318267
			345				
36	14/5	DA+0		208600.980	1030802.178	78.347412	9.315287
			345				
37	14/6	DA+0		208497.321	1030473.119	78.346491	9.312307
			345				
38	14/7	DA+0		208393.662	1030144.060	78.345571	9.309327

			345				
39	AP 15	DB+0		208290.004	1029815.001	78.344651	9.306347
			344				
40	15/1	DA+3		208204.372	1029481.791	78.343894	9.303330
			342				
41	15/2	DA+3		208119.268	1029150.574	78.343143	9.300332
			342				
42	15/3	DA+0		208034.149	1028819.350	78.342391	9.297334
			342				
43	AP16	DD+0		207949.016	1028488.004	78.341640	9.294334
			358				
44	16/1	DA+0		207678.440	1028253.560	78.339194	9.292197
			359				
45	16/2	DA+0		207407.538	1028018.818	78.336747	9.290058
			335				
46	16/3	DA+0		207154.697	1027799.744	78.334462	9.288062
			349				
47	16/4	DA+0		206890.853	1027571.111	78.332078	9.285978
			351				
48	16/5	DA+0		206625.675	1027341.351	78.329681	9.283884
			351				
49	AP17	DB+0		206360.977	1027111.979	78.327290	9.281794
			366				
50	17/1	DA+3		206119.889	1026837.801	78.325116	9.279300
			361				
51	17/2	DA+0		205881.562	1026566.760	78.322967	9.276835
			361				
52	17/3	DA+0		205643.191	1026295.672	78.320817	9.274369
			361				
53	17/4	DA+0		205404.796	1026024.570	78.318668	9.271904
			362				
54	AP18	DB+0		205165.993	1025753.000	78.316514	9.269434
			370				
55	18/1	DA+0		204920.662	1025476.814	78.314302	9.266922
			369				
56	18/2	DA+0		204675.905	1025201.272	78.312095	9.264416
			368				
57	18/3	DA+0		204431.475	1024926.092	78.309891	9.261913
			369				
58	AP19	DB+3		204186.684	1024650.521	78.307684	9.259406
			357				
59	AP20	DB+3		203902.860	1024434.842	78.305117	9.257438
			374				
60	20/1	DA+0		203655.173	1024154.751	78.302884	9.254891
			369				
61	20/2	DA+0		203410.954	1023878.596	78.300682	9.252379
			373				

62	20/3	DA+0		203163.638	1023598.940	78.298452	9.249835
			379				
63	20/4	DA+0		202912.505	1023314.955	78.296188	9.247252
			363				
64	AP21	DB+0		202671.992	1023042.990	78.294020	9.244779
			370				
65	21/1	DA+0		202426.472	1022766.033	78.291806	9.242259
			372				
66	21/2	DA+0		202179.781	1022487.749	78.289582	9.239728
			371				
67	21/3	DA+0		201933.669	1022210.130	78.287363	9.237203
			371				
68	AP22	DC+0		201687.997	1021933.002	78.285148	9.234683
			378				
69	22/1	DA+0		201527.550	1021591.359	78.283713	9.231585
			366				
70	22/2	DA+0		201372.127	1021260.384	78.282322	9.228584
			368				
71	22/3	DA+3		201215.886	1020927.671	78.280924	9.225567
			388				
72	22/4	DA+3		201051.236	1020577.065	78.279452	9.222388
			376				
73	AP23	DB+0		200892.005	1020238.008	78.278027	9.219314
			373				
74	23/1	DA+0		200733.554	1019900.318	78.276610	9.216252
			371				
75	23/2	DA+0		200575.877	1019564.309	78.275199	9.213206
			373				
76	23/3	DA+0		200417.516	1019226.796	78.273783	9.210145
			373				
77	AP24	DC+0		200258.996	1018888.999	78.272365	9.207082
			361				
78	24/1	DA+0		200002.929	1018635.179	78.270054	9.204772
			361				
79	24/2	DA+0		199746.915	1018381.410	78.267744	9.202461
			361				
80	24/3	DA+0		199490.277	1018127.033	78.265428	9.200145
			362				
81	AP 25	DB+3		199234.008	1017873.015	78.263115	9.197833
			370				
82	25/1	DA+3		198982.712	1017601.225	78.260849	9.195360
			370				
83	25/2	DA+0		198731.635	1017329.650	78.258585	9.192889
			371				
84	25/3	DA+0		198479.795	1017057.280	78.256314	9.190411
			369				
85	25/4	DA+0		198229.267	1016786.313	78.254055	9.187945

			371				
86	25/5	DA+0		197977.313	1016513.811	78.251783	9.185466
			370				
87	AP26	DB+0		197726.003	1016242.000	78.249517	9.182993
			360				
88	26/1	DA+0		197450.447	1016010.352	78.247028	9.180881
			360				
89	26/2	DA+0		197174.850	1015778.662	78.244539	9.178769
			360				
90	26/3	DA+0		196899.303	1015547.015	78.242050	9.176657
			360				
91	26/4	DA+0		196623.710	1015315.332	78.239560	9.174545
			360				
92	26/5	DA+3		196348.137	1015083.664	78.237071	9.172432
			365				
93	AP27	DB+0		196069.000	1014849.000	78.234549	9.170293
			360				
94	27/1	DA+0		195793.187	1014617.623	78.232058	9.168183
			360				
95	27/2	DA+0		195517.320	1014386.207	78.229566	9.166074
			360				
96	27/3	DA+3		195241.602	1014154.901	78.227076	9.163965
			360				
97	27/4	DA+0		194965.759	1013923.511	78.224584	9.161855
			360				
98	27/5	DA+0		194689.929	1013692.118	78.222093	9.159745
			355				
99	AP28	DB+0		194418.006	1013464.017	78.219637	9.157665
			350				
100	28/1	DA+0		194185.777	1013202.681	78.217544	9.155288
			342				
101	28/2	DA+0		193959.002	1012947.475	78.215500	9.152967
			348				
102	28/3	DA+0		193727.837	1012687.347	78.213417	9.150601
			345				
103	28/4	DA+0		193498.667	1012429.447	78.211352	9.148255
			346				
104	AP29	DB+0		193269.017	1012171.016	78.209282	9.145904
			347				
105	29/1	DA+0		193039.107	1011911.686	78.207210	9.143545
			348				
106	29/2	DA+0		192808.596	1011651.670	78.205133	9.141180
			347				
107	29/3	DA+3		192578.408	1011392.020	78.203059	9.138818
			347				
108	29/4	DA+0		192348.164	1011132.314	78.200984	9.136455
			347				

109	AP30	DC+3		192117.819	1010872.490	78.198909	9.134092
			367				
110	30/1	DA+0		192001.482	1010524.464	78.197876	9.130940
			376				
111	30/2	DA+0		191882.265	1010167.828	78.196817	9.127709
			376				
112	30/3	DA+0		191762.994	1009811.019	78.195758	9.124478
			376				
113	AP 31	DB+3		191643.762	1009454.349	78.194699	9.121247
			362				
114	AP 32	DD+3		191571.085	1009099.719	78.194064	9.118038
			330				
115	32/1	DA+0		191290.169	1008926.554	78.191522	9.116454
			333				
116	AP 33	DB+0		191007.000	1008752.000	78.188961	9.114857
			338				
117	AP 34	DD+6		190756.500	1008525.040	78.186700	9.112789
			410				
118	AP 35	DD+6		190501.377	1008204.514	78.184404	9.109876
			405				
119	AP 36	DD+0		190130.290	1008043.453	78.181042	9.108395
			375				
120	36/1	DA+3		189933.827	1007724.036	78.179279	9.105495
			375				
121	36/2	DA+0		189737.365	1007404.618	78.177516	9.102596
			375				
122	36/3	DA+0		189540.903	1007085.201	78.175753	9.099696
			379				
123	36/4	DA+0		189342.299	1006762.310	78.173970	9.096765
			384				
124	36/5	DA+0		189141.383	1006435.658	78.172167	9.093800
			383				
125	AP37	DC+3		188940.900	1006109.688	78.170368	9.090841
			360				
126	AP38	DC+3		188686.877	1005855.180	78.168077	9.088524
			350				
127	38/1	DA+0		188506.590	1005555.185	78.166460	9.085801
			341				
128	38/2	DA+3		188330.971	1005262.953	78.164885	9.083149
			379				
129	38/3	DA+3		188135.714	1004938.055	78.163133	9.080200
			349				
130	AP39	DC+6		187956.027	1004639.061	78.161521	9.077486
			370				
131	AP40	DD+18		187820.015	1004295.015	78.160310	9.074368
			266				
132	AP41	DD+18		187589.023	1004164.060	78.158219	9.073169

			348				
133	AP42	DB+6		187455.991	1003841.988	78.157033	9.070250
			345				
134	42/1	DA+0		187324.064	1003523.221	78.155857	9.067361
			340				
135	42/2	DA+0		187194.050	1003209.087	78.154698	9.064514
			340				
136	42/3	DA+0		187064.041	1002894.941	78.153538	9.061667
			340				
137	42/4	DA+0		186934.005	1002580.736	78.152379	9.058819
			340				
138	42/5	DA+0		186803.965	1002266.552	78.151220	9.055972
			340				
139	42/6	DA+0		186673.957	1001952.424	78.150060	9.053125
			374				
140	AP43	DB+0		186531.008	1001607.005	78.148786	9.049994
			359				
141	43/1	DA+0		186319.838	1001316.550	78.146887	9.047355
			358				
142	43/2	DA+0		186109.439	1001027.150	78.144996	9.044726
			359				
143	43/3	DA+0		185898.268	1000736.682	78.143098	9.042087
			358				
144	43/4	DA+0		185687.715	1000447.066	78.141205	9.039456
			359				
145	43/5	DA+3		185476.624	1000156.715	78.139307	9.036818
			358				
146	AP44	DB+0		185266.002	999867.008	78.137414	9.034186
			362				
147	44/1	DA+0		185047.478	999578.370	78.135449	9.031563
			361				
148	44/2	DA+0		184829.567	999290.562	78.133489	9.028947
			360				
149	44/3	DA+0		184612.279	999003.541	78.131535	9.026339
			360				
150	44/4	DA+3		184394.713	998716.179	78.129578	9.023728
			360				
151	44/5	DA+0		184177.696	998429.548	78.127627	9.021123
			361				
152	AP45	DB+0		183959.997	998142.009	78.125669	9.018510
			369				
153	45/1	DA+3		183739.067	997846.465	78.123683	9.015824
			369				
154	45/2	DA+3		183518.107	997550.896	78.121696	9.013139
			339				
155	45/3	DA+0		183315.127	997279.366	78.119871	9.010671
			359				

156	45/4	DA+0		183100.105	996991.747	78.117938	9.008058
			359				
157	AP46	DB+3		182885.006	996704.002	78.116004	9.005443
			395				
158	46/1	DA+0		182609.484	996420.925	78.113521	9.002866
			395				
159	46/2	DA+3		182334.173	996138.049	78.111039	9.000291
			333				
160	46/3	DA+0		182101.747	995899.243	78.108945	8.998117
			374				
161	46/4	DA+0		181840.884	995631.219	78.106594	8.995678
			374				
162	46/5	DA+3		181580.015	995363.191	78.104243	8.993238
			374				
163	AP47	DB+0		181318.990	995095.000	78.101890	8.990796
			365				
164	47/1	DA+0		181064.056	994833.549	78.099593	8.988416
			381				
165	47/2	DA+0		180798.051	994560.716	78.097195	8.985933
			373				
166	47/3	DA+0		180537.780	994293.768	78.094850	8.983503
			373				
167	47/4	DA+3		180277.326	994026.659	78.092503	8.981071
			373				
168	47/5	DA+0		180016.957	993759.635	78.090156	8.978640
			373				
169	AP48	DD+0		179757.004	993492.996	78.087813	8.976213
			330				
170	48/1	DA+0		179687.095	993170.486	78.087202	8.973295
			330				
171	48/2	DA+0		179617.185	992847.975	78.086590	8.970376
			330				
172	48/3	DA+0		179547.276	992525.465	78.085978	8.967458
			330				
173	48/4	DA+3		179477.367	992202.955	78.085366	8.964540
			344				
174	AP49	DD+9		179404.534	991866.954	78.084728	8.961499
			250				
175	AP50	DD+25		179242.004	991676.983	78.083265	8.959772
			250				
176	AP51	DD+25		179021.108	991560.089	78.081267	8.958700
			460				
177	AP52	DC+9		178689.977	991240.083	78.078282	8.955785
			247				
178	AP53	DC+9		178479.995	991110.004	78.076383	8.954595
			365				
179	53/1	DA+3		178214.808	990859.801	78.073992	8.952316

			340				
180	53/2	DA+3		177967.523	990626.506	78.071763	8.950191
			365				
181	AP54	DD+9		177702.002	990375.998	78.069369	8.947909
			236				
182	AP55	DD+9		177504.998	990247.004	78.067588	8.946729
			395				
183	55/1	DA+0		177400.380	989866.115	78.066665	8.943281
			378				
184	AP 55A	DB+3		177300.414	989502.163	78.065783	8.939986
			300				
185	55A/1	DA+0		177265.646	989204.180	78.065489	8.937292
			334				
186	AP56	DD+9		177226.982	988872.993	78.065162	8.934298
			218				
187	AP 56A	DD+9		177266.012	988658.994	78.065532	8.932367
			304				
188	AP57	DC+9		177301.000	988357.000	78.065872	8.929642
			334				
189	AP58	DD+9		177239.002	988028.979	78.065332	8.926674
			376				
190	AP 59	DD+30		177208.815	987654.771	78.065085	8.923292
			180				
191	AP 60	DD+30		177204.456	987474.658	78.065058	8.921665
			295				
192	AP 61	DD+9		177258.541	987184.593	78.065571	8.919048
			340				
193	61/1	DA+6		177239.457	986845.136	78.065422	8.915981
			329				
194	AP 62	DB+3		177221.003	986517.002	78.065278	8.913015
			370				
195	62/1	DA+6		177143.417	986155.224	78.064599	8.909742
			370				
196	AP 63	DC+3		177065.832	985793.447	78.063920	8.906468
			362				
197	AP 64	DD+9		176834.008	985516.001	78.061835	8.903945
			167				
198	AP 65	DD+9		176669.003	985489.003	78.060338	8.903689
			370				
199	AP 66	DA+0		176380.001	985258.003	78.057729	8.901582
			305				
200	AP 67	DD+0		176139.236	985070.767	78.055556	8.899873
			320				
201	AP 68	DB+0		176108.007	984752.000	78.055295	8.896992
			337				
202	AP 69	DD+0		176144.001	984417.001	78.055646	8.893968
			330				

203	AP 70	DD+0		176001.001	984120.003	78.054369	8.891275
			255				
204	AP 71	DD+0		175754.005	984055.005	78.052130	8.890670
			191				
205	AP 72	DD+0		175606.007	984175.003	78.050777	8.891744
			159				
206	AP 73	DD+0		175584.643	984332.639	78.050572	8.893166
			115				
	GANTRY			175584.644	984447.644	78.050563	8.894205
	Total length		71639				

400 kV DC line Udangudi – Ottapidaram

Sl. No	Loc. No	Tower Type	Span (m)	UTM Coordinate (Zone - 43P & 44P)		Spherical Coordinate	
				Easting	Northing	Longitude	Latitude
	GANTRY			175997.541	933620.459	78.057889	8.435100
			90				
1	AP1	DD+0		175933.901	933556.820	78.057316	8.434521
			200				
2	AP2	DD+0		175783.465	933425.181	78.055960	8.433322
			220				
3	AP3	DD+0		175567.818	933468.604	78.054000	8.433699
			227				
4	AP4	DD+0		175485.009	933679.318	78.053235	8.435597
			322				
5	4/1	DA+0		175674.242	933940.000	78.054934	8.437965
			360				
6	4/2	DA+0		175885.485	934231.002	78.056830	8.440608
			359				
7	AP5	DC+0		176096.000	934521.000	78.058720	8.443242
			360				
8	5/1	DA+0		176401.685	934711.148	78.061480	8.444981
			360				
9	5/2	DA+0		176707.370	934901.297	78.064241	8.446719
			360				
10	5/3	DA+0		177013.055	935091.446	78.067001	8.448458
			363				
11	AP6	DB+6		177321.000	935283.000	78.069782	8.450209
			376				
12	AP7	DD+6		177669.000	935425.000	78.072930	8.451515
			163				
13	AP8	DD+6		177830.194	935447.056	78.074391	8.451725
			350				
14	AP9	DB+6		178081.000	935691.000	78.076650	8.453946

			339				
15	9/1	DA+0		178319.380	935931.130	78.078796	8.456132
			340				
16	9/2	DA+0		178558.920	936172.420	78.080953	8.458327
			340				
17	9/3	DA+0		178798.460	936413.710	78.083110	8.460523
			340				
18	AP 10	DB+0		179038.000	936655.000	78.085267	8.462719
			345				
19	10/1	DA+0		179294.670	936885.534	78.087580	8.464819
			342				
20	10/2	DA+0		179549.242	937114.183	78.089874	8.466902
			343				
21	AP 11	DC+0		179804.000	937343.000	78.092170	8.468986
			324				
22	11/1	DA+0		179922.281	937644.638	78.093223	8.471719
			323				
23	AP 12	DD+0		180040.019	937944.907	78.094271	8.474440
			380				
24	12/1	DA+3		179835.478	938265.157	78.092393	8.477319
			333				
25	AP 13	DD+3		179656.247	938545.781	78.090748	8.479842
			308				
26	AP 14	DC+3		179375.754	938672.093	78.088194	8.480964
			395				
27	AP15	DC+3		179052.031	938899.268	78.085241	8.482994
			331				
28	15/1	DA+3		178863.726	939170.845	78.083514	8.485435
			360				
29	15/2	DA+3		178658.339	939467.059	78.081630	8.488096
			275				
30	AP16	DD+0		178501.659	939693.026	78.080193	8.490127
			350				
31	16/1	DA+0		178470.469	940041.641	78.079887	8.493274
			350				
32	16/2	DA+0		178439.251	940390.311	78.079579	8.496422
			350				
33	16/3	DA+0		178408.055	940738.917	78.079272	8.499569
			350				
34	16/4	DA+0		178376.873	941087.449	78.078966	8.502715
			350				
35	16/5	DA+3		178345.676	941436.050	78.078659	8.505862
			347				
36	16/6	DA+0		178314.751	941781.493	78.078354	8.508980
			352				
37	16/7	DA+0		178283.420	942131.651	78.078046	8.512141
			364				

38	AP18	DB+3		178251.000	942494.000	78.077727	8.515413
			386				
39	18/1	DA+3		178222.494	942879.136	78.077442	8.518890
			387				
40	18/2	DA+0		178193.950	943264.810	78.077157	8.522372
			387				
41	18/3	DA+3		178165.416	943650.414	78.076871	8.525853
			387				
42	18/4	DA+0		178136.884	944036.110	78.076586	8.529335
			386				
43	AP19	DC+3		178110.318	944412.476	78.076319	8.532733
			340				
44	19/1	DA+0		177985.883	944728.883	78.075168	8.535583
			360				
45	19/2	DA+0		177854.121	945063.906	78.073949	8.538601
			372				
46	AP20	DC+3		177718.182	945409.588	78.072691	8.541714
			257				
47	AP21	DC+3		177682.000	945664.000	78.072346	8.544010
			366				
48	21/1	DA+0		177715.143	946028.581	78.072621	8.547305
			385				
49	AP23	DC+6		177750.000	946412.000	78.072911	8.550771
			415				
50	23/1	DA+6		177609.278	946802.413	78.071607	8.554288
			315				
51	23/2	DA+0		177502.465	947098.751	78.070617	8.556958
			310				
52	23/3	DA+0		177397.347	947390.385	78.069643	8.559585
			366				
53	AP 24/0	DB+3		177273.241	947734.701	78.068493	8.562687
			386				
54	24/1	DA+3		177189.788	948111.571	78.067710	8.566086
			390				
55	AP25	DB+3		177105.600	948491.761	78.066919	8.569514
			400				
56	AP27	DB+6		177075.001	948889.998	78.066614	8.573110
			396				
57	AP28	DD+9		176971.000	949271.999	78.065643	8.576553
			203				
58	AP29	DD+9		176888.000	949456.998	78.064877	8.578219
			395				
59	AP30	DD+9		176658.110	949777.860	78.062769	8.581101
			183				
60	AP31	DD+9		176669.010	949960.000	78.062855	8.582747
			379				
61	AP32	DB+3		176405.999	950232.999	78.060449	8.585195

			277				
62	32/1	DA+0		176215.984	950433.762	78.058710	8.586996
			290				
63	32/2	DA+0		176016.639	950644.383	78.056886	8.588884
			317				
64	32/3	DA+0		175798.738	950874.615	78.054893	8.590949
			334				
65	AP33	DC+0		175568.462	951117.914	78.052786	8.593131
			365				
66	33/1	DA+0		175230.860	951256.650	78.049712	8.594360
			362				
67	AP34	DC+3		174895.940	951394.300	78.046663	8.595581
			375				
68	34/1	DA+6		174613.786	951641.312	78.044085	8.597792
			375				
69	AP36	DD+6		174332.000	951888.000	78.041510	8.600001
			355				
70	36/1	DA+0		173988.180	951976.390	78.038383	8.600775
			355				
71	36/2	DA+0		173644.360	952064.781	78.035256	8.601550
			355				
72	36/3	DA+0		173300.540	952153.171	78.032129	8.602324
			355				
73	36/4	DA+3		172956.720	952241.561	78.029003	8.603098
			355				
74	36/5	DA+0		172612.900	952329.952	78.025876	8.603873
			355				
75	36/6	DA+0		172269.080	952418.342	78.022749	8.604647
			355				
76	36/7	DA+0		171925.260	952506.732	78.019622	8.605421
			355				
77	36/8	DA+0		171581.441	952595.123	78.016496	8.606196
			355				
78	36/9	DA+0		171237.621	952683.513	78.013369	8.606970
			355				
79	36/10	DA+3		170893.801	952771.903	78.010242	8.607744
			350				
80	AP40	DB+0		170555.000	952859.000	78.007161	8.608507
			350				
81	40/1	DA+0		170207.461	952900.401	78.004004	8.608856
			336				
82	AP41	DC+0		169873.974	952940.127	78.000974	8.609191
			335				
83	41/1	DA+0		830050.810	953112.060	77.998355	8.610750
			300				
84	41/2	DA+0		829791.118	953262.260	77.996009	8.612125
			349				

85	AP42	DB+3		829488.999	953436.999	77.993279	8.613725
			380				
86	AP43	DD+9		829177.997	953655.000	77.990472	8.615716
			418				
87	AP44	DD+9		828853.670	953918.900	77.987547	8.618122
			260				
88	AP45	DB+6		828653.004	954083.003	77.985738	8.619619
			340				
89	AP46	DD+18		828412.000	954322.000	77.983567	8.621795
			270				
90	AP47	DD+18		828404.575	954591.897	77.983519	8.624233
			367				
91	AP48	DD+0		828628.958	954881.907	77.985576	8.626837
			351				
92	48/1	DA+0		828696.305	955226.556	77.986212	8.629945
			345				
93	48/2	DA+0		828762.472	955565.148	77.986836	8.632999
			350				
94	AP49	DC+0		828829.599	955908.654	77.987470	8.636097
			397				
95	AP50	DB+3		828769.001	956301.007	77.986948	8.639646
			382				
96	AP51	DD+9		828769.672	956683.260	77.986981	8.643099
			376				
97	AP52	DD+3		828718.067	957055.616	77.986539	8.646466
			330				
98	52/1	DA+3		828515.891	957316.422	77.984723	8.648836
			420				
99	52/2	DA+0		828258.570	957648.368	77.982411	8.651852
			310				
100	52/3	DA+0		828068.643	957893.370	77.980704	8.654079
			308				
101	AP53	DC+0		827879.991	958137.012	77.979009	8.656293
			326				
102	53/1	DA+0		827632.521	958349.300	77.976778	8.658228
			326				
103	53/2	DA+3		827385.120	958561.540	77.974547	8.660163
			327				
104	53/3	DA+3		827136.988	958774.393	77.972310	8.662103
			326				
105	53/4	DA+3		826889.481	958986.707	77.970078	8.664038
			326				
106	AP54	DC+0		826641.877	959198.961	77.967846	8.665973
			323				
107	54/1	DA+0		826508.390	959493.087	77.966655	8.668639
			323				
108	54A/0	DC+0		826375.000	959787.000	77.965465	8.671304

			387				
109	54A/1	DA+0		826388.622	960174.210	77.965616	8.674801
			315				
110	AP55/0	DD+0		826399.685	960488.928	77.965739	8.677643
			365				
111	55/1	DA+0		826229.847	960811.554	77.964220	8.680569
			380				
112	55/2	DA+0		826052.546	961148.015	77.962634	8.683621
			380				
113	55/3	DA+3		825875.321	961484.157	77.961049	8.686670
			301				
114	AP56	DB+3		825735.482	961750.611	77.959798	8.689086
			380				
115	56/1	DA+0		825602.828	962106.705	77.958619	8.692312
			377				
116	56/2	DA+0		825471.216	962459.985	77.957450	8.695513
			377				
117	56/3	DA+0		825339.609	962813.268	77.956280	8.698713
			360				
118	56/4	DA+0		825213.852	963150.878	77.955162	8.701772
			360				
119	56/5	DA+0		825088.417	963487.599	77.954047	8.704822
			381				
120	56/6	DA+0		824955.594	963844.140	77.952867	8.708053
			380				
121	AP57	DB+0		824823.020	964200.003	77.951688	8.711276
			358				
122	57/1	DA+0		824696.730	964535.387	77.950566	8.714315
			345				
123	57/2	DA+0		824575.110	964858.289	77.949484	8.717240
			345				
124	57/3	DA+0		824453.630	965181.131	77.948404	8.720165
			345				
125	AP58	DB+0		824332.024	965504.021	77.947323	8.723090
			325				
126	58/1	DA+0		824221.281	965809.571	77.946339	8.725858
			325				
127	58/2	DA+0		824110.539	966115.122	77.945355	8.728626
			325				
128	58/3	DA+0		823999.796	966420.672	77.944372	8.731394
			366				
129	AP 59	DD+9		823875.000	966765.000	77.943263	8.734513
			247				
130	AP60/0	DC+9		823916.000	967008.000	77.943652	8.736706
			388				
131	60/1	DA+0		824114.358	967341.463	77.945477	8.739704
			374				

132	60/2	DA+0		824305.558	967662.895	77.947236	8.742594
			374				
133	60/3	DA+0		824496.759	967984.327	77.948995	8.745484
			374				
134	60/4	DA+0		824687.960	968305.758	77.950754	8.748374
			374				
135	60/5	DA+0		824879.160	968627.190	77.952513	8.751264
			374				
136	AP61/0	DB+0		825069.988	968947.994	77.954268	8.754148
			364				
137	61/1	DA+3		825260.205	969258.353	77.956018	8.756938
			348				
138	AP62/0	DB+6		825442.003	969555.016	77.957689	8.759605
			367				
139	AP63/0	DD+18		825633.042	969867.991	77.959446	8.762419
			214				
140	AP64/0	DD+18		825706.029	970069.008	77.960124	8.764229
			350				
141	AP65/0	DC+6		825926.735	970340.648	77.962147	8.766667
			358				
142	65/1	DA+3		826135.047	970631.789	77.964059	8.769282
			360				
143	65/2	DA+0		826344.524	970924.544	77.965982	8.771912
			360				
144	65/3	DA+0		826554.024	971217.330	77.967906	8.774542
			360				
145	65/4	DA+0		826763.512	971510.100	77.969829	8.777171
			360				
146	65/5	DA+0		826973.001	971802.871	77.971752	8.779801
			360				
147	65/6	DA+0		827182.489	972095.641	77.973675	8.782430
			360				
148	65/7	DA+0		827391.978	972388.412	77.975599	8.785060
			360				
149	AP66/0	DC+0		827597.991	972676.325	77.977490	8.787646
			343				
150	66/1	DA+0		827885.441	972863.465	77.980114	8.789316
			350				
151	66/2	DA+0		828178.758	973054.424	77.982791	8.791019
			350				
152	AP67/0	DD+3		828472.987	973245.977	77.985477	8.792728
			346				
153	67/1	DA+3		828627.646	973555.487	77.986904	8.795513
			370				
154	AP68/0	DB+6		828793.117	973886.634	77.988430	8.798492
			288				
155	AP69	DD+18		828952.981	974125.959	77.989899	8.800643

			222				
156	AP70	DD+9		828961.001	974348.008	77.989988	8.802648
			335				
157	AP71	DD+3		829221.455	974559.418	77.992369	8.804539
			353				
158	71/1	DA+0		829292.795	974905.133	77.993042	8.807656
			345				
159	71/2	DA+0		829362.519	975243.014	77.993699	8.810703
			345				
160	71/3	DA+0		829432.243	975580.895	77.994357	8.813750
			345				
161	AP72	DD+0		829502.007	975918.967	77.995015	8.816799
			306				
162	AP73	DB+9		829732.997	976119.969	77.997127	8.818598
			295				
163	AP 74	DD+25		829942.595	976315.027	77.999045	8.820344
			255				
164	AP 75	DD+25		169972.000	976539.000	77.999328	8.822365
			388				
165	AP 76	DD+9		829982.000	976919.000	77.999447	8.825797
			272				
166	AP 77	DD+9		829992.000	977190.000	77.999558	8.828244
			328				
167	AP 78	DB+3		170041.014	977490.000	78.000720	8.830956
			326				
168	AP 79	DB+0		170201.010	977774.025	78.002153	8.833533
			325				
169	79/1	DA+3		170347.943	978063.893	78.003466	8.836162
			330				
170	AP 80	DD+9		170497.300	978358.550	78.004801	8.838835
			220				
171	AP 81	DD+9		170626.500	978536.510	78.005961	8.840452
			345				
172	AP 82	DD+3		170910.996	978730.990	78.008531	8.842229
			350				
173	82/1	DA+0		171251.100	978814.588	78.011613	8.843009
			350				
174	82/2	DA+0		171590.779	978898.071	78.014692	8.843787
			350				
175	82/3	DA+0		171930.670	978981.617	78.017773	8.844567
			331				
176	82/4	DA+0		172252.031	979060.606	78.020685	8.845303
			371				
177	AP 83	DB+0		172612.010	979149.080	78.023948	8.846129
			308				
178	83/1	DA+0		172915.478	979199.100	78.026701	8.846602
			320				

179	83/2	DA+0		173231.236	979251.151	78.029565	8.847095
			315				
180	83/3	DA+0		173542.118	979302.394	78.032384	8.847581
			370				
181	83/4	DA+3		173907.192	979362.571	78.035696	8.848150
			390				
182	AP 84	DB+9		174292.000	979426.000	78.039186	8.848751
			361				
183	AP 85	DD+30		174649.993	979469.000	78.042434	8.849165
			191				
184	AP 85A	DD+30		174834.019	979518.004	78.044102	8.849621
			248				
185	AP 86	DD+30		175068.448	979599.275	78.046225	8.850372
			192				
186	AP 87	DD+30		175246.352	979671.778	78.047836	8.851040
			379				
187	AP88	DD+9		175525.263	979928.896	78.050350	8.853382
			388				
188	AP89	DB+9		175616.473	980305.914	78.051151	8.856794
			354				
189	AP90	DC+3		175623.993	980660.001	78.051194	8.859993
			353				
190	AP91	DD+3		175733.096	980995.931	78.052161	8.863036
			333				
191	AP92	DB+3		175652.096	981319.065	78.051402	8.865949
			345				
192	92/1	DA+3		175583.983	981657.272	78.050759	8.868999
			356				
193	92/2	DA+3		175513.697	982006.367	78.050095	8.872147
			320				
194	92/3	DA+0		175450.519	982319.969	78.049499	8.874976
			357				
195	AP94	DC+0		175379.999	982670.117	78.048833	8.878134
			365				
196	94/1	DA+0		175400.109	983034.567	78.048989	8.881427
			365				
197	94/2	DA+0		175420.207	983399.020	78.049146	8.884721
			365				
198	94/3	DA+0		175440.325	983763.456	78.049302	8.888014
			365				
199	AP95	DB+0		175460.418	984127.694	78.049458	8.891306
			207				
200	AP96	DD+0		175488.646	984332.644	78.049700	8.893159
			115				
	GANTRY			175488.646	984447.646	78.049691	8.894198
	Total length		67938				

230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS

Sl. No	Loc. No	Tower Type	Span (m)	UTM Coordinate (Zone - P)		Spherical Coordinate	
				Easting	Northing	Longitude	Latitude
1	AP1	LS+0		184681	986603	78°7' 58.9417"E	8°54' 51.5562"N
			275				
2	AP2	LS+3		184429	986700	78°7' 50.6757"E	8°54' 54.6471"N
			260				
3	2/1	G+0		184176	986639	78°7' 42.4196"E	8°54' 52.6233"N
			260				
4	AP3	KS+3		183917	986578	78°7' 33.9623"E	8°54' 50.5501"N
			238				
5	AP4	MD+6		183688	986616	78°7' 26.4635"E	8°54' 51.7279"N
			200				
6	AP5	MD+6		183568	986777	78°7' 22.4981"E	8°54' 56.9335"N
			240				
7	AP6	KS+3		183337	986824	78°7' 14.9315"E	8°54' 58.4034"N
			245				
8	6/1	G+0		183111	986919	78°7' 7.5302"E	8°55' 1.4559"N
			245				
9	6/2	G+0		182885	987015	78°7' 0.1288"E	8°55' 4.5084"N
			245				
10	AP7	LS+3		182693	987097	78°6' 53.8006"E	8°55' 7.1182"N
			254				
11	7/1	G+0		182440.8205	987127.3565	78°6' 45.5456"E	8°55' 8.0413"N
			254				
12	7/2	G+3		182188.6411	987157.713	78°6' 37.2906"E	8°55' 8.9644"N
			254				
13	7/3	G+0		181936.4616	987188.069	78°6' 29.0356"E	8°55' 9.8874"N
			254				
14	7/4	G+0		181684.2821	987218.426	78°6' 20.7807"E	8°55' 10.8104"N
			254				
15	7/5	G+0		181432.1027	987248.7825	78°6' 12.5257"E	8°55' 11.7333"N
			254				
16	AP8	KS+3		181206	987276	78°6' 5.1243"E	8°55' 12.5607"N
			264				
17	AP9	KS+9		180960	987290	78°5' 57.0757"E	8°55' 12.9531"N
			256				
18	AP10	MD+9		180746	987199	78°5' 50.1005"E	8°55' 9.9391"N
			201				
19	AP11	MD+9		180591	987075	78°5' 45.0634"E	8°55' 5.8669"N
			248				
20	AP12	LS+6		180433	986885	78°5' 39.9452"E	8°54' 59.6476"N
			245				
21	12/1	G+0		180191.7306	986842.4078	78°5' 32.0659"E	8°54' 58.2008"N

			245				
22	12/2	G+0		179950.4613	986799.8156	78°5' 24.1867"E	8°54' 56.7539"N
			245				
23	12/3	G+0		179709.1919	986757.2233	78°5' 16.3075"E	8°54' 55.3069"N
			245				
24	AP13	KS+0		179504	986721	78°5' 9.6065"E	8°54' 54.0763"N
			252				
25	AP14	KS+0		179259	986734	78°5' 1.591"E	8°54' 54.4362"N
			245				
26	AP15	KS+9		179023	986794	78°4' 53.8577"E	8°54' 56.3268"N
			290				
27	AP16	KS+3		178736	986821	78°4' 44.465"E	8°54' 57.131"N
			255				
28	AP17	KS+9		178491	986763	78°4' 36.4679"E	8°54' 55.1819"N
			185				
29	AP18	KS+9		178316	986740	78°4' 30.751"E	8°54' 54.3889"N
			240				
30	18/1	G+6		178093.9226	986648.9965	78°4' 23.5121"E	8°54' 51.3722"N
			260				
31	18/2	G+3		177853.3388	986550.4095	78°4' 15.6701"E	8°54' 48.1042"N
			250				
32	18/3	G+3		177622.0081	986455.6142	78°4' 8.1297"E	8°54' 44.9619"N
			244				
33	AP19	LS+3		177396	986363	78°4' 0.7628"E	8°54' 41.8918"N
			214				
34	AP19A,	D-3		177239	986234	78°3' 06.4075"E	8°54' 39.3216"N
35	AP19A1	D-3		177233	986224	78°3' 55.4685"E	8°54' 37.3295"N
			196				
36	AP19B	D-3		177042	986217	78°3' 17.0969"E	8°54' 59.6945"N
37	AP19B1	D-3		177038	986206	78°3' 49.0964"E	8°54' 36.6937"N
			226				
38	AP20	LS+9		176877	986047	78°3' 43.8727"E	8°54' 31.4816"N
			210				
39	AP21	LS+12		176668	986065	78°3' 37.0335"E	8°54' 32.0129"N
			270				
40	21/1	G+3		176422.2574	985953.1493	78°3' 29.0265"E	8°54' 28.312"N
			270				
41	21/2	G+3		176176.5148	985841.2986	78°3' 21.0195"E	8°54' 24.6111"N
			281				
42	AP22	LS+0		175921	985725	78°3' 12.6942"E	8°54' 20.7629"N
			237				
43	AP23	LS+0		175825	985508	78°3' 9.6115"E	8°54' 13.6814"N
			241				
44	AP24	LS+0		175833	985274	78°3' 9.9341"E	8°54' 6.074"N
			218				
45	AP25	LS+3		175825	985064	78°3' 9.7272"E	8°53' 59.2429"N
			128				

46	AP26	MD+12		175712	985004	78°3' 6.0477"E	8°53' 57.2625"N
			209				
47	AP27	MD+12		175503	984993	78°2' 59.2162"E	8°53' 56.8506"N
			129				
48	AP28	LS+0		175379	984957	78°2' 55.1708"E	8°53' 55.6478"N
			94				
49	AP29	LS+0		175319	984884	78°2' 53.2278"E	8°53' 53.2583"N
			61				
		GANTRY		175317	984823	78°2' 53.1783"E	8°53' 51.2741"N
Total length			10886				

230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram

Sl. No	Loc. No	Tower Type	Span (m)	UTM Coordinate (Zone - P)		Spherical Coordinate	
				Easting	Northing	Longitude	Latitude
1	AP1	MD+9		180714	985934	78°5' 49.3791"E	8°54' 28.7925"N
			225				
2	AP2	MD+9		180536	985959	78°5' 43.5516"E	8°54' 29.5601"N
			265				
3	AP3	LS+6		180301	985901	78°5' 35.8815"E	8°54' 27.6138"N
			270				
4	3/1	G+3		180035.9457	985849.5585	78°5' 27.2269"E	8°54' 25.8732"N
			270				
5	3/2	G+3		179770.8914	985798.1171	78°5' 18.5723"E	8°54' 24.1324"N
			270				
6	3/3	G+0		179505.8371	985746.6756	78°5' 9.9178"E	8°54' 22.3916"N
			270				
7	3/4	G+0		179240.7828	985695.2342	78°5' 1.2633"E	8°54' 20.6508"N
			265				
8	AP4	KS+0		179085	985665	78°4' 56.1767"E	8°54' 19.6276"N
			265				
9	AP5	LS+3		178832	985666	78°4' 47.9029"E	8°54' 19.5952"N
			260				
10	AP6	LS+9		178649	985826	78°4' 41.8772"E	8°54' 24.7514"N
			201				
11	AP7	LS+9		178496	985915	78°4' 36.8508"E	8°54' 27.6063"N
			276				
12	AP8	KS+3		178241	985977	78°4' 28.4958"E	8°54' 29.557"N
			271				
13	8/1	G+3		177971.1861	986002.3274	78°4' 19.6659"E	8°54' 30.3111"N
			262				
14	AP9	KS+3		177719	986026	78°4' 11.4129"E	8°54' 31.016"N
			265				
15	9/1	G+3		177478.1472	985915.4788	78°4' 3.5653"E	8°54' 27.3598"N
			270				
16	AP10	KS+0		177257	985814	78°3' 56.3598"E	8°54' 24.0027"N

			279				
17	AP11	KS+3		177056	985621	78°3' 49.8369"E	8°54' 17.6745"N
			277				
18	AP12	LS+12		176856	985430	78°3' 43.3463"E	8°54' 11.4116"N
			184				
19	AP13	LS+12		176673	985410	78°3' 37.3673"E	8°54' 10.714"N
			220				
20	AP14	KS+3		176520	985252	78°3' 32.4051"E	8°54' 5.5364"N
			218				
21	AP15	LS+3		176379	985086	78°3' 27.8375"E	8°54' 0.1017"N
			174				
22	AP15A	D-6		176249	984969	78°3' 23.5048"E	8°53' 56.3649"N
			214				
23	AP15B	D-6		176031	984970	78°3' 16.4879"E	8°53' 56.2394"N
			126				
24	AP16	LS+3		175906	984984	78°3' 12.3967"E	8°53' 56.6623"N
			195				
25	AP17	MD+12		175712	985004	78°3' 6.0477"E	8°53' 57.2625"N
			209				
26	AP18	MD+12		175503	984993	78°2' 59.2162"E	8°53' 56.8506"N
			171				
27	AP19	LS+0		175374	984881	78°2' 55.0271"E	8°53' 53.175"N
			59				
	GANTRY			175364	984823	78°2' 54.7152"E	8°53' 51.2863"N
Total length			6231				

110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS

Sl. No.	Loc. No.	Tower No.	Tower Type	Span (m)	UTM Coordinate (Zone - P)	
					Easting	Northing
1	1	AP1	QD+3		179184	977730
				237		
2	2	AP2	QD+0		179096	977933
				275		
3	3	AP2/1	KCO+3		178971	978178
				275		
4	4	2/2	GCO+0		17842	978417
				275		
5	5	2/3	GCO+3		178710	978662
				275		
6	6	AP3	HCO+0		178581	978904
				275		
7	7	3/1	GCO+3		178450	979147
				275		
8	8	3/2	GCO+0		178317	979388
				276		

9	9	3/3	GCO+0		178189	979627
				274		
10	10	AP4	HCO+3		178056	979870
				250		
11	11	AP5	QD+6		177645	980470
				240		
12	12	AP6	QD+6		177509	980682
				250		
13	13	AP7	HCO+3		177374	980892
				250		
14	14	7/1	GCO+0		177255	981079
				250		
15	15	7/2	GCO+0		176076	982170
				250		
16	16	AP8	KCO+0		176846	982802
				231		
17	17	8/1	GCO+0		176818	982999
				231		
18	18	8/2	GCO+0		177065	981488
				231		
19	19	AP9	KCO+0		176968	981684
				250		
20	20	9/1	GCO+0		176925	981930
				255		
21	21	AP10	KCO+6		176885	982161
				249		
22	22	AP11	KCO+6		176899	982410
				262		
23	23	11/1	GCO+0		176863	982669
				260		
24	24	11/2	GCO+0		176828	982927
				260		
25	25	AP12	KCO+0		176816	983016
				50		
26	1		DP1		176774	983002
27	2		DP2		176774	983011
				50		
28	3		DP3		176726	983010
29	4		DP4		176726	983019
				50		
30	26	AP13	KCO+0		176685	983020
				190		
31	27	13/1	GCO+0		176561	983134
				201		
32	28	AP14	KCO+3		176434	983251
				265		

33	29	AP15	HCO+3		176428	983509
				220		
34	30	AP16	HCO+0		176483	983693
				242		
35	31	AP17	HCO+0		176482	983915
				242		
36	32	17/1	GCO+0		176433	984143
				215		
37	33	AP18	KCO+0		176387	984355
				50		
38	5		DP5		176348	984362
39	6		DP6		176349	984367
				50		
40	7		DP7		176297	984380
41	8		DP8		176300	984390
				61		
42	34	AP19	KCO+0		176242	984403
				60		
43	9		DP9		176177	984430
44	10		DP10		176180	984441
				55		
45	11		DP11		176129	984454
46	12		DP12		176131	984464
				50		
47	35	AP20	KCO+0		176085	984481
				260		
48	36	20/1	GCO+0		175936	984883
				252		
49	37	AP21	KCO+3		175784	984891
				176		
50	38	AP22	KCO+0		175617	984854
				63		
			Gantry			
			Total Length	8958		

110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS

Sl. No	Loc. No	Tower Type	Span (m)	UTM Coordinate (Zone - P)		Spherical Coordinate	
				Easting	Northing	Longitude	Latitude
		GANTRY		175549	984804	78°3' 0.7697"E	8°53' 50.7164"N
			62				
1	AP1	KCO+0		175554	984866	78°3' 0.917"E	8°53' 52.7339"N
			207				
2	AP2	KCO+0		175575	985072	78°3' 1.55"E	8°53' 59.4383"N
			144				

3	AP3	QD+3		175431	985074	78°2' 56.8407"E	8°53' 59.466"N
			237				
4	AP4	QD+3		175199	985126	78°2' 49.2406"E	8°54' 1.1084"N
			259				
5	AP5	KCO+0		175108	985368	78°2' 46.2017"E	8°54' 8.9528"N
			190				
6	AP6	HCO+3		175109	985558	78°2' 46.191"E	8°54' 15.1244"N
			203				
7	AP7	KCO+3		175093	985760	78°2' 45.6088"E	8°54' 21.6964"N
			50				
8	AP7A	DP		175045	985773	78° 2'44.04"E	8°54'22.10"N
			67				
9	AP7B	DP		174980	985790	78° 2'41.91"E	8°54'22.63"N
			50				
10	AP8	KCO+0		174932	985803	78°2' 40.3328"E	8°54' 23.0428"N
			203				
11	AP9	HCO+3		174788	985946	78°2' 35.5865"E	8°54' 27.6555"N
			206				
12	AP10	QD+3		174642	986092	78°2' 30.774"E	8°54' 32.3653"N
			175				
13	AP11	QD+6		174533	986229	78°2' 27.1738"E	8°54' 36.792"N
			265				
14	AP12	KCO+0		174394	986455	78°2' 22.5691"E	8°54' 44.105"N
			270				
15	12/1	GCO+3		174253.5001	986685.564	78°2' 17.9142"E	8°54' 51.566"N
			255				
16	AP13	KCO+6		174121	986903	78°2' 13.5242"E	8°54' 58.6022"N
			194				
17	AP14	KCO+6		174110	987097	78°2' 13.1136"E	8°55' 4.908"N
			260				
18	14/1	GCO+0		174218.3942	987330.411	78°2' 16.5971"E	8°55' 12.5265"N
			260				
19	14/2	GCO+0		174327.9036	987566.2238	78°2' 20.1163"E	8°55' 20.2234"N
			223				
20	AP15	HCO+0		174423	987771	78°2' 23.1725"E	8°55' 26.9072"N
			273				
21	15/1	GCO+0		174500.013	988032.9122	78°2' 25.6222"E	8°55' 35.4444"N
			273				
22	15/2	GCO+0		174577.0261	988294.8244	78°2' 28.072"E	8°55' 43.9815"N
			270				
23	AP16	KCO+3		174650	988543	78°2' 30.3934"E	8°55' 52.0709"N
			258				
24	AP17	HCO+3		174560	988783	78°2' 27.3871"E	8°55' 59.8519"N
			270				
25	17/1	GCO+0		174418.1386	989012.7289	78°2' 22.6875"E	8°56' 7.2854"N
			270				
26	17/2	GCO+0		174276.2772	989242.4577	78°2' 17.9878"E	8°56' 14.7188"N

			270				
27	17/3	GCO+0		174134.4158	989472.1866	78°2' 13.2881"E	8°56' 22.1522"N
			270				
28	AP18	HCO+0		174003	989685	78°2' 8.9343"E	8°56' 29.0382"N
			250				
29	18/1	GCO+3		173945.4589	989928.2879	78°2' 6.9885"E	8°56' 36.9345"N
			255				
30	18/2	GCO+0		173886.7669	990176.4416	78°2' 5.0037"E	8°56' 44.9887"N
			250				
31	18/3	GCO+0		173828.075	990424.5953	78°2' 3.0188"E	8°56' 53.043"N
			250				
32	AP19	HCO+0		173775	990649	78°2' 1.2239"E	8°57' 0.3264"N
			250				
33	19/1	GCO+0		173748.8821	990897.632	78°2' 0.3042"E	8°57' 8.4046"N
			250				
34	19/2	GCO+0		173722.7642	991146.2639	78°1' 59.3844"E	8°57' 16.4829"N
			250				
35	19/3	GCO+0		173696.6464	991394.8959	78°1' 58.4646"E	8°57' 24.5612"N
			250				
36	AP20	HCO+3		173673	991620	78°1' 57.6318"E	8°57' 31.875"N
			275				
37	20/1	GCO+0		173544.2516	991862.9997	78°1' 53.3569"E	8°57' 39.7432"N
			275				
38	20/2	GCO+0		173415.5032	992105.9994	78°1' 49.082"E	8°57' 47.6113"N
			275				
39	AP21	HCO+3		173300	992324	78°1' 45.2468"E	8°57' 54.67"N
			270				
40	21/1	GCO+3		173175.2613	992563.4583	78°1' 41.1038"E	8°58' 2.424"N
			275				
41	AP22	KCO+0		173051	992802	78°1' 36.9766"E	8°58' 10.1482"N
			262				
42	AP23	KCO+3		172834	992947	78°1' 29.841"E	8°58' 14.8062"N
			257				
43	AP24	KCO+6		172744	993186	78°1' 26.8341"E	8°58' 22.5543"N
			225				
44	24/1	GCO+6		172557.5248	993311.9048	78°1' 20.7018"E	8°58' 26.5993"N
			225				
45	24/2	GCO+3		172371.0497	993437.8095	78°1' 14.5695"E	8°58' 30.6443"N
			225				
46	AP25	HCO+3		172196	993556	78°1' 8.8129"E	8°58' 34.4414"N
			270				
47	25/1	GCO+0		171970.5736	993704.6033	78°1' 1.4006"E	8°58' 39.2141"N
			270				
48	25/2	GCO+3		171745.1471	993853.2065	78°0' 53.9882"E	8°58' 43.9867"N
			270				
49	25/3	GCO+0		171519.7207	994001.8098	78°0' 46.5758"E	8°58' 48.7593"N
			270				

50	25/4	GCO+0		171294.2943	994150.413	78°0' 39.1633"E	8°58' 53.5318"N
			270				
51	25/5	GCO+3		171068.8679	994299.0163	78°0' 31.7508"E	8°58' 58.3043"N
			270				
52	AP26	KCO+3		170855	994440	78°0' 24.7183"E	8°59' 2.832"N
			265				
53	26/1	GCO+0		170616	994555	78° 0'16.87"E	8°59'6.51"N
			265				
54	26/2	GCO+0		170374	994675	78° 0'8.92"E	8°59'10.35"N
			265				
55	26/3	GCO+0		170137	994793	78° 0'1.14"E	8°59'14.12"N
			265				
56	AP27	KCO+0		829696	994910	77°59' 53.4287"E	8°59' 17.9688"N
			273				
57	27/1	GCO+0		829494.6533	995094.3597	77°59' 46.8927"E	8°59' 24.0173"N
			273				
58	AP28	HCO+3		829293	995279	77°59' 40.3466"E	8°59' 30.0749"N
			265				
59	28/1	GCO+0		829093.4123	995453.3266	77°59' 33.8652"E	8°59' 35.7967"N
			270				
60	28/2	GCO+0		828890.0588	995630.9423	77°59' 27.2615"E	8°59' 41.6264"N
			265				
61	28/3	GCO+3		828690.4712	995805.2689	77°59' 20.78"E	8°59' 47.3481"N
			265				
62	AP29	KCO+3		828495	995976	77°59' 14.4322"E	8°59' 52.9518"N
			265				
63	AP30	HCO+3		828258.1796	996094.916	77°59' 6.718"E	8°59' 56.8815"N
			270				
64	AP31	QD+3		828027	996211	77°58' 59.1875"E	9°0' 0.7176"N
			192				
65	AP32	QD+3		827941	996382	77°58' 56.4202"E	9°0' 6.301"N
			266				
66	AP33	HCO+6		827808.2755	996612.5216	77°58' 52.1404"E	9°0' 13.8322"N
			275				
67	AP34	HCO+3		827675	996844	77°58' 47.8429"E	9°0' 21.3948"N
			265				
68	AP35	HCO+3		827480	997018	77°58' 41.511"E	9°0' 27.1046"N
			280				
69	AP36	KCO+0		827215	997111	77°58' 32.8678"E	9°0' 30.1989"N
			270				
70	AP37	HCO+3		827030	997298	77°58' 26.8664"E	9°0' 36.3288"N
			275				
71	37/1	GCO+6		826836.0462	997492.9536	77°58' 20.5742"E	9°0' 42.7196"N
			275				
72	AP38	HCO+6		826642	997688	77°58' 14.2788"E	9°0' 49.1135"N
			275				
73	38/1	GCO+3		826493.7461	997919.6156	77°58' 9.4911"E	9°0' 56.6844"N

			275				
74	AP39	HCO+3		826345	998152	77°58' 4.6873"E	9°1' 4.2805"N
			275				
75	39/1	GCO+3		826197.2075	998383.9103	77°57' 59.9146"E	9°1' 11.8609"N
			275				
76	39/2	GCO+0		826049.415	998615.8205	77°57' 55.1419"E	9°1' 19.4413"N
			275				
77	AP40	KCO+0		825904	998844	77°57' 50.4458"E	9°1' 26.8997"N
			260				
78	40/1	GCR+0		825747.134	999051.3477	77°57' 45.3697"E	9°1' 33.6838"N
			260				
79	40/2	GCR+3		825590.268	999258.6954	77°57' 40.2934"E	9°1' 40.4678"N
			260				
80	AP41	KCR+0		825441	999456	77°57' 35.463"E	9°1' 46.9233"N
			50				
81	AP41A	DP		825399	999485	77°57'34.10"E	9° 1'47.88"N
			50				
82	AP41B	DP		825358	999515	77°57'32.76"E	9° 1'48.86"N
			50				
83	AP43	KCR+0		825319	999547	77°57' 31.4964"E	9°1' 49.9146"N
			235				
84	43/1	GCR+0		825265.9671	999775.9378	77°57' 29.8223"E	9°1' 57.3734"N
			235				
85	43/2	GCR+6		825212.9342	1000004.876	77°57' 28.1483"E	9°2' 4.8321"N
			236				
86	AP44	KCR+0		825177	1000160	77°57' 27.014"E	9°2' 9.886"N
			50				
87	AP44A	DP		825212	1000195	77°57'28.17"E	9° 2'11.01"N
			50				
88	AP44B	DP		825210	1000194	77°57'28.17"E	9° 2'11.01"N
			50				
89	AP45	KCR+0		825243	1000228	77°57' 29.191"E	9°2' 12.0799"N
			263				
90	45/1	GCR+0		825194.0192	1000486.399	77°57' 27.6574"E	9°2' 20.4955"N
			263				
91	AP46	HCR+3		825145	1000745	77°57' 26.1225"E	9°2' 28.9178"N
			271				
92	46/1	GCR+6		825091.13	1001010.592	77°57' 24.4308"E	9°2' 37.5687"N
			275				
93	46/2	GCR+0		825036.4648	1001280.104	77°57' 22.7141"E	9°2' 46.3473"N
			275				
94	46/3	GCR+3		824981.7996	1001549.616	77°57' 20.9974"E	9°2' 55.1259"N
			273				
95	AP47	HCR+0		824930	1001805	77°57' 19.3707"E	9°3' 3.4444"N
			260				
96	47/1	GCR+0		824877.6594	1002059.677	77°57' 17.7261"E	9°3' 11.7399"N
			255				

97	47/2	GCR+3		824826.3254	1002309.457	77°57' 16.1132"E	9°3' 19.876"N
			260				
98	AP48	HCR+6		824781	1002530	77°57' 14.689"E	9°3' 27.0597"N
			270				
99	48/1	GCR+3		824729.3636	1002795.016	77°57' 13.0702"E	9°3' 35.6914"N
			275				
100	48/2	GCR+0		824676.7709	1003064.941	77°57' 11.4214"E	9°3' 44.4829"N
			275				
101	48/3	GCR+0		824624.1783	1003334.865	77°57' 9.7726"E	9°3' 53.2743"N
			270				
102	AP49	HCR+3		824577	1003577	77°57' 8.2935"E	9°4' 1.1607"N
			225				
103	49/1	GCR+3		824483.2527	1003781.54	77°57' 5.2809"E	9°4' 7.8369"N
			225				
104	AP50	KCR+3		824434	1003889	77°57' 3.6982"E	9°4' 11.3444"N
			50				
105	AP50A	DP		824392	1003914	77°57'2.33"E	9° 4'12.17"N
			50				
106	AP50B	DP		824350	1003939	77°57'0.96"E	9° 4'12.99"N
			50				
107	AP51	KCR+0		824330	1003954	77°57' 0.3131"E	9°4' 13.4856"N
			50				
108	AP51A	DP		824282	1003970	77°56'58.75"E	9° 4'14.02"N
			50				
109	AP51B	DP		824236	1003988	77°56'57.25"E	9° 4'14.62"N
			50				
110	AP52	KCR+0		824215	1003998	77°56' 56.5625"E	9°4' 14.9468"N
			265				
111	52/1	GCR+0		824044.9934	1004201.28	77°56' 51.0546"E	9°4' 21.6021"N
			265				
112	AP53	HCR+0		823888	1004389	77°56' 45.9683"E	9°4' 27.748"N
			250				
113	53/1	GCR+0		823728.3979	1004581.425	77°56' 40.7978"E	9°4' 34.0475"N
			255				
114	53/2	GCR+0		823565.6038	1004777.697	77°56' 35.5239"E	9°4' 40.4731"N
			255				
115	53/3	GCR+0		823402.8097	1004973.97	77°56' 30.2499"E	9°4' 46.8986"N
			250				
116	AP54	HCR+6		823251	1005157	77°56' 25.3317"E	9°4' 52.8906"N
			280				
117	AP55	HCR+3		823123	1005405	77°56' 21.2097"E	9°5' 0.989"N
			270				
118	55/1	GCR+3		822944.4126	1005607.501	77°56' 15.4205"E	9°5' 7.6213"N
			270				
119	AP56	HCR+3		822772	1005803	77°56' 9.8315"E	9°5' 14.0241"N
			274				
120	AP57	HCR+3		822648	1006046	77°56' 5.8389"E	9°5' 21.959"N

			260				
121	57/1	GCR+0		822486.3367	1006249.63	77°56' 0.6036"E	9°5' 28.6234"N
			260				
122	57/2	GCR+0		822324.6735	1006453.259	77°55' 55.3682"E	9°5' 35.2878"N
			260				
123	57/3	GCR+0		822163.0102	1006656.889	77°55' 50.1328"E	9°5' 41.9523"N
			260				
124	57/4	GCR+0		822001.347	1006860.518	77°55' 44.8973"E	9°5' 48.6167"N
			260				
125	AP58	HCR+3		821866	1007031	77°55' 40.5141"E	9°5' 54.1963"N
			270				
126	58/1	GCR+0		821678.6906	1007225.461	77°55' 34.437"E	9°6' 0.5693"N
			265				
127	58/2	GCR+0		821494.8498	1007416.321	77°55' 28.4724"E	9°6' 6.8243"N
			265				
128	58/3	GCR+3		821311.0091	1007607.182	77°55' 22.5077"E	9°6' 13.0793"N
			265				
129	58/4	GCR+0		821127.1684	1007798.042	77°55' 16.543"E	9°6' 19.3342"N
			265				
130	58/5	GCR+3		820943.3276	1007988.902	77°55' 10.5782"E	9°6' 25.5892"N
			270				
131	AP59	HCR+3		820766	1008173	77°55' 4.8246"E	9°6' 31.6225"N
			270				
132	59/1	GCR+0		820578.5897	1008367.364	77°54' 58.7439"E	9°6' 37.9924"N
			270				
133	59/2	GCR+3		820391.1793	1008561.728	77°54' 52.663"E	9°6' 44.3622"N
			266				
134	59/3	GCR+0		820206.5455	1008753.213	77°54' 46.6722"E	9°6' 50.6376"N
			265				
135	59/4	GCR+3		820022.6057	1008943.977	77°54' 40.7039"E	9°6' 56.8894"N
			270				
136	59/5	GCR+0		819835.1954	1009138.341	77°54' 34.6229"E	9°7' 3.2592"N
			270				
137	AP60	HCR+3		819661	1009319	77°54' 28.9706"E	9°7' 9.1799"N
			272				
138	60/1	GCR+0		819524.6784	1009554.373	77°54' 24.572"E	9°7' 16.8699"N
			275				
139	60/2	GCR+3		819386.8533	1009792.342	77°54' 20.1248"E	9°7' 24.6447"N
			272				
140	AP61	HCR+0		819255	1010020	77°54' 15.8703"E	9°7' 32.0826"N
			280				
141	61/1	GCR+0		819198.2876	1010294.197	77°54' 14.0868"E	9°7' 41.0143"N
			280				
142	AP62	HCR+0		819146	1010547	77°54' 12.4424"E	9°7' 49.2492"N
			225				
143	62/1	GCR+3		819116.6477	1010770.077	77°54' 11.5406"E	9°7' 56.5113"N
			226				

144	AP63	KCR+3		819096	1010927	77°54' 10.9063"E	9°8' 1.6199"N
			231				
145	AP64	HCR+3		818966	1011108	77°54' 6.7"E	9°8' 7.54"N
			50				
146	AP64A	DP		818931	1011143	77°54'5.56"E	9° 8'8.69"N
			50				
147	AP64B	DP		818898.25	1011181.16	77°54'4.49"E	9° 8'9.93"N
			45				
148	AP65	KCR+0		818866	1011215	77°54' 3.4559"E	9°8' 11.0459"N
			198				
149	AP66	KCR+0		818671	1011200	77°53' 57.071"E	9°8' 10.6091"N
			40				
Total Length			34412				

110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS

Sl. No	Loc. No	Tower Type	Span (m)	UTM Coordinate (Zone P)		Spherical Coordinate	
				Easting	Northing	Longitude	Latitude
		DP		176777	987325	78°3' 40.2664"E	8°55' 13.0043"N
			53				
1	AP1	KCO+0		176727	987342	78°3' 38.6205"E	8°55' 13.5662"N
			231				
2	AP2	HCO+0		176501	987292	78°3' 31.2658"E	8°55' 11.875"N
			249				
3	AP3	HCO+0		176261	987227	78°3' 23.4305"E	8°55' 9.7098"N
			231				
4	AP4	HCO+6		176042	987159	78°3' 16.2637"E	8°55' 7.4168"N
			229				
5	AP5	QD+6		175826	987081	78°3' 9.2299"E	8°55' 4.8289"N
			182				
6	AP6	QD+6		175861	986903	78°3' 10.43"E	8°54' 59.0387"N
			241				
7	AP7	HCO+6		175856	986661	78°3' 10.3399"E	8°54' 51.1874"N
			242				
8	AP8	QD+0		175792	986428	78°3' 8.2905"E	8°54' 43.5742"N
			181				
9	AP9	QD+0		175740	986254	78°3' 6.6312"E	8°54' 37.9251"N
			237				
10	AP10	HCO+3		175701	986021	78°3' 5.4331"E	8°54' 30.3219"N
			180				
11	10/1	GCO+3		175701	985840	78° 3'5.47"E	8°54'24.47"N
			180				
12	10/2	GCO+0		175700	985660	78° 3'5.50"E	8°54'18.61"N
			180				
13	AP11	HCO+0		175701	985841	78°3' 5.4659"E	8°54' 24.4683"N
			216				
14	11/1	GCO+0		175671	985266	78° 3'4.67"E	8°54'5.80"N

			217				
15	AP12	HCO+0		175700	985661	78°3' 5.4984"E	8°54' 18.6148"N
			220				
16	AP13	KCO+0		175700	985481	78°3' 5.531"E	8°54' 12.771"N
			45				
		GANTRY		175602	984791	78°3' 2.5062"E	8°53' 50.3074"N
Total Length			3314				

ANNEXURE 4: DETAILED PUBLIC CONSULTATIONS DURING IMPLEMENTATION

765 kV DC line Virudhunagar – Coimbatore, Reach 1

Consultation 1	
Village	Nadakkottai
Tehsil/Mandal	Nilakkottai
District	Dindigul
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	Yes, we have heard about the project
What is your opinion about this project?	The project gives electricity connection to other parts of the state, which is necessary for our lives
Do you support this project?	Yes
How do you think the project will affect you?	Maybe it will affect some landowner.
Do you face any problem regarding current electricity supply?	No problem regarding current supply
Do you think that the project is necessary?	The project is necessary for the development of the nation.
What are your main concerns/issues about the project?	Reduced land area and crop productivity
Can you suggest how to best address your concerns/issues?	The transmission line could be rerouted to higher elevations, wastelands, or areas with lower crop yield.
Specifically, what concerns/issues do you have on the implementation of the project?	Apprehension during the rainy season on the safety aspect of transmission line.
What positive impacts and/or benefits do you think the project will have?	People may benefit from increased energy output and accessibility, as well as free electricity availability.
What negative impacts do you think the project will have?	Selling the land will be difficult.
How safe do you think or consider the electric transmission line?	During the rainy season, there is fear of more radiation from lines.
Any criteria you would like to be considered for project design, construction and operation stage?	Nil
How long have you been living in this area?	For three generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	Nil
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	It should be adequate compensation for the loss suffered.
Is the consultation useful?	Yes useful.
Do you think that the local people would like to get regular information regarding the project?	No
Would you support and participate during the implementation of project?	Yes
Any suggestion/opinion, etc.	It is suggested that the transmission line be installed in barren lands.

List of participants = Total 9 (Male-9 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Rajamani	53	Male	5 th	Farmer
2	Ramasamy	70	Male	5 th	Farmer
3	Magalingam	37	Male	10 th	Farmer
4	Muniappan	62	Male	5 th	Labourer
5	Manikandan	50	Male	9 th	Farmer
6	S. Pattani	40	Male	D.T.Ed.	Farmer
7	M. Murugan	58	Male	9 th	Farmer
8	V. Ganesan	54	Male	10 th	Farmer
9	S. Govindan	59	Male	10 th	Farmer

Consultation 2	
Village	Uthappanaickanoor
Tehsil/Mandal	Usilampatti
District	Madurai
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	Yes
What is your opinion about this project?	Since high-voltage transmission is involved, it can have an effect on human lives.
Do you support this project?	No support
How do you think the project will affect you?	Depreciation of land value will occur. The tower will occupy a certain area of the land indefinitely.
Do you face any problem regarding current electricity supply?	No problem
Do you think that the project is necessary?	Yes. It is necessary
What are your main concerns/issues about the project?	It is possible that small and marginal farmers will be impacted more.
Can you suggest how to best address your concerns/issues?	Nil
Specifically, what concerns/issues do you have on the implementation of the project?	During the rainy season, there is a fear of more radiation from the transmission line.
What positive impacts and/or benefits do you think the project will have?	There are no anticipated positive effects or benefits.
What negative impacts do you think the project will have?	The value of the land would be halved.
How safe do you think or consider the electric transmission line?	During the rainy season, there is a fear of more radiation from the transmission line.
Any criteria you would like to be considered for project design, construction and operation stage?	Nil
How long have you been living in this area?	For three generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	Nil

What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Since the land value would be negatively impacted, adequate compensation is expected.
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes, it will be helpful
Would you support and participate during the implementation of project?	No support
Any suggestion/opinion, etc.	Nil

List of participants = Total 10 (Male-4 and Female-6)

S. No.	Name	Age	Sex	Education	Occupation
1	Ananth	35	Male	ITI	Auto driver
2	K. Thiruvengadam	42	Male	8 th	Farmer
3	M. Devi	28	Female	12 th	Farmer/ Labourer
4	Sanmugavalli	40	Female	5 th	Farmer/ Labourer
5	Murugamma	60	Female	Illiterate	Labourer
6	Pandiamma	50	Female	Illiterate	Labourer
7	Jayaram	58	Male	Illiterate	Farmer
8	Sivalingam	55	Male	8 th	Farmer
9	Nadhiya	34	Female	7 th	Labourer
10	Mayadevi	25	Female	10 th	Unemployed

Consultation 3	
Village	Sirupatti
Tehsil/Mandal	Usilampatti
District	Madurai
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No
What is your opinion about this project?	No opinion due to little awareness about the project
Do you support this project?	Yes
How do you think the project will affect you?	Loss of livelihood is the main concern.
Do you face any problem regarding current electricity supply?	Yes, sometimes.
Do you think that the project is necessary?	No, it is not necessary as it will not benefit directly to our village.
What are your main concerns/issues about the project?	Loss of livelihood is the main concern.
Can you suggest how to best address your concerns/issues?	Women and youth should be given employment opportunities and jobs/businesses.
Specifically, what concerns/issues do you have on the implementation of the project?	For the electricity used by corporations, they can provide sufficient employment for the local community.
What positive impacts and/or benefits do you think the project will have?	At this time, no positive effects or benefits are expected. However, the benefits can be felt in the future.

What negative impacts do you think the project will have?	Loss of livelihood is the main concern.
How safe do you think or consider the electric transmission line?	Safe. However, in the event of an emergency, a phone number may be given for immediate contact.
Any criteria you would like to be considered for project design, construction and operation stage?	Nil
How long have you been living in this area?	For three generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	Nil
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation is required. The compensation should be given as long as the tower remains on the ground.
Is the consultation useful?	Useful
Do you think that the local people would like to get regular information regarding the project?	Yes, indeed. We must obtain additional knowledge about the project.
Would you support and participate during the implementation of project?	Yes, indeed. We will support in exchange for the government's assistance.
Any suggestion/opinion, etc.	Local people should be given contract labour jobs.

List of participants = Total 8 (Male-2 and Female-6)

S. No.	Name	Age	Sex	Education	Occupation
1	Pandeeswari	29	Female	10 th	Labourer
2	Kalaivani	28	Female	9 th	Labourer
3	Malar	45	Female	8 th	Housewife
4	Ayyamma	55	Female	Illiterate	Unemployed
5	Chellamma	55	Female	Illiterate	Farmer
6	Lakshmi	31	Female	10 th	Labourer
7	Rajamanickam	28	Male	ITI	Tea shop owner
8	Rameshpandian	39	Male	9 th	Self-employed

Consultation 4	
Village	P. Vagaikulam
Tehsil/Mandal	Thirumangalam
District	Madurai
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	Yes.
What is your opinion about this project?	No opinion about the project
Do you support this project?	No support.
How do you think the project will affect you?	It is possible that groundwater could be depleted. Crop cultivation would be affected. The tower's vibrations can have an effect on the crops and trees.

Do you face any problem regarding current electricity supply?	No problem
Do you think that the project is necessary?	It is not needed. It is beneficial to large-scale business owners.
What are your main concerns/issues about the project?	This project would have an effect on agricultural land.
Can you suggest how to best address your concerns/issues?	Compensation for the impacted land should be given at the best price possible.
Specifically, what concerns/issues do you have on the implementation of the project?	Land value depreciation and impact on agricultural fields.
What positive impacts and/or benefits do you think the project will have?	Nil
What negative impacts do you think the project will have?	The electricity generated by this project would support only corporate companies and not the general public.
How safe do you think or consider the electric transmission line?	No idea
Any criteria you would like to be considered for project design, construction and operation stage?	Nil
How long have you been living in this area?	For many generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	Nil
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Compensation amount for every year.
Is the consultation useful?	Useful
Do you think that the local people would like to get regular information regarding the project?	Yes.
Would you support and participate during the implementation of project?	No support.
Any suggestion/opinion, etc.	The project is not required as it will affect the land owners more.

List of participants = Total 8 (Male-7 and Female-1)

S. No.	Name	Age	Sex	Education	Occupation
1	Bharathakodi	69	Male	5 th	Farmer
2	Maharajan	55	Male	Illiterate	Farmer
3	Kannan	61	Male	5 th	Self employed
4	Moongil Selvi	37	Female	12 th	Self employed
5	S. Ammavasi	48	Male	6 th	Farmer
6	Muniandi	44	Male	10 th	Driver
7	Kannan	47	Male	Illiterate	Farmer
8	Kandiappan C	70	Male	8 th	Farmer

Consultation 5	
Village	Naduvakkottai
Tehsil/Mandal	Thirumangalam
District	Madurai
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No, we have not received any detailed information so far.
What is your opinion about this project?	The project is for large-scale industries/companies.
Do you support this project?	No support
How do you think the project will affect you?	Agriculture will suffer. The selling of land may be challenging. It is possible that the value of the land will depreciate.
Do you face any problem regarding current electricity supply?	Yes. Sometimes, power disruption happens in alternative days.
Do you think that the project is necessary?	It is not beneficial to local people. It is a benefit for other regions.
What are your main concerns/issues about the project?	The value of the crop land will depreciate.
Can you suggest how to best address your concerns/issues?	Issues including impact on land fertility should all be explained among the community through proper consultations.
Specifically, what concerns/issues do you have on the implementation of the project?	Issues related to the impact of the tower on their land fertility. The compensation sum will be sufficient for the current year, but the tower's effects will be felt for the rest of the life.
What positive impacts and/or benefits do you think the project will have?	Nil
What negative impacts do you think the project will have?	Negative impacts on agricultural land and land value depreciation
How safe do you think or consider the electric transmission line?	No awareness about it
Any criteria you would like to be considered for project design, construction and operation stage?	Nil
How long have you been living in this area?	For many generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	Nil
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Compensation should be structured in such a way that the lives of those affected would prosper for years to come.
Is the consultation useful?	Useful
Do you think that the local people would like to get regular information regarding the project?	Yes. They need regular information regarding the project
Would you support and participate during the implementation of project?	No support
Any suggestion/opinion, etc.	The community should be made aware of the project's benefits and drawbacks.

List of participants = Total 7 (Male-7 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Ayyanar	47	Male	5 th	Labourer
2	Karthikeyan	57	Male	8 th	Farmer
3	Kesu Rajan	57	Male	5 th	Labourer
4	Ramkumar	57	Male	6 th	Farmer
5	Vikram	30	Male	B.Sc.	Self employed
6	Mani	27	Male	B.A.	Farmer
7	Kannan	60	Male	Illiterate	Labourer

Consultation 6	
Village	Lalapuram
Tehsil/Mandal	Thirumangalam
District	Madurai
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	Yes, heard about the project through relatives.
What is your opinion about this project?	The power generated in the project is intended to be exported supply to other states.
Do you support this project?	No support
How do you think the project will affect you?	Crop land in the area may be affected by the project.
Do you face any problem regarding current electricity supply?	No problem
Do you think that the project is necessary?	Not necessary for the local people
What are your main concerns/issues about the project?	Crop production will be affected.
Can you suggest how to best address your concerns/issues?	No such issues
Specifically, what concerns/issues do you have on the implementation of the project?	The project includes high-power transmission, which could endanger the safety of human lives; standing under the tower or transmission line for an extended period of time (i.e. for more than 2 hours) could be harmful to one's health.
What positive impacts and/or benefits do you think the project will have?	No positive impacts for the local people
What negative impacts do you think the project will have?	It will affect the local livelihoods
How safe do you think or consider the electric transmission line?	No safety
Any criteria you would like to be considered for project design, construction and operation stage?	Nil
How long have you been living in this area?	For three generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	Nil

What kind of compensation will you be expecting in case of land acquisition or loss of crops?	The compensation should be provided every year.
Is the consultation useful?	Useful
Do you think that the local people would like to get regular information regarding the project?	No
Would you support and participate during the implementation of project?	No idea about it
Any suggestion/opinion, etc.	Nil

List of participants = Total 7 (Male-4 and Female-3)

S. No.	Name	Age	Sex	Education	Occupation
1	Indrani	52	Female	5 th	Farmer
2	Lakshmi	55	Female	3 rd	Labourer
3	Ramamoorthy	72	Male	3 rd	Labourer/Farmer
4	Seenii	74	Male	5 th	Laundry
5	Lakshmanan	65	Male	5 th	Farmer
6	Lakshmi	38	Female	Illiterate	Petty Shop
7	Murugan	40	Male	5 th	Labourer

Consultation 07	
Village	Vadamalakuruchi
Tehsil/Mandal	Virudhunagar
District	Virudhunagar
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	Yes. The villager has seen the construction of the tower in their neighbourhood.
What is your opinion about this project?	The project is necessary.
Do you support this project?	Support on a conditional basis. If the transmission line will avoid their crop land, they will support
How do you think the project will affect you?	It will their crop land.
Do you face any problem regarding current electricity supply?	No problem
Do you think that the project is necessary?	The project is necessary. The implementation method, on the other hand, should be appropriate.
What are your main concerns/issues about the project?	Loss of land due to the project is the major issue. Also, they felt that safety of people is a concern.
Can you suggest how to best address your concerns/issues?	Detailed consultations should be done to understand the people's perception and need.
Specifically, what concerns/issues do you have on the implementation of the project?	Loss of crop Land, safety of transmission line.
What positive impacts and/or benefits do you think the project will have?	Nil
What negative impacts do you think the project will have?	Safety issues. Negative impacts on livelihoods

How safe do you think or consider the electric transmission line?	Sound and vibrations from the tower have bad affects.
Any criteria you would like to be considered for project design, construction and operation stage?	Nil
How long have you been living in this area?	For a prolonged time
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	As compensation, twice the size of the affected land should be given in the outside area.
Is the consultation useful?	Useful
Do you think that the local people would like to get regular information regarding the project?	Yes
Would you support and participate during the implementation of project?	If the community's expectations are met, they will engage in the project's implementation.
Any suggestion/opinion, etc.	Nil

List of participants = Total 8 (Male-8 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Rajasekar	53	Male	10 th	Farmer
2	Subash	40	Male	D.M.E	CCTV operator
3	Gandhi	44	Male	10 th	Government Employee
4	Kalakandi	52	Male	10 th	Catering
5	Aandavar	47	Male	10 th	Farmer
6	Subburaj	62	Male	5 th	Petty Shop
7	Munnusamy	34	Male	12 th	Electrician
8	Kumar	35	Male	5 th	Centering works

Consultation 08	
Village	Chinnathampatti
Tehsil/Mandal	Virudhunagar
District	Virudhunagar
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	The villagers learn about the project during the erection of foundation work.
What is your opinion about this project?	The project is deemed unnecessary as they can no longer grow tall plants, there will be effect on crop yield.
Do you support this project?	No support
How do you think the project will affect you?	The land would become a wasteland. There is no guarantee of safety.
Do you face any problem regarding current electricity supply?	No issues
Do you think that the project is necessary?	According to the community, the project is unnecessary because it provides no direct benefit to them.

What are your main concerns/issues about the project?	Fruit trees should be avoided as it provides them livelihood.
Can you suggest how to best address your concerns/issues?	No idea about it
Specifically, what concerns/issues do you have on the implementation of the project?	Fruit trees are being cut down for the tower erection. These should be avoided as it provides them with livelihood.
What positive impacts and/or benefits do you think the project will have?	Nil
What negative impacts do you think the project will have?	Negative impact on livelihoods
How safe do you think or consider the electric transmission line?	So far, there have been no safety concerns. However, during rainy season, there is fear of current shock due to the transmission line
Any criteria you would like to be considered for project design, construction and operation stage?	Nil
How long have you been living in this area?	For three generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Since it affects one's livelihood, a monthly compensation sum is expected. It is not expected to make a one-time settlement.
Is the consultation useful?	Useful
Do you think that the local people would like to get regular information regarding the project?	Yes. Regular information is needed
Would you support and participate during the implementation of project?	No
Any suggestion/opinion, etc.	It is suggested not to build transmission lines along agricultural lands.

List of participants = Total 8 (Male-8 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Palraj	60	Male	Illiterate	Labourer
2	Balaguru	51	Male	D.M.E	Construction worker
3	Keezhagam	50	Male	10 th	LIC Agent
4	Pandi	56	Male	5 th	Labourer
5	Karuppasamy	70	Male	Illiterate	Farmer
6	A. Karuppasamy	62	Male	Illiterate	Farmer
7	Ramanathan	35	Male	Illiterate	Textile worker
8	Siva Suriyan	36	Male	6 th	Farmer

Consultation 09

Village	Valayapatti
Tehsil/Mandal	Virudhunagar
District	Virudhunagar

Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	There is no detailed information about the project implementation.
What is your opinion about this project?	If transmission lines pass through agricultural fields, they should change the route alignment
Do you support this project?	Yes. All need electricity supply for power connection
How do you think the project will affect you?	The project will improve the power supply connection in the State
Do you face any problem regarding current electricity supply?	No issues
Do you think that the project is necessary?	Yes, everybody requires electricity.
What are your main concerns/issues about the project?	The towers are being erected on cultivable lands.
Can you suggest how to best address your concerns/issues?	Nil
Specifically, what concerns/issues do you have on the implementation of the project?	Crop productivity is affected
What positive impacts and/or benefits do you think the project will have?	Positive impacts are there. New industries may come to or near their village
What negative impacts do you think the project will have?	No idea about it.
How safe do you think or consider the electric transmission line?	No safety issues
Any criteria you would like to be considered for project design, construction and operation stage?	Nil
How long have you been living in this area?	For many generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation at the best rate is expected.
Is the consultation useful?	Useful
Do you think that the local people would like to get regular information regarding the project?	Yes, regular information is useful and required.
Would you support and participate during the implementation of project?	Yes
Any suggestion/opinion, etc.	The concerned government officials should properly explain the details about the project.

List of participants = Total 6 (Male-6 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	A. Chidambaram	65	Male	5 th	Farmer
2	Solai	45	Male	3 rd	Farmer
3	S. Perumal	68	Male	7 th	Farmer
4	Ravindran	50	Male	10 th	Panchayat worker
5	Chinnan	55	Male	8 th	Farmer
6	V. Muthuirulan	70	Male	Illiterate	Unemployed

765 kV DC line Virudhunagar – Coimbatore, Reach 2 (For detailed public consultations & gender consultations see the Social Assessment Report of this line)

765 kV DC line Virudhunagar – Coimbatore, Reach 3

Consultation 1	
Village	Rettaravalasu
Tehsil/Mandal	Dharapuram
District	Tiruppur
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No
What is your opinion about this project?	No opinion about the project
Do you support this project?	No support
How do you think the project will affect you?	Loss of land. Also, battery levels for vehicles/trucks parked under the transmission line will be reduced.
Do you face any problem regarding current electricity supply?	No problem
Do you think that the project is necessary?	It is not necessary
What are your main concerns/issues about the project?	Skin allergies, and cancer may affect the children.
Can you suggest how to best address your concerns/issues?	Transmission lines should be routed underground rather than overhead to ensure a secure supply.
Specifically, what concerns/issues do you have on the implementation of the project?	Land loss, difficulties in selling lands, and drop in crop productivity
What positive impacts and/or benefits do you think the project will have?	Beneficial to the growth of the state
What negative impacts do you think the project will have?	The towers would affect the individual landowners.
How safe do you think or consider the electric transmission line?	Not safe
Any criteria you would like to be considered for project design, construction and operation stage?	The alignment must be at least 500 metres away from human settlements.
How long have you been living in this area?	For ten generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Adequate compensation to allow people to reclaim their livelihoods.
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. Officials should share enough details of the project.
Would you support and participate during the implementation of project?	No support
Any suggestion/opinion, etc.	The project's route alignment must be further away from residential areas.

List of participants = Total 6 (Male-4 and Female-2)

S. No.	Name	Age	Sex	Education	Occupation
1	Vetriseivam	32	Male	9 th	Worker
2	Sathish Kumar	33	Male	12 th	Unemployed
3	Rukmani	50	Female	Illiterate	Farmer
4	Papathi	60	Female	Illiterate	Labourer
5	Sanmugam	75	Male	Illiterate	Labourer
6	Saravanakumar	36	Male	B.E.	Software Engineer

Consultation 02	
Village	Vanavarayanallur
Tehsil/Mandal	Kangeyam
District	Tiruppur
Tribal or Non-Tribal area	Non-tribal
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No
What is your opinion about this project?	No idea about it
Do you support this project?	No support
How do you think the project will affect you?	It will have an effect on agricultural lands.
Do you face any problem regarding current electricity supply?	No issues
Do you think that the project is necessary?	For their village, it is unnecessary.
What are your main concerns/issues about the project?	Croplands are impacted. Land loss has an effect on small landowners. Lands will be difficult to sell.
Can you suggest how to best address your concerns/issues?	The route alignment should avoid croplands.
Specifically, what concerns/issues do you have on the implementation of the project?	Noise from transmission line is a major concern. Electromagnetic radiation near the towers is a concern.
What positive impacts and/or benefits do you think the project will have?	No positive impacts envisaged
What negative impacts do you think the project will have?	Loss of land
How safe do you think or consider the electric transmission line?	Not safe, because of electromagnetic radiation issues
Any criteria you would like to be considered for project design, construction and operation stage?	No idea about it
How long have you been living in this area?	For four generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Since their livelihoods are affected, higher compensation is required.

Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes, it is required.
Would you support and participate during the implementation of project?	No support
Any suggestion/opinion, etc.	The route should not traverse on cropland.

List of participants = Total 7(Male-0 and Female-7)

S. No.	Name	Age	Sex	Education	Occupation
1	Deivanai	60	Female	5 th	Labourer
2	Santhi	49	Female	8 th	Labourer
3	Rani	55	Female	Illiterate	Labourer
4	Sridevi	34	Female	8 th	Labourer
5	Mani	55	Female	8 th	Labourer
6	Senbagam	55	Female	Illiterate	Labourer
7	Arukamma	60	Female	Illiterate	Labourer

Consultation 03	
Village	Muthukalivalasu
Tehsil/Mandal	Kangeyam
District	Tiruppur
Tribal or Non-Tribal area	Non-tribal
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	Yes. TANTRANSCO officials arrived and briefed us on the project's detail.
What is your opinion about this project?	We are concerned about the high voltage transmission line because it has some negative health consequences.
Do you support this project?	No support
How do you think the project will affect you?	Land loss and land value depreciation
Do you face any problem regarding current electricity supply?	Yes. Only 6-8 hours of power supply is available during day time.
Do you think that the project is necessary?	It is not necessary.
What are your main concerns/issues about the project?	Land loss, crop loss and loss of livelihood
Can you suggest how to best address your concerns/issues?	Because of loss of livelihood, compensation should be higher.
Specifically, what concerns/issues do you have on the implementation of the project?	Towers pass over coconut plantation areas, necessitating additional compensation.
What positive impacts and/or benefits do you think the project will have?	It will give more power supply.
What negative impacts do you think the project will have?	Loss of crop

How safe do you think or consider the electric transmission line?	No safety since hazard from electromagnetic radiation is envisaged.
Any criteria you would like to be considered for project design, construction and operation stage?	No idea about it.
How long have you been living in this area?	For five generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	We expect more monetary compensation in order to maintain our livelihoods.
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes.
Would you support and participate during the implementation of project?	Yes. We will support.
Any suggestion/opinion, etc.	Nil

List of participants = Total 6 (Male-5 and Female-1)

S. No.	Name	Age	Sex	Education	Occupation
1	Palanisamy	61	Male	6 th	Farmer
2	Samiathal	45	Female	Illiterate	Farmer
3	Ramasamy	60	Male	4 th	Farmer
4	Thangaraj	40	Male	10 th	Farmer
5	Gautham	21	Male	M.B.A.	Student
6	Velengiri	47	Male	6 th	Farmer

Consultation 4	
Village	Sadayapalayam
Tehsil/Mandal	Kangeyam
District	Tiruppur
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No
What is your opinion about this project?	Agricultural land may be affected, which should not happen.
Do you support this project?	Conditional support. The project, however, should not have affect cropland.
How do you think the project will affect you?	Safe distance from residential areas.
Do you face any problem regarding current electricity supply?	No issues
Do you think that the project is necessary?	Yes. It is necessary for the country's development.
What are your main concerns/issues about the project?	Effect on cropland and residential areas

Can you suggest how to best address your concerns/issues?	The transmission line and towers must pass over waste or barren lands.
Specifically, what concerns/issues do you have on the implementation of the project?	Croplands will be affected.
What positive impacts and/or benefits do you think the project will have?	Power supply in the State will be enhanced.
What negative impacts do you think the project will have?	Loss of land and crops
How safe do you think or consider the electric transmission line?	Safe, as no issues has been faced so far.
Any criteria you would like to be considered for project design, construction and operation stage?	No idea about.
How long have you been living in this area?	For four generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Alternative lands shall be provided with sufficient water and electricity supply to sustain our livelihood.
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. It is required.
Would you support and participate during the implementation of project?	Yes. However, the land should not be affected.
Any suggestion/opinion, etc.	Nil

List of participants = Total 6 (Male-6 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Sathyamoorthi	30	Male	10 th	Worker
2	Rajendran	21	Male	8 th	Worker
3	Kathirvel	30	Male	8 th	Worker
4	Selvakumar	18	Male	12 th	Worker
5	Karthi	32	Male	8 th	Worker
6	Karuppasamy	30	Male	10 th	Worker

Consultation 05	
Village	Parapalayam
Tehsil/Mandal	Oothukuli
District	Tiruppur
Tribal or Non-Tribal area	Non-tribal
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	Yes

What is your opinion about this project?	The project would have an effect on agricultural lands, crop loss, and livelihood loss.
Do you support this project?	No support.
How do you think the project will affect you?	Livelihood will be affected due to loss of land and crops, as well as the risk of electromagnetic radiation.
Do you face any problem regarding current electricity supply?	Yes. On an average 20 hours of power supply is available.
Do you think that the project is necessary?	It is not necessary. It will affect the local people.
What are your main concerns/issues about the project?	It will restrict agricultural activities. The value of land would be diminished. It will have an effect on our livelihoods.
Can you suggest how to best address your concerns/issues?	Towers should not be placed in agricultural lands.
Specifically, what concerns/issues do you have on the implementation of the project?	Agricultural crops will get affected.
What positive impacts and/or benefits do you think the project will have?	No positive impacts
What negative impacts do you think the project will have?	The lands may become unusable for any agriculture activities.
How safe do you think or consider the electric transmission line?	Not safe, since high voltage lines are passing.
Any criteria you would like to be considered for project design, construction and operation stage?	Alignment route should be shifted.
How long have you been living in this area?	For five generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	We do not require any compensation. Therefore, towers should not be placed on crop land.
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes.
Would you support and participate during the implementation of project?	No support.
Any suggestion/opinion, etc.	This project is unnecessary in their region. The route alignment may be placed away from croplands.

List of participants = Total 9 (Male-7 and Female-2)

S. No.	Name	Age	Sex	Education	Occupation
1	Mahalakshmi	25	Female	10 th	Worker
2	Sasipriya	25	Female	10 th	Unemployed
3	Ponnusamy	60	Male	Illiterate	Farmer
4	Rangasamy	50	Male	8 th	Farmer
5	Ponnusamy	65	Male	5 th	Farmer
6	Ravichandran	54	Male	5 th	Worker

7	Navinkumar	29	Male	10 th	Farmer
8	Palanisamy	47	Male	5 th	Ex. President
9	Chinnasamy	33	Male	5 th	Worker

400 kV DC line Virudhunagar - Kayathar(For detailed public consultations & gender consultations see the Social Assessment Report of this line)

400 kV DC line Kamuthi – Ottapidaram SS

Public Consultation 1	
Name of the Transmission Line package	Kamuthi - Ottapidaram
Type of TL line (New/revised)	Revised
Village	K. Pappankulam
Tehasil/Mandal	Kamuthi
District	Ramnathapuram
Distance from the Line (km)	200m
Date of Consultation	8.4.2021
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	They support the project but do not want that it crosses their lands.
Do you support this Project	Yes.
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	400 5 Acre on average
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. 40 100%
What is average hours of electricity per day for domestic consumption?	12 hours
Do you face any problem regarding current electric supply as far as your home connection is concerned?	Sometimes power cut
What is the composition of People in the Village? Number of total households: Population of the Village:	400 Households 1200 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Rice , Maize, Cotton
Average Yielding of the major crops and how many season and what is the price per quintals	Rice – 100 Sacks (1 sack = 65 kg) /acre Corn – 3 Quintals/acre Cotton – 1 Quintal/ acre
How do you think that the project will benefit you	It does not benefit us directly
What negative impacts do you think the project will have	The project will affect agriculture causing low yield and less income.
What are your main concerns/issues about the project	The project will affect agriculture causing low yield and less income.
Can you suggest how best to address your concerns/issues	Avoid agriculture land and utilize government land

Public Consultation 1	
Specifically, what concerns/issues do you have on the implementation of the project	The land value will reduce due to the passage of line. Trees cannot be planted under the line. The lands are getting damaged due to the movement of vehicle over agriculture land. The land should be restored after construction.
How safe do you think or consider the Transmission?	It is not safe. The electric field would affect the people who work in the field under the line.
Any criteria you would like to be considered for project design, construction and operation stage?	None
How long have you been living in this area?	60 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	Not sure
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	Project implementation, especially construction shall be done during the dry season or post harvest season.

List of Participants

S.No	Name	Age	Sex	Education	Occupation
1	S. Vallivittan	61	Male	Graduate (B.A)	Farmer
2	R. Selvalingam	41	Male	6 th	Farmer
3	D. Muneeswaran	26	Male	10 th	Farmer
4	T. Dinesh	26	Male	12 th	Farmer

Public Consultation 2	
Name of the Transmission Line package	Kamuthi - Ottaipidaram
Type of TL line (New/revised)	New
Village	Thimmanathapuram
Tehasil/Mandal	Kamuthi
District	Ramnathapuram
Distance from the Line (km)	600
Date of Consultation	8.4.2021
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	The tower erection would cause loss for landowners.
Do you support this Project	Yes, after obtaining the compensation
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	300 of which 85% of them have land
Are all houses electrified? Yes/No	Yes.
For how many years, the village is electrified?	40
What % of village is electrified	100%

Public Consultation 2	
What is average hours of electricity per day for domestic consumption?	16
Do you face any problem regarding current electric supply as far as your home connection is concerned?	Low voltage during summer
What is the composition of People in the Village? Number of total households: Population of the Village:	300 households 1500 persons
What is the general economic activities in the area	Agriculture & Labour
What are the major crops and how many crops you cultivate in a year?	Maize, Cotton , Black Gram, Chilli
Average Yielding of the major crops and how many season and what is the price per quintals	Maize – 4 quintal/acre Cotton – 3 Quintal/acre Black Gram – 3 quintal/acre Chilli -2 quintal/acre
How do you think that the project will benefit you	Not directly but if proper compensation is given it would be beneficial
What negative impacts do you think the project will have	Reduced harvest.
What are your main concerns/issues about the project	Reduced harvest.
Can you suggest how best to address your concerns/issues	Undertake the tower erection and stringing during non cropping season/dry season
Specifically, what concerns/issues do you have on the implementation of the project	Loss of land and crop yield
How safe do you think or consider the Transmission?	Not sure of the safety of transmission line as this is the first transmission line that passes over our village lands
Any criteria you would like to be considered for project design, construction and operation stage?	Revise the alignment
How long have you been living in this area?	50 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Demand Draft
What will be the impacts of the project on women and men?	Not sure
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Yes, but the concerns of the villagers should be addressed
Any suggestion/opinion, etc.	

List of Participants

S.No	Name	Age	Sex	Education	Occupation
1	Jayaraj	50	M	Illiterate	Labourer
2	Dharmaraj	65	M	5th	Labourer
3	Mariswaran	34	M	6th	Labourer
4	Marisamy	67	M	Illiterate	Labourer

Public Consultation 3	
Name of the Transmission Line package	Kamuthi - Ottaipidaram
Type of TL line (New/revised)	New
Village	Ayyanbommaiahpuram
Tehasil/Mandal	Vilathikulam
District	Thoothukudi
Distance from the Line (km)	450m
Date of Consultation	9.04.2021
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project now
What is your opinion about this Project	Only the project affected people were informed.
Do you support this Project	We have no say in the matter
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	250 3-4 Acres/person
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. 50 100%
What is average hours of electricity per day for domestic consumption?	8-9 hours
Do you face any problem regarding current electric supply as far as your home connection is concerned?	Yes
What is the composition of People in the Village? Number of total households: Population of the Village:	250 Households 1000 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Chilli, Maize, Black gram
Average Yielding of the major crops and how many season and what is the price per quintals	Chilli, - 5 Quintal / acre Maize – 10-15 Quintal / acre Black gram – 5 quintal/ acre
How do you think that the project will benefit you	No direct benefit
What negative impacts do you think the project will have	Loss of land, reduced yield
What are your main concerns/issues about the project	Proper compensation should be given
Can you suggest how best to address your concerns/issues	A public consultation should have been done with the entire village prior to construction. One-to-one consultation was done with affected people.
Specifically, what concerns/issues do you have on the implementation of the project	Loss of land, reduced yield
How safe do you think or consider the Transmission?	As it is the first time such a project is being implemented, we aren't sure about the impacts
Any criteria you would like to be considered for project design, construction and operation stage?	None
How long have you been living in this area?	60years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque / DD
What will be the impacts of the project on women and men?	Not aware/do not know

Public Consultation 3	
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Since it is already started, we have nothing to say.
Any suggestion/opinion, etc.	

List of Participants

S.No	Name	Age	Sex	Education	Occupation
1	Arumugaswamy	57	M	Illiterate	Agriculture
2	Adithiaraj	36	M	10th	Agriculture
3	Murugan	50	M	Illiterate	Agriculture
4	Viswanathan	20	M	BCA	Fresh Graduate
5	Kannan	23	M	9th	Agriculture
6	Murugesan	53	M	Illiterate	Agriculture
7	Mariappan	46	M	Illiterate	Agriculture

Public Consultation 4	
Name of the Transmission Line package	Kamuthi - Ottaipidaram
Type of TL line (New/revised)	Revised
Village	Kakkarampatti
Tehasil/Mandal	Ottapidaram
District	Thoothukudi
Distance from the Line (km)	450mm
Date of Consultation	9.4.2021
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	There are losses to few of our village people on whose land the towers would be erected
Do you support this Project	No
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	100 households 10 Acre on average
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. 45 100%
What is average hours of electricity per day for domestic consumption?	10-16
Do you face any problem regarding current electric supply as far as your home connection is concerned?	Yes
What is the composition of People in the Village? Number of total households: Population of the Village:	250 Households 1000 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Black gram, Green Gram, Chilli, Rice, Kambu (pearl millets), Maize, onion

Public Consultation 4	
Average Yielding of the major crops and how many seasons and what is the price per quintals	Black Gram – 6 quintals/acre Green Gram – 6 quintals/acre Chilli – 5 quintals/acre Rice – 40 quintals/acre Kambu (pearl millet) – 20 quintals/acre Maize – 20- quintals/acre Onion – 10 quintals/acre
How do you think that the project will benefit you	It won't benefit us as the line won't supply electricity to our village.
What negative impacts do you think the project will have	Land value would reduce,
What are your main concerns/issues about the project	Reduction of crop yield and land value
Can you suggest how best to address your concerns/issues	Avoid agriculture land, give us prior intimation prior to construction in order to gather our opinions and suggestions.
Specifically, what concerns/issues do you have on the implementation of the project	The agriculture production will be lessened due to the tower erection and trees cannot be planted under the line. Land value would also decrease.
How safe do you think or consider the Transmission?	The electric field would affect the people who work in the field under the line.
Any criteria you would like to be considered for project design, construction and operation stage?	The lands are getting damaged due to the movement of vehicle over agriculture land. The land should be restored after construction.
How long have you been living in this area?	Over 40 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	Not sure
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes, but need information of the project progress
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	Proper estimation of land value should have been done

List of Participants

S.No	Name	Age	Sex	Education	Occupation
1	Muthuraj	41	Male	M.P.Ed	Schoolmaster
2	Subburaj	39	Male	Illiterate	Labourer
3	Devapitchai	70	Male	5 th	Harbour worker (retd.)
4	Arul Raj	25	Male	Illiterate	Labourer

Public Consultation 5	
Name of the Transmission Line package	Kamuthi - Ottaipidaram
Type of TL line (New/revised)	Revised
Village	Mel Lakshmpuram
Tehasil/Mandal	Ottapidaram
District	Thoothukudi
Distance from the Line (km)	600m
Date of Consultation	9.4.2021
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	There is no direct benefit to the village
Do you support this Project	No
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	100 4 Acre
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. 40 100%
What is average hours of electricity per day for domestic consumption?	20
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	40 Households 200 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Maize, Black gram, Rice
Average Yielding of the major crops and how many season and what is the price per quintals	Maize – 40- 50 quintal/acre Rice – 40-50 quintal/acre Black gram – 7 quintal/acre
How do you think that the project will benefit you	It won't benefit us as the line won't supply electricity to our village
What negative impacts do you think the project will have	The request was made to the contractors to save the top soil, but it was not done properly.
What are your main concerns/issues about the project	The top soil should be preserved properly.
Can you suggest how best to address your concerns/issues	Provide proper compensation to the affected persons for the land.
Specifically, what concerns/issues do you have on the implementation of the project	The top soil should be preserved properly.
How safe do you think or consider the Transmission?	The electric field would dry up the soil and reduce the yield.
Any criteria you would like to be considered for project design, construction and operation stage?	The top soil should be preserved properly.
How long have you been living in this area?	46 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque

Public Consultation 5	
What will be the impacts of the project on women and men?	Not sure about the impact to women
Is the consultation useful	Yes, it was very useful as we get a chance to explain our problems.
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Not without proper compensation
Any suggestion/opinion, etc.	Proper estimation of land value should have been done

List of Participants

S.No	Name	Age	Sex	Education	Occupation
1	Saktivel	46	Male	8th Grade	Farmer
2	Ramesh	30	Male	10th	Farmer
3	Azhagarwami	60	Male	5th	Farmer
4	Adhilingam	60	Male	5th	Farmer
5	Shanmugaiah	60	Male	Illiterate	Farmer

400 kV DC line Udangudi – Ottapidaram SS

Public Consultation 1	
Name of the Transmission Line package	Udangudi-Ottapidaram
Type of TL line (New/revised)	Revised
Village	Kallamoli
Tehasil/Mandal	Tiruchendur
District	Thoothukudi
Distance from the Line (m)	450m
Date of Consultation	10.04.2021
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	There is no direct benefit to the village or villagers. However, agriculture land & its fertility may be affected.
Do you support this Project	Yes, but with proper implementation of the project, taking care of minimising any possible loss, health & safety concerns of the people.
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	Approx. Total 300 HH Approx. 150 HH having agricultural land Avg. Landholding size 15 Acre.
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. more than 50 years 100%
What is average hours of electricity per day for domestic consumption?	24
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No

Public Consultation 1	
What is the composition of People in the Village? Number of total households: Population of the Village:	300 Households 1200 persons
What is the general economic activities in the area	Agriculture, Self-employed, Drivers
What are the major crops and how many crops you cultivate in a year?	Rice
Average Yielding of the major crops and how many season and what is the price per quintals	40-50 quintal/acre
How do you think that the project will benefit you	It won't benefit us as the line won't supply electricity to our village
What negative impacts do you think the project will have	Loss of land leading to low income.
What are your main concerns/issues about the project	Loss of land, impact on health, pollution.
Can you suggest how best to address your concerns/issues	The compensation should be estimated higher. Also avoid using agriculture land for the project as far as possible.
Specifically, what concerns/issues do you have on the implementation of the project	The land value will reduce due to passing of the line. Trees cannot be planted under the line.
How safe do you think or consider the Transmission?	It is not safe all the time & season. The electric field would affect the health of people who work in the field under the line.
Any criteria you would like to be considered for project design, construction and operation stage?	The lands are getting damaged due to the movement of vehicle over agriculture land. The land should be restored after the construction.
How long have you been living in this area?	More than 60 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	Loss of employment w.r.t agriculture labours due to loss of land.
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes, people want regular updates on any development regarding the project.
Would you support and participate during the implementation of Project?	Yes, if the project would be implemented properly and a fair compensation would be provided to the affected people.
Any suggestion/opinion, etc.	<ul style="list-style-type: none"> Minimise the losses and reduce the involvement of agricultural lands in the project.

List of Participants

S. No.	Name	Age	Sex	Education	Occupation
1	A. Anivthalingam	55	M	5 th	Daily Wages Labour
2	M. Muthuselvam	33	M	5 th	Daily Wages Labour
3	S. Rasathi	40	F	7 th	Daily Wages Labour
4	V. Pechiammal	50	F	Illiterate	Daily Wages Labour
5	Pattukani S.	35	F	Illiterate	Daily Wages Labour
6	Aramukani S.	45	F	Illiterate	Daily Wages Labour
7	Muthuselvi E.	37	F	Illiterate	Daily Wages Labour

8	S. Kannar	40	M	10 th	Truck Driver
9	K.V. Rajadurai	46	M	10 th	Agriculture

Public Consultation 2	
Name of the Transmission Line package	Udangudi-Ottapidaram
Type of TL line (New/revised)	Revised
Village	Vannimanagaram
Tehasil/Mandal	Eral
District	Thoothukudi
Distance from the Line (m)	355m
Date of Consultation	09.04.2021
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes, but not fully aware with the nature & objective of the project.
What is your opinion about this Project	From the proposed project, there is no direct benefit to the villagers. However, agriculture land & its fertility may be affected.
Do you support this Project	Yes, but the villagers must get full information regarding any development in the project.
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	Approx. Total 120 HH All HH having agricultural land Avg. Landholding size 10-15 Acre.
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. Since Independence. 100%
What is average hours of electricity per day for domestic consumption?	24
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	120 Households approx. 750 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Rice
Average Yielding of the major crops and how many season and what is the price per quintals	30-40 quintal/acre
How do you think that the project will benefit you	No direct benefits. It won't benefit us as the line won't supply electricity to our village.
What negative impacts do you think the project will have	Loss of land leading to low income, reduction of the value of Land.
What are your main concerns/issues about the project	Loss of land, reduction of the value of Land.
Can you suggest how best to address your concerns/issues	The land compensation should be estimated in a proper manner.
Specifically, what concerns/issues do you have on the implementation of the project	The land value will be decreased due to passing of the transmission line; trees cannot be planted under the line.
How safe do you think or consider the Transmission?	It would not be safe all the time. It is not good for agricultural activities and it drains the battery of tractors operating near the towers/ parked below the line.

Public Consultation 2	
Any criteria you would like to be considered for project design, construction and operation stage?	The lands are getting damaged due to the movement of vehicle over agriculture land. The land should be properly restored.
How long have you been living in this area?	More than 60-70 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	Loss of employment w.r.t agriculture labours due to loss of land.
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes, people want regular updates on any development regarding the project.
Would you support and participate during the implementation of Project?	Yes, if the project would be implemented properly and a fair compensation would be provided to the affected people.
Any suggestion/opinion, etc.	<ul style="list-style-type: none"> Minimise the losses and reduce the involvement of agricultural lands in the project. Provide detailed information about the project to the villagers and compensate fairly to the affected people.

List of Participants

S. No.	Name	Age	Sex	Education	Occupation
1	Thanasekar	52	M	9th	Agriculture
2	Kadar Karaithangam	70	M	B. Sc.	Agriculture
3	N. Murugan	70	M	7 th	Agriculture
4	M. Paalraj	80	M	5 th	Agriculture
5	T. Perumal Naadar	74	M	10 th	Agriculture
6	Thalai Saamy	50	M	3 rd	Shopkeeper
7	Sakthi Kumar	36	M	8 th	Business
8	Shreedar	30	M	8 th	Shopkeeper
9	M. Ramesh	32	M	8 th	Shopkeeper
10	T. Karthick	26	M	ITI	Shopkeeper

Public Consultation 3	
Name of the Transmission Line package	Udangudi-Ottapidaram
Type of TL line (New/revised)	Revised
Village	Kurumbur
Tehasil/Mandal	Eral
District	Thoothukudi
Distance from the Line (m)	388 m
Date of Consultation	09.04.2021
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes, but not fully aware with the objective of the project.
What is your opinion about this Project	The proposed project is not beneficial to the villagers, even agriculture land & its fertility may be affected.
Do you support this Project	Yes, but the affected people must be considered for proper compensation.

Public Consultation 3	
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	Approx. Total 200 HH All HH having agricultural land Avg. Landholding size 10 Acre.
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. Since Independence. 100%
What is average hours of electricity per day for domestic consumption?	24
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	200 Households approx. 1500 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Rice, Black Gram
Average Yielding of the major crops and how many season and what is the price per quintals	Rice: 25-30 quintal/acre
How do you think that the project will benefit you	No direct benefits. It won't benefit us as the line won't supply electricity to our village.
What negative impacts do you think the project will have	Loss of land leading to low income, decrease in the value of Land.
What are your main concerns/issues about the project	Loss of land, fair compensation.
Can you suggest how best to address your concerns/issues	Detailed information should be given to the villagers. The land compensation should be estimated higher. Also avoid using agriculture land for the project as far as possible.
Specifically, what concerns/issues do you have on the implementation of the project	The land value will decrease due to passing of the transmission line in the area. Agriculture production will reduce due to the tower erection.
How safe do you think or consider the Transmission?	It is not good for agricultural activities and it drains the battery of tractors operating near the towers/ parked below the line.
Any criteria you would like to be considered for project design, construction and operation stage?	The project design should consider avoiding the agricultural lands as far as possible.
How long have you been living in this area?	60-70 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	Not sure
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes, people want regular updates on any development regarding the project.
Would you support and participate during the implementation of Project?	Yes, if the project would be implemented properly and a higher compensation would be provided to the affected people.
Any suggestion/opinion, etc.	<ul style="list-style-type: none"> Minimise the losses and reduce the involvement of agricultural lands in the project.

Public Consultation 3

	<ul style="list-style-type: none"> The MED Form should be written in local and English language to avoid confusion in comprehending the details of the document.
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List of Participants

S. No.	Name	Age	Sex	Education	Occupation
1	Zavier	50	M	8 th	Shopkeeper
2	G.Prabhakaran	57	M	B.A.	Agriculture
3	S. Venkatesh	35	M	ITI	Agriculture
4	P.Muthukrishnan	50	M	10 th	Agriculture
5	Ramachandran	35	M	10 th	Agriculture
6	Kadarkarai Thangam	38	M	BA	Agriculture
7	P. Murugesan	70	M	8 th	Agriculture
8	Ramalingam	45	M	8 th	Govt. Job
9	Rajendran	60	M	8 th	Agriculture
10	L. Karumban	35	M	Illiterate	Agriculture

Public Consultation 4

Name of the Transmission Line package	Udangudi-Ottapidaram
Type of TL line (New/revised)	Revised
Village	Minakshipatti
Tehasil/Mandal	Siruvaikunddam
District	Thoothukudi
Distance from the Line (m)	763 m
Date of Consultation	08.04.2021
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes, but not fully aware with the objective of the project.
What is your opinion about this Project	The proposed project is not beneficial directly to the villagers.
Do you support this Project	Not fully supporting.
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	Approx. Total 300 HH About 250 HH having agricultural land Avg. Landholding size 15-20 Acre.
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. Since 1970. 100%
What is average hours of electricity per day for domestic consumption?	24
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	300 Households approx. 1000 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Rice, Jasmine

Public Consultation 4	
Average Yielding of the major crops and how many season and what is the price per quintals	Rice: 30-40 quintal/acre
How do you think that the project will benefit you	No direct benefits. It won't benefit us as the line won't supply electricity to our village.
What negative impacts do you think the project will have	Loss of land leading to low income
What are your main concerns/issues about the project	Loss of land, fair compensation.
Can you suggest how best to address your concerns/issues	Detailed information should be given to the villagers. The compensation should be estimated higher. Also avoid using agriculture land for the project as far as possible.
Specifically, what concerns/issues do you have on the implementation of the project	The land value will go down due to passing the transmission line in the area.
How safe do you think or consider the Transmission?	The electric field would affect the health of people who work in the field below the line.
Any criteria you would like to be considered for project design, construction and operation stage?	The project design should consider less use of agricultural lands as far as possible. The land should be restored in its previous form after construction.
How long have you been living in this area?	More than 70 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	Loss of employment w.r.t agriculture labours due to loss of land.
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes, people want regular updates on any development regarding the project.
Would you support and participate during the implementation of Project?	Yes, if the project would be implemented properly and a fair compensation would be provided to the affected people.
Any suggestion/opinion, etc.	<ul style="list-style-type: none"> Minimise the losses and reduce the involvement of agricultural lands in the project. The MED Form should be in local language along with English language.

List of Participants

S. No.	Name	Age	Sex	Education	Occupation
1	S. Alagar	75	M	5 th	Agriculture
2	C.Arunachalam	40	M	8 th	Driver
3	S. Krishnan	45	M	8 th	Driver
4	A. Kaantari	45	M	10 th	Business
5	S. Aathiyappan	70	M	4 th	Labour
6	Sankaran	53	M	Illiterate	Animal Husbandry
7	E. Murugan	53	M	5 th	Shopkeeper

Public Consultation 5	
Name of the Transmission Line package	Udangudi-Ottapidaram
Type of TL line (New/revised)	Revised
Village	Rajavinkovil
Tehasil/Mandal	Ottapidaram
District	Thoothukudi
Distance from the Line (m)	269 m
Date of Consultation	08.04.2021
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes, but not fully aware with the objective of the project.
What is your opinion about this Project	The proposed project is not directly beneficial to the villagers.
Do you support this Project	Some of the villagers have no objection with the project but some of the villagers are not happy with the project because of losses of land due to the project.
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	Approx. Total 150 HH All the HH having agricultural land Avg. Landholding size 5-10 Acre.
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. Since 1967. 100%
What is average hours of electricity per day for domestic consumption?	24 hours (for domestic uses)
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	150 Households approx. 1000 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Chilli, Cotton, Tomato, Brinjal, Onion, Ragi, Bajra etc.
Average Yielding of the major crops and how many season and what is the price per quintals	Varies according to climate changed.
How do you think that the project will benefit you	No direct benefits. It won't benefit us as the line won't supply electricity to our village.
What negative impacts do you think the project will have	Loss of agricultural land leading to low income
What are your main concerns/issues about the project	Loss of crop land, adequate compensation.
Can you suggest how best to address your concerns/issues	Detailed information should be given to the villagers. The land compensation should be higher. Also avoid using agriculture land for the project as far as possible.
Specifically, what concerns/issues do you have on the implementation of the project	The land value will decrease due to passing of the transmission line in the area.
How safe do you think or consider the Transmission?	The electric field would affect the health of people who work in the field below the line.
Any criteria you would like to be considered for project design, construction and operation stage?	The project design should consider less use of agricultural lands as far as possible.

Public Consultation 5	
How long have you been living in this area?	More than 75 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	No idea
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes, people want regular updates regarding the project.
Would you support and participate during the implementation of Project?	Yes, if the project would be implemented properly and a fair compensation would be provided to the affected people.
Any suggestion/opinion, etc.	<ul style="list-style-type: none"> Alarming/warning system should be available for any possible danger due to transmission line. The MED form should be in local language along with English language for ease of understanding. Minimise the losses and involvement of agricultural lands in the project.

List of Participants

S. No.	Name	Age	Sex	Education	Occupation
1	Paneer Selvam	72	M	5 th	Agriculture (Ex-Sarpanch)
2	K. Shivalingam	80	M	7 th	Agriculture
3	M. Sournapandi	49	M	12 th	Agriculture & Shopkeeper
4	Jeyakumar	47	M	6 th	Labour
5	N. Alagulingam	55	M	7 th	Labour
6	C. Thangapandi	55	M	9 th	Shopkeeper
7	M. Thangadurai	50	M	Illiterate	Labour
8	S.Mangaleshwari	40	F	7 th	Housewife

230 kV DC line LILO of T- Sipcot Kavanoor SC line to Ottapidaram SS

Consultation 1	
Village	Sindalakattai
Tehsil/Mandal	Ottapidaram
District	Tuticorin
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No
What is your opinion about this project?	No idea about the project
Do you support this project?	No support
How do you think the project will affect you?	Land value depreciation and impacts on crops

Do you face any problem regarding current electricity supply?	Yes. Voltage fluctuations can be felt sometime.
Do you think that the project is necessary?	No
What are your main concerns/issues about the project?	Crop loss due to the impacts of the project
Can you suggest how to best address your concerns/issues?	It is essential to avoid damaging the cropland.
Specifically, what concerns/issues do you have on the implementation of the project?	Impacts on crop lands
What positive impacts and/or benefits do you think the project will have?	We have no idea what the project's positive effects.
What negative impacts do you think the project will have?	Depreciation of land value
How safe do you think or consider the electric transmission line?	No safety issues
Any criteria you would like to be considered for project design, construction and operation stage?	No awareness about it
How long have you been living in this area?	For three generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	Nil
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	We want to reroute the transmission line.
Is the consultation useful?	Yes. It is useful
Do you think that the local people would like to get regular information regarding the project?	Only the particular landowners may need regular information regarding the project.
Would you support and participate during the implementation of project?	Yes.
Any suggestion/opinion, etc.	Nil

List of participants = Total 6 (Male-5 and Female-1)

S. No.	Name	Age	Sex	Education	Occupation
1	Kaliammal M	60	Female	Illiterate	Labourer
2	Esvadiyan	70	Male	6 th	Labourer
3	Paul	46	Male	Illiterate	Driver
4	Mariappan	68	Male	Illiterate	Labourer
5	Perumal	71	Male	5 th	Labourer
6	Vallikan	60	Male	Illiterate	Labourer

Consultation 02	
Village	Perianatham
Tehsil/Mandal	Ottapidaram
District	Tuticorin
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No

What is your opinion about this project?	The project should not cause any inconvenience to the residents of the village.
Do you support this project?	Yes, on the condition that there will be no problem for the village residents.
How do you think the project will affect you?	Electromagnetic Field (EMF) may affect us, particularly when it rains.
Do you face any problem regarding current electricity supply?	No issues
Do you think that the project is necessary?	Yes
What are your main concerns/issues about the project?	Effect on crop lands
Can you suggest how to best address your concerns/issues?	The alignment should be adjusted through the barren lands so that croplands are not harmed.
Specifically, what concerns/issues do you have on the implementation of the project?	In the waterlogged areas, electric shocks have been observed.
What positive impacts and/or benefits do you think the project will have?	It has a positive effect because the State's power supply could be improved.
What negative impacts do you think the project will have?	Crop land gets affected.
How safe do you think or consider the electric transmission line?	No safety as it causes electric shocks
Any criteria you would like to be considered for project design, construction and operation stage?	The alignment shall be rerouted.
How long have you been living in this area?	For three generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	Nil
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	No idea
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes
Would you support and participate during the implementation of project?	Conditional support
Any suggestion/opinion, etc.	Route alignment has to be reconsidered.

List of participants = Total 5 (Male-5 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Mookaiya	62	Male	4 th	Labourer
2	George Kutty	47	Male	8 th	Labourer
3	M. Raja	40	Male	5 th	Driver
4	Subburaj	41	Male	7 th	Labourer
5	Paramasivam	50	Male	Illiterate	Unemployed

Consultation 03	
Village	M. Subramaniapuram
Tehsil/Mandal	Ottapidaram
District	Tuticorin
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	Yes
What is your opinion about this project?	No idea about the project
Do you support this project?	Yes.
How do you think the project will affect you?	The project may make the land into wasteland.
Do you face any problem regarding current electricity supply?	Yes. Issues are there.
Do you think that the project is necessary?	Yes. It is necessary.
What are your main concerns/issues about the project?	The line passes near the village.
Can you suggest how to best address your concerns/issues?	It is suggested that the route alignment of line be changed.
Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	It will improve power supply in the State.
What negative impacts do you think the project will have?	It passes near the village, so they suggest for changing the route.
How safe do you think or consider the electric transmission line?	Safe
Any criteria you would like to be considered for project design, construction and operation stage?	Nil
How long have you been living in this area?	For three or four generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	Nil
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation.
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes
Would you support and participate during the implementation of project?	Yes
Any suggestion/opinion, etc.	Nil

List of participants = Total 7 (Male-7 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Aandichamy	54	Male	3 rd	Farmer
2	Subbiah	70	Male	3 rd	Farmer
3	Karuppasamy	50	Male	Illiterate	Labourer
4	Pachamuthu	62	Male	Illiterate	Labourer

5	Nithish Kumar	24	Male	B.B.A.	Labourer
6	Mani	50	Male	8 th	Labourer
7	Poomani	22	Male	12 th	Labourer

230 kV DC line LILO of T- Sipcot Savasapuram feeder to Ottapidaram

Consultation 01	
Village	M. Subramaniapuram
Tehsil/Mandal	Ottapidaram
District	Thoothukkudi
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	Yes.
What is your opinion about this project?	No idea about it
Do you support this project?	Yes.
How do you think the project will affect you?	Land on which the line will pass will become less valuable
Do you face any problem regarding current electricity supply?	Yes.
Do you think that the project is necessary?	Yes.
What are your main concerns/issues about the project?	The transmission line should be further away from the village.
Can you suggest how to best address your concerns/issues?	Suggest to change the route alignment.
Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	It would improve the power supply, resulting in less power outages.
What negative impacts do you think the project will have?	No idea
How safe do you think or consider the electric transmission line?	Yes. It is safe
Any criteria you would like to be considered for project design, construction and operation stage?	It should not pass close to the village.
How long have you been living in this area?	For three to four generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	Nil
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	The compensation should be paid in cash at the best market rate.
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes
Would you support and participate during the implementation of project?	Yes
Any suggestion/opinion, etc.	Nil

List of participants = Total 7 (Male-7 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Aandichamy	54	Male	3 rd	Farmer
2	Subbiah	70	Male	3 rd	Farmer
3	Karuppasamy	50	Male	Illiterate	Labourer
4	Pachamuthu	62	Male	Illiterate	Labourer
5	Nithish Kumar	24	Male	B.B.A.	Labourer
6	Mani	50	Male	8 th	Labourer
7	Poomani	22	Male	12 th	Labourer

Consultation 02	
Village	Lakshmiapuram
Tehsil/Mandal	Ottapidaram
District	Thoothukkudi
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No awareness about the project
What is your opinion about this project?	It may affect them from cultivating crops.
Do you support this project?	No support
How do you think the project will affect you?	It will have an effect in terms of land loss, crop loss, and productivity.
Do you face any problem regarding current electricity supply?	No issues
Do you think that the project is necessary?	It is not necessary
What are your main concerns/issues about the project?	Land value depreciation and the difficulty in selling the land are issues.
Can you suggest how to best address your concerns/issues?	It is essential to provide contact information for the project.
Specifically, what concerns/issues do you have on the implementation of the project?	There should be proper information about the project.
What positive impacts and/or benefits do you think the project will have?	No positive impacts envisaged.
What negative impacts do you think the project will have?	Issues regarding land loss and land value depreciation
How safe do you think or consider the electric transmission line?	No safety
Any criteria you would like to be considered for project design, construction and operation stage?	Nil
How long have you been living in this area?	For four generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	Nil
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Compensation in the form of money. There should be adequate compensation.
Is the consultation useful?	Yes. It is useful.

Do you think that the local people would like to get regular information regarding the project?	Yes
Would you support and participate during the implementation of project?	No support
Any suggestion/opinion, etc.	Nil

List of participants = Total 5 (Male-5 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Chellamuthu	70	Male	Illiterate	Labourer
2	Poolchami	67	Male	5 th	Labourer
3	Ganesan	52	Male	5 th	Farmer
4	Karuppasamy	54	Male	Illiterate	Labourer
5	Sanmugam	61	Male	2 nd	Farmer

Consultation 03	
Village	Sindalakattai
Tehsil/Mandal	Ottapidaram
District	Thoothukkudi
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No
What is your opinion about this project?	No idea about the project
Do you support this project?	No support
How do you think the project will affect you?	Land value depreciation and impacts on crops
Do you face any problem regarding current electricity supply?	Yes. Voltage fluctuations can be felt.
Do you think that the project is necessary?	No
What are your main concerns/issues about the project?	Crop loss due to the impacts of the project
Can you suggest how to best address your concerns/issues?	It is essential to avoid the cropland.
Specifically, what concerns/issues do you have on the implementation of the project?	Impacts on crop lands
What positive impacts and/or benefits do you think the project will have?	We have no idea about the project's positive effects.
What negative impacts do you think the project will have?	Depreciation of land value
How safe do you think or consider the electric transmission line?	No safety issues
Any criteria you would like to be considered for project design, construction and operation stage?	No awareness about it
How long have you been living in this area?	For three generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	Nil
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	We don't expect any compensation but want to reroute the transmission line.
Is the consultation useful?	Yes. It is useful

Do you think that the local people would like to get regular information regarding the project?	Only the affected landowners may need regular information regarding the project.
Would you support and participate during the implementation of project?	Yes.
Any suggestion/opinion, etc.	Nil

List of participants = Total 6 (Male-5 and Female-1)

S. No.	Name	Age	Sex	Education	Occupation
1	Kaliammal M	60	Female	Illiterate	Labourer
2	Esvadiyan	70	Male	6 th	Labourer
3	Paul	46	Male	Illiterate	Driver
4	Mariappan	68	Male	Illiterate	Labourer
5	Perumal	71	Male	5 th	Labourer
6	Vallikan	60	Male	Illiterate	Labourer

110 kV DC line on DC tower from LILO of TT auto-T Sipcot feeder to Ottapidaram SS

Consultation 01	
Village	Sillanatham
Tehsil/Mandal	Ottapidaram
District	Tuticorin
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No
What is your opinion about this project?	According to the villagers, there may be no negative consequences as a result of this initiative.
Do you support this project?	Yes
How do you think the project will affect you?	It may affect their crop land
Do you face any problem regarding current electricity supply?	No issues
Do you think that the project is necessary?	Yes. It is necessary
What are your main concerns/issues about the project?	Agricultural fields and crops may be affected.
Can you suggest how to best address your concerns/issues?	No opinion about it
Specifically, what concerns/issues do you have on the implementation of the project?	Impacts on the cultivated crops should be minimum
What positive impacts and/or benefits do you think the project will have?	No awareness about it
What negative impacts do you think the project will have?	It may affect their crop land
How safe do you think or consider the electric transmission line?	Safe. No issues on safety
Any criteria you would like to be considered for project design, construction and operation stage?	Nil

How long have you been living in this area?	For three generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	Nil
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Adequate compensation
Is the consultation useful?	Useful
Do you think that the local people would like to get regular information regarding the project?	Yes. It is required
Would you support and participate during the implementation of project?	We have to support as it is a government implemented project.
Any suggestion/opinion, etc.	Nil

List of participants = Total 6 (Male-6 and Female-0)

S.No.	Name	Age	Sex	Education	Occupation
1	Muthuraj	60	Male	Illiterate	Farmer
2	Annamalai	50	Male	3 rd	Labourer
3	Arumugasami	58	Male	3 rd	Labourer
4	Arumugam	74	Male	6 th	Labourer
5	Sami	45	Male	3 rd	Unemployed
6	Manthiram	60	Male	7 th	Driver

Consultation 02	
Village	Saminatham
Tehsil/Mandal	Ottapidaram
District	Tuticorin
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No
What is your opinion about this project?	No view as we do not have much information
Do you support this project?	Yes.
How do you think the project will affect you?	The value of the affected land would depreciate, which will have an effect on the landowners.
Do you face any problem regarding current electricity supply?	No issues in the supply
Do you think that the project is necessary?	It is not necessary as it does not give any direct benefits to them
What are your main concerns/issues about the project?	No such serious issues
Can you suggest how to best address your concerns/issues?	Transmission lines should be routed underground.
Specifically, what concerns/issues do you have on the implementation of the project?	Nil

What positive impacts and/or benefits do you think the project will have?	It will boost the State's power production and supply.
What negative impacts do you think the project will have?	Land value depreciation
How safe do you think or consider the electric transmission line?	Yes. It is safe.
Any criteria you would like to be considered for project design, construction and operation stage?	No idea about it
How long have you been living in this area?	For four to five generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	Nil
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Compensation amount for the land as per the best market value.
Is the consultation useful?	Useful
Do you think that the local people would like to get regular information regarding the project?	No. It is not necessary
Would you support and participate during the implementation of project?	Yes.
Any suggestion/opinion, etc.	Nil

List of participants = Total 6 (Male-6 and Female-0)

S.No.	Name	Age	Sex	Education	Occupation
1	Thanabalan	68	Male	B.Sc.	Retired
2	Jeyabalan	70	Male	10 th	Farmer
3	Perumal	78	Male	10 th	Retired
4	Selvaraj	60	Male	8 th	Farmer
5	Anthony	70	Male	8 th	Farmer
6	Kandasamy	20	Male	B.Com.	Student

110 kV SC line on DC tower from proposed Ottapidaram to existing Vijayapuri SS

Consultation 01	
Village	Vellaram
Tehsil/Mandal	Ottapidaram
District	Thoothukkudi
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No
What is your opinion about this project?	It brings development in the State. However, it could affect the agricultural lands.
Do you support this project?	No support, because agricultural lands are located within the line corridor
How do you think the project will affect you?	Agricultural lands will be affected.

Do you face any problem regarding current electricity supply?	No issues
Do you think that the project is necessary?	It is not necessary
What are your main concerns/issues about the project?	Impact on agriculture is the main concern
Can you suggest how to best address your concerns/issues?	The line should be rerouted across the barren lands.
Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	It has no positive impact on their village.
What negative impacts do you think the project will have?	The land would become less valuable.
How safe do you think or consider the electric transmission line?	Not safe.
Any criteria you would like to be considered for project design, construction and operation stage?	No idea about it.
How long have you been living in this area?	For ten generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	Nil
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	No idea
Is the consultation useful?	Yes.
Do you think that the local people would like to get regular information regarding the project?	Yes.
Would you support and participate during the implementation of project?	No support
Any suggestion/opinion, etc.	The project should have no negative consequences for agricultural lands.

List of participants = Total 6 (Male-6 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Murugesan	74	Male	11 th	Retired
2	Aavudaiyappan	68	Male	8 th	Pottery
3	Pichamani	56	Male	5 th	Labourer
4	Mohan	65	Male	B.Sc.	Farmer
5	Nagaraj	45	Male	8 th	Tea shopkeeper
6	Ganesan	54	Male	8 th	Tea shopkeeper

Consultation 02	
Village	Thethampatti
Tehsil/Mandal	Kayathar
District	Thoothukkudi
Tribal or Non-Tribal area	Non-tribal area

Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No
What is your opinion about this project?	The project is great as long as it did not take place near the village.
Do you support this project?	Yes
How do you think the project will affect you?	It will affect the agricultural lands.
Do you face any problem regarding current electricity supply?	No issues
Do you think that the project is necessary?	Yes.
What are your main concerns/issues about the project?	Concerns are about the project's high-voltage transmission and its impacts.
Can you suggest how to best address your concerns/issues?	No awareness about it.
Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	No positive impacts envisaged
What negative impacts do you think the project will have?	Loss of land
How safe do you think or consider the electric transmission line?	No safety.
Any criteria you would like to be considered for project design, construction and operation stage?	No opinion about it.
How long have you been living in this area?	For four generations.
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Compensation is not an alternative since our lands are more valuable to us.
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	No
Would you support and participate during the implementation of project?	No support
Any suggestion/opinion, etc.	The transmission line should not be allowed to pass near the village.

List of participants = Total 6 (Male-6 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Vellasamy	60	Male	Illiterate	Unemployed
2	Murugan	55	Male	Illiterate	Labourer
3	Madasamy	52	Male	Illiterate	Labourer
4	Angapareddy	65	Male	Illiterate	Unemployed
5	Perumal	75	Male	Illiterate	Unemployed
6	Azhagupandian	46	Male	Illiterate	Farmer

Consultation 03	
Village	Kamanayakkanpatti
Tehsil/Mandal	Kayathar
District	Thoothukkudi
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No
What is your opinion about this project?	It has an effect on agricultural lands
Do you support this project?	No
How do you think the project will affect you?	Electromagnetic Field (EMF) radiation from the project will affect them
Do you face any problem regarding current electricity supply?	No issues
Do you think that the project is necessary?	No. It is not necessary.
What are your main concerns/issues about the project?	It has an effect on crop lands
Can you suggest how to best address your concerns/issues?	Safety protocols must be correctly enforced.
Specifically, what concerns/issues do you have on the implementation of the project?	The transmission lines and towers should not pass near the village
What positive impacts and/or benefits do you think the project will have?	It provides the essential electricity connection. However, crop land should not get affected.
What negative impacts do you think the project will have?	Land value depreciation and impacts on croplands.
How safe do you think or consider the electric transmission line?	No safety
Any criteria you would like to be considered for project design, construction and operation stage?	No opinion about it
How long have you been living in this area?	For four generations.
Are there any indigenous people/ tribal people or ethnic minority living in this area?	Nil
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Compensation is not required; however, the lines and/or towers shall not pass on the agricultural lands.
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	No
Would you support and participate during the implementation of project?	No support if line passes on the agricultural lands
Any suggestion/opinion, etc.	Nil

List of participants = Total 6 (Male-6 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Thangavel	70	Male	B.Sc.	Retired
2	Karuppasamy	80	Male	Illiterate	Farmer
3	Jesuraj	60	Male	4 th	Farmer

4	Selvam	30	Male	10 th	Cooking
5	Arul Raj	60	Male	8 th	Cooking
6	Ravindran	55	Male	Illiterate	Labourer

110 kV DC line on DC tower from LILO of Eppodhmvendran to Ottapidaram SS

Consultation 01	
Village	Kakkarampatti
Tehsil/Mandal	Ottapidaram
District	Tuticorin
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	Yes
What is your opinion about this project?	The project is beneficial for power supply.
Do you support this project?	Yes
How do you think the project will affect you?	Land owners will get affected.
Do you face any problem regarding current electricity supply?	No
Do you think that the project is necessary?	Yes
What are your main concerns/issues about the project?	No idea about it.
Can you suggest how to best address your concerns/issues?	No such suggestion.
Specifically, what concerns/issues do you have on the implementation of the project?	Loss of land due to the project
What positive impacts and/or benefits do you think the project will have?	It improves power transmission across the State.
What negative impacts do you think the project will have?	Land loss due to the project
How safe do you think or consider the electric transmission line?	No safety
Any criteria you would like to be considered for project design, construction and operation stage?	The route of the line should avoid the agricultural land.
How long have you been living in this area?	For four generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Compensation in cash based on the best selling price.
Is the consultation useful?	Yes

Do you think that the local people would like to get regular information regarding the project?	No
Would you support and participate during the implementation of project?	Yes
Any suggestion/opinion, etc.	Nil

List of participants = Total 5 (Male-5 and Female-0)

S.No.	Name	Age	Sex	Education	Occupation
1	Rajamani	63	Male	2 nd	Labourer
2	Devapichai	67	Male	5 th	Retired
3	Paulraj. S	72	Male	10 th	Retired
4	Amul Raj	31	Male	M.B.A.	Medical Representative
5	Thillaiyan	76	Male	Illiterate	Unemployed

Consultation 02	
Village	Keezhameenatchipuram
Tehsil/Mandal	Ottapidaram
District	Tuticorin
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No
What is your opinion about this project?	The project has impact on agricultural land
Do you support this project?	Conditional support
How do you think the project will affect you?	It has impact on valuable crop land
Do you face any problem regarding current electricity supply?	No issues
Do you think that the project is necessary?	It is not necessary
What are your main concerns/issues about the project?	Impact of Electromagnetic Field (EMF) radiations from the transmission line
Can you suggest how to best address your concerns/issues?	Nil
Specifically, what concerns/issues do you have on the implementation of the project?	Radiation from the transmission line

What positive impacts and/or benefits do you think the project will have?	The project has no direct positive benefit to the local community.
What negative impacts do you think the project will have?	Land value depreciation and impact on croplands.
How safe do you think or consider the electric transmission line?	No safety
Any criteria you would like to be considered for project design, construction and operation stage?	No
How long have you been living in this area?	For four generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	It is difficult to suggest the form of compensation now.
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	No
Would you support and participate during the implementation of project?	No support
Any suggestion/opinion, etc.	Adequate compensation for loss of land.

List of participants = Total 6 (Male-6 and Female-0)

S.No.	Name	Age	Sex	Education	Occupation
1	Santhanaperumal	51	Male	10 th	Milk Supplier
2	Mariappan	40	Male	Illiterate	Milk Supplier
3	Mahendran	29	Male	10 th	Driver
4	Subbiah	47	Male	Illiterate	Labourer
5	Samuthirakani	55	Male	10 th	Farmer
6	Moorthi	32	Male	10 th	Tea shopkeeper

Consultation 03	
Village	Lakshmiapuram
Tehsil/Mandal	Ottapidaram
District	Tuticorin
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural

Have you heard about the project or Do you have any information about the project?	No awareness about the project
What is your opinion about this project?	It will prevent us from cultivating crops.
Do you support this project?	No support
How do you think the project will affect you?	It will have an effect in terms of land loss, crop loss, and productivity.
Do you face any problem regarding current electricity supply?	No issues
Do you think that the project is necessary?	It is not necessary
What are your main concerns/issues about the project?	Land value depreciation and the difficulty in selling the land are issues.
Can you suggest how to best address your concerns/issues?	It is essential to provide contact information for the project.
Specifically, what concerns/issues do you have on the implementation of the project?	There should be prior information about the project.
What positive impacts and/or benefits do you think the project will have?	No positive impacts envisaged.
What negative impacts do you think the project will have?	Issues regarding land loss and land value depreciation
How safe do you think or consider the electric transmission line?	No safety
Any criteria you would like to be considered for project design, construction and operation stage?	No
How long have you been living in this area?	For four generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	Nil
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Adequate cash compensation at market rate.
Is the consultation useful?	Yes. It is useful.
Do you think that the local people would like to get regular information regarding the project?	No
Would you support and participate during the implementation of project?	Conditional support
Any suggestion/opinion, etc.	Nil

List of participants = Total 5 (Male-5 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Chellamuthu	70	Male	Illiterate	Labourer
2	Poolchami	67	Male	5 th	Labourer
3	Ganesan	52	Male	5 th	Farmer
4	Karuppasamy	54	Male	Illiterate	Labourer
5	Sanmugam	61	Male	2 nd	Farmer

PHOTOGRAPHS OF PUBLIC CONSULTATIONS



Consultation at Kattunayakanpatti



Consultation at Konoor



Consultation at Ramakaundapatti



Consultation at Sadayapalayam



Consultation at Parapalayam Consultation at Kurumbur



Consultation at Vannimanagaram Consultation at Kallamoli



Consultation at Laksh mipuram Consultation at Sillanatham



Consultation at Perianatham



Consultation at Kamanayakanpatti



Consultation at Kakkarampatti



Consultation at Keezhameenatchipuram

ANNEXURE 5: GOVERNMENT OF TAMIL NADU G.O. (MS) NO. 86 (REVISED GUIDELINES FOR PAYMENT OF COMPENSATION)


ABSTRACT

Energy Department – Revised guidelines for payment of compensation towards damages in regard to RoW for transmission lines 110 KV and 230 KV lines and above orders – Issued.

ENERGY (A1) DEPARTMENT

G.O. (Ms)No.86 Dated: 30.10.2019
திருவள்ளூர் ஆண்டு 2050
விவரம், ஐப்பசி 13

Read:-

1. Government of India, Ministry of Power, Guidelines for payment of compensation towards damages in regard to Right of way for transmission lines, dated 15.10.2015
2. G.O. (Ms) No. 63, Energy (A1) Department dated 22.11.2017
3. Letter (Ms) No. 41/A1/2018, Energy (A1) Department dated 16.05.2018
4. Letter.No.3755/A1/2018,Energy(A1)Department dated:22.10.2018.
5. From Director Transmission Projects, TANTRANSCO, Chennai Letter No. CE/ C/ TR/ SE/ C1/ TR/ EE2/ AEE/ F.RoW/ D,1146/19, dated 03.09.2019.

ORDER:

In the G.O. second read above, Government have ordered guidelines for payment of compensation towards damages in regard to Right of way for transmission lines covering 110kv & 230kv lines and above as below, subject to the condition that it will be applicable only to new projects with prospective effect:-

- a) Compensation @ 85% of land value as determined by District Magistrate or any other authority based on Circle rate/ Guideline value/ Stamp Act rates for tower base area (between four legs).
- b) Compensation towards diminution of land value in the width of Right of Way (RoW) Corridor due to laying of transmission line, subject to a maximum of 15% of land value as determined based on Circle rate/ Guideline value/ Stamp Act

2. In the reference third read above, Government have issued orders stating that only in the case of acquiring Right of Way for transmission lines through private negotiation, which will avoid unnecessary litigation for enhanced compensation, as in the case of land acquisition, the negotiated value of land may be determined as per the Revenue and Disaster Management Department G.O (Ms) No. 281, dated 07.09.2017, which can then be adopted as the basis of compensation for such Right of Way.

3. In the reference 5th read above, the Director, Transmission, TANTRANSCO has stated that a high level meeting was conducted to discuss the enhancement of RoW land compensation and fixation of compensation rate for coconut trees.

4. Consequent on decision taken in the meeting, the Government issue the following orders:-

- i) For tower base area the existing provision of 85% shall be enhanced to 100% of assessed land value as per above procedure.
- ii) For diminution of land value for stringing corridor area (RoW) the existing provision of 15% shall be enhanced to 20% of assessed land value as per above procedure.
- iii) Rs. 50,000/- is fixed as minimum payable amount for tower base area for first 3 cents, if the assessed land value is less than Rs. 50,000/-.
- iv) Rs. 10,000/- may be fixed for every additional one cent or part thereof, if the tower base area exceeds 3 cents and this would be added to the minimum payable amount for tower base area.
- v) If the 100% assessed value for tower base area is more than the amount calculated as per point (iii) and (iv) above, the assessed value may be fixed as illustrated below:-

Sl. No.	Description	Compensation Amount payable
01	Tower base area up to and including 3 cents.	a. If the assessed value is less than or equal to Rs. 16,667/- per cent, the total compensation amount payable is <u>Rs.50,000/-</u> b. If the assessed value is more than Rs. 16,667/- per cent, the total compensation amount payable is <u>the assessed value per cent multiplied by 3 (Three)</u>
02.	Tower base area beyond 3 cents and part thereof.	a. If the assessed value is less than or equal to Rs. 10,000/- per cent, the total compensation amount payable is <u>Rs.50,000/- for 3 cents + Rs.10,000/- per additional cent or part thereof.</u>

		<p>b. If the assessed value is from Rs.10,001/- up to and including Rs. 16,667/- per cent, the total compensation amount payable is Rs. 50,000/- for 3 cents + the assessed value per cent multiplied by additional cents or part thereof.</p> <p>c. If the assessed value is more than Rs.16,667/- per cent, the total compensation amount payable is assessed value per cent multiplied by total cents or part thereof.</p>
<p>Note: If the ownership of land belongs to more than a person, the total compensation shall be paid based on the proportionate land holding.</p>		

Fixation of compensation rate for Coconut trees

The compensation value for yielding coconut trees may be fixed not more than Rs. 36,450/- per tree.

5. This order issues with the concurrence of Finance Department vide its U.O. No. 53907/PW.II/2019 dated.25.10.2019

(BY ORDER OF THE GOVERNOR)

DHEERAJ KUMAR
PRINCIPAL SECRETARY TO GOVERNMENT (FAC)

To,
 The Chairman,
 Tamilnadu Transmission Corporation Limited, Chennai - 2
 The Chairman cum Managing Director,
 Tamilnadu Generation and Distribution Corporation Limited, Chennai -2
 All District Collectors

Copy to:
 Joint Secretary (Trans) Ministry of Power, Government of India, New Delhi.
 The Chairman and Managing Director, Power Grid Corporation, New Delhi.
 The Senior PA to Hon'ble Chief Minister, Chennai -9.
 The Senior PA to Hon'ble Deputy Chief Minister, Chennai -9.
 The Senior PA to Hon'ble Minister for (Electricity, Prohibition and Excise)
 Chennai -9.
 The Principal Private Secretary to Government, Energy Department, Chennai -9.
 Municipal Administration & Water Supply / Rural Development & Panchayat Raj /
 Finance / Revenue & Disaster Management / Agriculture Department Chennai-9.
 SF/SC.

**ANNEXURE 6: SOCIAL ASSESSMENT REPORTS OF THREE TRANSMISSION
LINES**

**Social Assessment Study for 400kV DC Transmission line from
Virudhunagar 765kV SS to Kayathar 400kV SS in Tamil Nadu**

April 2021

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List of Annexure

- Annexure 1: Details of villages considered for the socio-economic assessment of the sub-project area from secondary data
 - Annexure 2: Details on public consultations
 - Annexure 3: Details of Gender Consultations
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List of acronyms and abbreviations

ACSR	Aluminium conductors steel reinforced
ADB	Asian Development Bank
AP	Angle Point
BPL	Below Poverty Line
EA	Executive Agency
FGD	Focus Group Discussion
GIS	Geographic Information System
HT	High Tension
IA	Implementing Agency
INR	Indian Rupee
ITI	Industrial Training Institute
km	Kilometer
kV	Kilovolt
LPG	Liquefied Petroleum Gas
m	Meter
MEIL	Megha Engineering and Infrastructures Limited
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MoP	Ministry of Power
NA	Not Available
NGO	Non-governmental organizations
OBC	Other Backward Class
PHC	Primary Health Centre
RoW	Right of Way
SC	Scheduled Caste
SH	State Highways
SPS	Safeguard Policy Statement
SS	Sub station
ST	Scheduled Tribe
TANGEDCO	Tamil Nadu Generation and Distribution Corporation Limited
TANTRANSCO	Tamil Nadu Transmission Corporation Limited
TP	Town Panchayat
TRTA	Transaction Technical Assistance

EXECUTIVE SUMMARY

This report captures the socio-economic assessment of the sub-project for erection of 400 kV Double Circuit (DC) line on DC tower with quad moose conductor from the Virudhunagar 765/400kV substation to existing Kayathar 400/230/110kV substation. It is a sub-project under the construction of various transmission line assets in the State of Tamil Nadu to improve power supply to industrial demand centres in Chennai-Kanyakumari Industrial Corridor. This sub-project falls in two southern districts of Tamil Nadu namely Virudhunagar and Thoothukkudi. The length of the sub-project area stretches 70.2 km with a Right of Way (RoW) of 46 meters as per the guidelines of Ministry of Environment, Forest & Climate Change.

Socio-economic assessment of the community living in the sub-project area has been carried out using both primary and secondary data sources. Primary survey involves sample household survey for which data was collected from 120 households in the sub-project area. In addition to household surveys, informal public consultations were carried out in 18 village locations to understand the views and opinions of the community regarding the sub-project and any implementation concerns for further improvement. Gender consultations were held at five places to capture the views and opinions of the women.

Secondary data have been compiled from census of India reports and government department websites to describe the district profiles on relevant indicators. Socio-economic findings based on the household survey were presented in this report in a detailed manner. The report also presented major crossing details, type of land and trees to be affected due to tower construction and stringing.

The findings of the public consultations show that most of the villagers are aware about the project. According to the community's views in the sub-project region, their key concern is the crop loss/productivity loss while implementing the project. In addition, because of the tower and transmission line along the RoW, the community also expects the depreciation of land value.

During the consultation it was explained that in addition to providing compensation for the loss of standing crops and trees, the project provides 100 percent of the land value compensation under the tower foundation and compensation of 20 percent of the land value under the RoW. As such there is no land acquisition involved in the sub-project and the project provides compensation for land restriction under the tower foundation. TANTRANSCO through the contractor will ensure that loss of crops on farmland can be minimal by undertaking the construction for tower foundation, erection and stringing in the lean cycle or post-harvest season.

1. DESCRIPTION OF THE PROJECT

The proposed project work includes the erection of 400 kV double Circuit (DC) line on DC tower with quad moose conductor from the Virudhunagar 765/400 kV substation to existing Kayathar 400/230/110kV substation. Tamil Nadu Transmission Corporation Limited (TANTRANSCO) is the executing agency (EA) and the implementing agency (IA).

The project's impact is aligned to enhance the industrial development and renewable energy generation in Tamil Nadu. The project's outcome is to improve power supply to industrial demand centres in Chennai-Kanyakumari Industrial Corridor. The proposed project will improve operational efficiency and quality of power, reliability of the system and at the same time will reduce losses due to interconnection with TNEB network and hence virtual up-gradation to higher voltage level and better voltage profile. Evacuation of power to both the local areas and regions outside the state will boost overall economic development of the state due to extra revenues generated by power sold outside the state because of availability of additional power evacuation infrastructure.

The project does not require any private land acquisition for construction of transmission lines under the proposed ADB financing components. The impacts are categorized in to two types, impacts due to tower base and impacts due to line along the RoW. The impacts are foreseen in terms of restriction of land use for tower footings but not necessarily complete loss of land under the towers. The land under towers can be continuously used for crop cultivation. Temporary impacts are foreseen in terms of loss of crops along the RoW during the construction of transmission lines and will not lead to any land use restriction. The route map for this sub-project is shown in Figure 1.1. The proposed alignment route is finalized by considering the following aspects:

1. No. of Angle points shall be kept in minimum
2. Route should have minimum number of power line crossings (Aerial obstacles).
3. Route should have free from settlements
4. Route should have free from special cost zones
5. Route should be as nearest possible to the "Bee" line.
6. Route should be away from restricted area, such as Civil and Military airfield, air craft landing approaches
7. Route should avoid forest, stone quarry, villages, buildings etc.

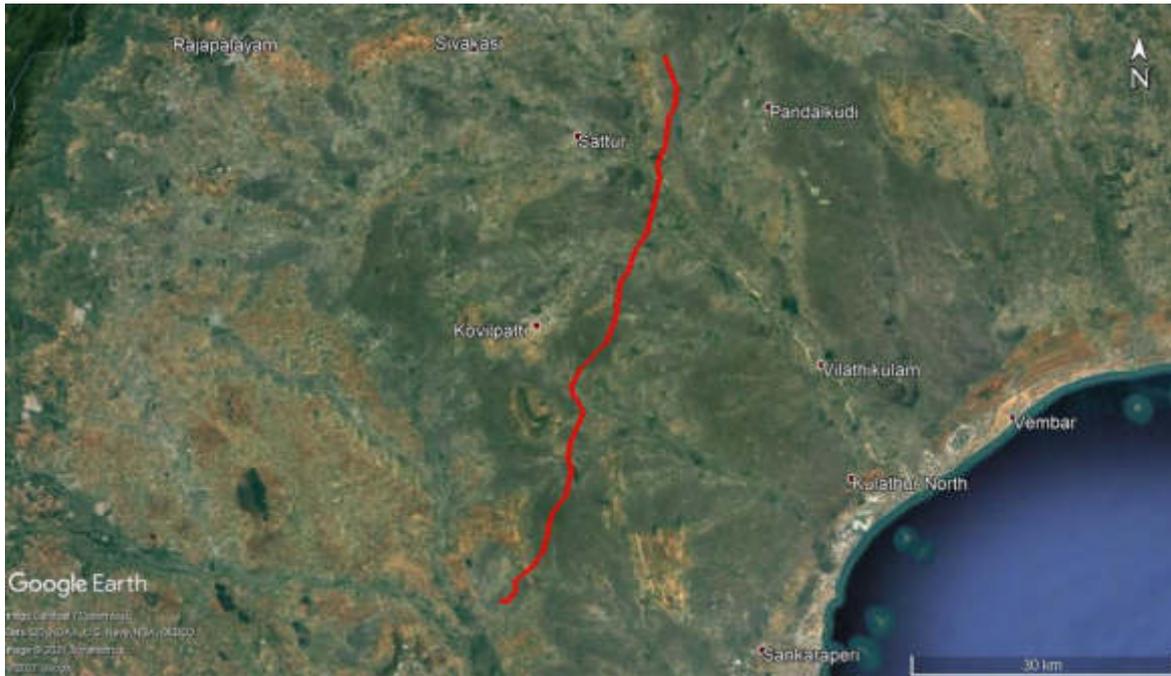


Figure 1.1: Proposed Project Alignment from Virudhunagar SS (North) to Kayathar SS (South)

The salient features of the proposed transmission line from Virudhunagar to Kayathar along with the study area profile are listed in Table 1.1. The actual route length of the proposed line is 70.2km with a 46m wide Right of Way (RoW). This sub-project encompasses two Tamil Nadu districts, Virudhunagar and Thoothukkudi, respectively. The tower base and the RoW pass through 30 villages, among which six villages (20%) in the district of Virudhunagar and 24 villages (80%) in the district of Thoothukkudi. The village details are presented in Table 1.2.

Table 1.1: Details of proposed Transmission Line

S.No.	Details	Description
1	Total length of the line	70.2km
2	Total number of proposed towers	Total towers – 201nos. Angle tower – 73nos. Normal towers – 128nos.
3	Major river crossing	2nos. (Vaippar river between Angle Points 12 & 13; Uppar river between Angle Points 17 & 18)
4	Road crossings (including major & minor roads)	29nos. (Between Angle Points: 1-2; 3-4; 4-5; 9-10; 10-11; 12-13; 13-14; 14-15; 17-18; 25-26; 27-28; 28-29; 29-30; 33-34; 35-36; 36-37; 39-40; 40-41; 41-42; 44-45; 50-51; 54-55; 56-57; 63-64; 71-72)
5	Railway crossings	1no. (Kovilpatti Junction to Kadambur Station between Angle Points 52 & 53)
6	High tension (HT) line crossings	62nos. (11kV line crossing – 14nos., 33kv line crossing – 35nos., 110kV line crossing – 02nos., 230kV line crossing – 05nos., 400kV line crossing – 05nos., 765kV line crossing – 01nos.)

S.No.	Details	Description
7	Districts covered by proposed transmission line	Two Districts (Virudhunagar and Thoothukkudi)
8	Number of revenue villages in the study area	30

*Source: Field Data

Table 1.2: List of villages covering the line area (RoW & 1km buffer area)

S. No.	Name of the villages ¹²	Taluk as per Census 2011	District
1	Mallanayakkanpatti	Sattur	Virudhunagar
2	Irukkankudi		
3	Kalingumettupatti		
4	Nenmeni		
5	Ayyampatti		
6	Uppatur		
7	Kottur	Ettayapuram	Thoothukkudi
8	Pikkilipatti		
9	Urulaikudi		
10	Varadampatti		
11	Kadalaiyur		
12	Tippanuttu		
13	Usilampatti	Kovilpatti	
14	Chennayampatti		
15	Sivandipatti		
16	Kodukkamparai		
17	Duraiyur		
18	Theethanpatti		
19	Koppampatti		
20	Pommuswamipuram		
21	Puthupatti		
22	Elanthapatti		
23	TherkuVandanam		
24	Chokkalingapuram		
25	Malaipatti		
26	Iravanpatti		
27	Thennampatti		
28	Kottali		
29	Parivillikottai		
30	Govindapuram		

¹²The villages having settlements within 1km buffer area have been considered

Among the total towers (angle point and normal towers), majority of the towers (87%) are coming under private crop lands whereas about 8% of the towers are lying in private barren lands and remaining towers (5%) on government lands (Table 1.3). Private crop lands are being cultivated for different food crops such as maize, Black gram, green gram, sorghum, sunflower, pearl millet, and sesame, plantations such as cotton, casuarina, palmyrah, banana, coconut, papaya, and eucalyptus and other crops such as castor and sesbania.

Table 1.3: Tower Details on Land

S. No.	Name of the Transmission Line	Length (km)	Total number of angle point towers and normal towers	Tower to be place on Government land*	Tower to be place on private waste land*	Tower to be placed on private crop land*
1	400 kV DC line on DC tower with ACSR Quad Moose conductor from Virudhunagar to Kayathar	70.2	201	10 (4.98%)	16 (7.96%)	175 (87.06%)

*Source: Field Data.

The total number of trees to be felled or cut is observed as 208, where fruit trees are comparatively less (43%) than the non-fruit trees (57%), (Table 1.4). Fruit trees primarily include coconut, palm guava, lemon and papaya while neem, babul (*Acacia nilotica*), eucalyptus and casuarina are mainly covered by non-fruit trees. Details of the trees to be affected in the sub-project are present in Annexure 1.

Table 1.4: Number of trees to be affected

S.No.	Name of the Transmission Line	Number of fruit trees	Number of non-fruit trees	Total trees affected
1	Erection of 400 kV DC line on DC tower with ACSR Quad Moose conductor from Virudhunagar 765/400 kV SS to Kayathar 400/230/110 kV SS	90	118	208

2. STUDY METHODOLOGY

The broad methodology adopted to undertake the socio-economic assessment is as follows:

- Collection of primary socio-economic data through a sample socio-economic household survey
- Carrying out informal public consultations at selected locations along the transmission lines
- Undertaking gender consultations at selected locations along the transmission lines
- Inventory surveys along transmission lines to assess the temporary impacts on loss of crops and loss of trees etc.

In the sub-project, socio-economic assessment was conducted using both primary and secondary sources. Prior to the assessment, a buffer zone of 1 km on either side of the route alignment in the sub-project area was drawn up using GIS tools (Figure 2.1) and rural villages falling within the buffer zone were considered for the socioeconomic assessment. Sample socio-economic household survey were held across the 30 villages that comes along 1 km of both side of the line corridor (Table 2.1). List of these villages are presented in Annexure 2.

During the month of January 2021, primary household surveys using structured survey questionnaire were carried out in the sub-project area. This assessment concerns households residing within the buffer zone, but the households covered by the surveys are not necessarily affected by the sub-project. During the study period, 120 household samples were covered in the above said study area. In addition to the household survey, public consultations and gender consultations were conducted in some villages.

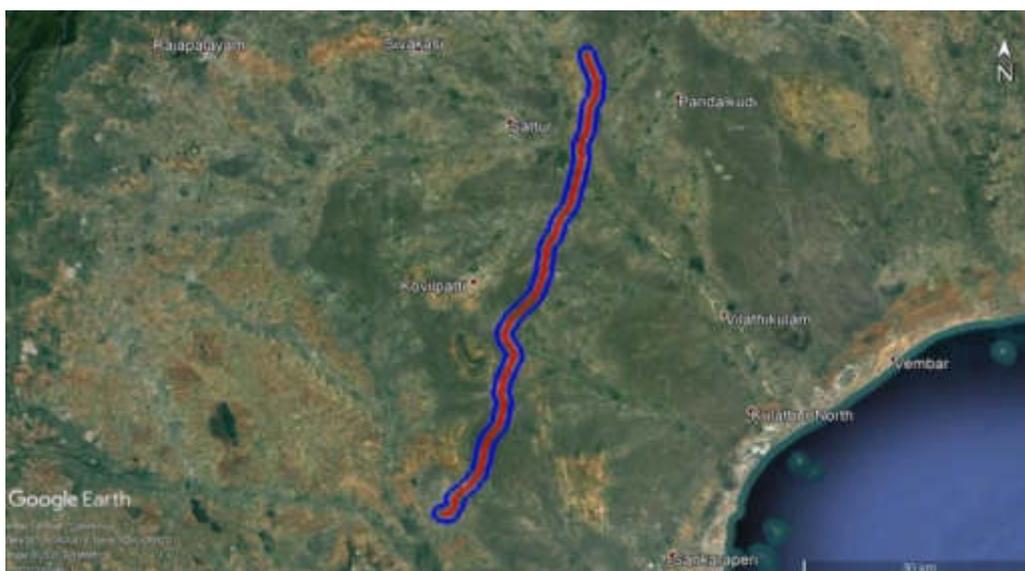


Figure 2.1: Map showing the 1km buffer area (blue line) on either side of proposed alignment

Table 2.1: Villages considered for the socio-economic assessment in the sub-project area

Name of the districts	No. of taluks covered	Name of the taluks	No. of villages (rural areas)
Virudhunagar	1	Sattur	6
Thoothukkudi	3	Ettayapuram	7
		Kovilpatti	11
		Ottapidaram	6
Total	4		30

3. SOCIO-ECONOMIC PROFILE

3.1. General

The respondents in the socio-economic household survey are mainly males (96 HHs, 80%) than the females (24 HHs, 20%). Average age of the respondents is 42 years (range: 24-59 years) in which average age of male respondents are 41 years (range: 24-55 years) and average age of female respondents are 47 years (range: 37-59 years).

3.2. District Profile

The secondary data sources include the most recent documents from the State Planning Commission and Directorate of Census Operations, Tamil Nadu, Agricultural Census during 2015-2016 period and Statistical Hand Book 2019 of Department of Economics and Statistics, Government of Tamil Nadu. The project covers two southern districts of Tamil Nadu viz, Virudhunagar and Thoothukkudi.

In terms of population among the districts, the district of Virudhunagar ranked 17th, while the coastal district of Thoothukkudi ranked 20th. The population density in the districts of Virudhunagar and Thoothukkudi is 458 people/km² and 369 people/km² respectively. Compared to the state population density (555 people/km²), both these districts have lower population densities. The sex ratio of both districts (Virudhunagar with 1007 and Thoothukkudi with 1023) is higher than that of the State sex ratio (i.e., 996). In both districts, approximately half the total population lives in urban areas (Virudhunagar: 50.47%, Thoothukkudi: 50.10%).

In both districts, agriculture is the primary occupation. About 70% of the people in the Thoothukkudi district depend on agriculture, while 52% of the population in the Virudhunagar district depend on it. The main crops cultivated in the Virudhunagar district are paddy, maize, groundnut, chilly, sorghum, green gram, black gram etc. The main crops in the Thoothukkudi district are paddy, sorghum, pearl millet, maize, finger millet, green gram, black gram, chilli, sugarcane, onion, gingelly and groundnut. The plantation crops like palmyrah and coconut are also cultivated in this district. Table 3.1: presents data on selected indicators for the both districts and for the Tamil Nadu State.

Table 3.1: Profile of project affected districts and Tamil Nadu¹³

Indicator/ Parameter	Thoothukkudi District	Virudhunagar District	Tamil Nadu State
Total population	1,750,176	1,942,288	72,147,030
% of rural population	49.90	49.53	51.60
% of urban population	50.10	50.47	48.4
% of SC population	19.88	20.59	20.01
% of ST population	0.28	0.12	1.10
Sex ratio	1023	1007	996
Literacy rate (%)	86.16	80.15	80.09
Male literacy rate (%)	91.14	87.71	86.77
Female literacy rate (%)	81.33	72.69	73.44
Life expectancy at birth (Male)	68.60	Data not available	71.80
Life expectancy at birth (Female)	71.80	Data not available	75.20
Infant Mortality Rate (2013-14)	12.50	13.00	22.00
Maternal Mortality Rate	105.80	125.09	66.00
% of Households covered with drinking water supply	54.14	6.92	34.90
% of Households with toilet facilities (2014)	56.67	62.44	48.29 ¹⁴
Per capita income during 2011- 12 at constant prices (In INR)	74,933	87,361	63,996
% of BPL households (2013-14)	18.33	42.48	12.00
Worker participation rate (%)	42.70	48.90	45.60
Worker participation rate (%) (Male)	58.23	59.80	59.30
Worker participation rate (%) (Female)	27.61	38.10	31.80
Total workers (Main and marginal)	748,095	950,158	32,884,681
% of cultivator	6.49	6.02	5.89

¹³Source: Census of India, 2011; State Planning Commission, Tamil Nadu (for the year 2017); Agricultural Census 2015-16; World Bank Group, 2017 (<http://documents1.worldbank.org/curated/en/380971504177733539/pdf/119267-BRI-P157572-Tamil-Nadu-Poverty.pdf>); Statistical Hand Book 2019, Department of Economics and Statistics, Government of Tamil Nadu (<https://www.tn.gov.in/deptst/stat.htm>).

¹⁴The data is for the year 2011

Indicator/ Parameter	Thoothukkudi District	Virudhunagar District	Tamil Nadu State
% of agriculture labourers	26.82	21.96	13.32
% workers in household industry	3.06	3.71	1.89
% of other workers	63.64	68.3	24.48
Net cultivated area (in hectares)	226,991	163,826	5,795,115
Average size of agriculture land holdings (In hectares)	1.32	0.94	0.75
Total forest area (in hectares)	14,567	23,276	2,156,574 ¹⁵
Electricity generation from thermal (in million unit)	5547.59	Nil	22868.44
Electricity generation from wind mill (in million unit)	329.41	Nil	12671.02
Number of working factories (Registered)	1036	3420	30002
Number of small-scale industries	1346	2776	Data not available
Number of medium & large industries	16	40	Data not available

3.3. Results of socio-economic findings

3.3.1. Demography

The results of the sample household survey (120 sample households) indicate that the average size of the household is 4.27. A high percentage of households (73.3%) stay in nuclear families. This is one of the main reasons for a small household size in the sub-project area. The sex ratio of the sub-project area is 1,000 males:1008 females. All the surveyed households recorded residing in rural settlements. Details of demographic characteristics are given in Table 3.2.

Table 3.2: Demographic Feature

S. No.	Particulars	Sub-project area
1	Total Household	120
2	Sex Ratio	1008
3	Average Household Size	4.27
4	% of households reside in rural area	100%

**Source: Field data*

The results of the survey indicate that the majority (60%) of households belong to the Other Backward Class (OBC) with respect to social class. One third of households (33.3%) belong to the group of scheduled caste (SC). There are no households belonging to scheduled tribes (ST) in the

¹⁵The data is for the year 2017-2018

sub-project area, as per the results of the survey. Details of social group distribution among households are given in Table 3.3.

Table 3.3: Households by Social Group

S. No.	Particulars	No. of households	%
1	General	8	6.7
2	Scheduled Caste (SC)	40	33.3
3	Other Backward Class (OBC)	72	60.0
4	Scheduled Tribe (ST)	0	0
Total		120	100

**Source: Field data*

3.3.2. Literacy and education

The female literacy rate (88.9%) among the households surveyed in the sub-project region is marginally higher than the male literacy rate (86.2%). The disparity in the sub-project region is much smaller (2.7%) compared to the difference between the male and female literacy rates in Tamil Nadu (13.4%). Details of literacy status are given in Table 3.4.

Table 3.4: Literacy Status

S. No.	Particulars	Sub project area	Tamil Nadu (Census 2011)
1	Overall literacy rate (%)	89.1	80.1
2	Male literacy rate (%)	86.2	86.8
3	Female literacy rate (%)	88.9	73.4

**Source: Field data*

As per the household survey in the sub-project region, the levels of educational attainment across genders vary. As shown in Table 3.5, differences were observed between the male and female education attainment levels. The data show that among women, the proportion of people who completed secondary education is higher than males. Nevertheless, attainment of college level education is greater in men than in women. This suggests that males pursue their education past the secondary education level. Literates without formal education are higher among women (18.5%) than men (8.1%).

Table 3.5: Gender Desegregated Education Achievement

S. No.	Education level	Male		Female		Total	
		Nos.	%	Nos.	%	Nos.	%
1	Primary	40	13.5	24	11.1	64	12.5
2	Middle	72	24.3	16	7.4	88	17.2
3	Secondary	64	21.6	80	37.0	144	28.1

S. No.	Education level	Male		Female		Total	
		Nos.	%	Nos.	%	Nos.	%
4	Graduate/Post graduate	48	16.2	24	11.1	72	14.1
5	Diploma/ITI	16	5.4	8	3.7	24	4.7
6	Literate but no formal education	24	8.1	40	18.5	64	12.5
7	Illiterate	32	10.8	24	11.1	56	10.9
Total		296	100.0	216	100.0	512	100.0

*Source: Field data

3.3.3. Vulnerability

The household survey in the sub-project area captured vulnerabilities of household on selective parameters. The project defines vulnerable households as households headed by women, scheduled tribe/indigenous people household, households with physically challenged persons, and below the poverty line (BPL) households. Among the households surveyed, there are only two forms of vulnerability that are shown in the Table 3.6. BPL households account for about 33.33% of households. About 6.6% of households have physically challenged persons.

Table 3.6: Vulnerability feature of households

S. No.	Particulars	No. of households	%
1	Households having physically challenged persons	8	6.67
2	Below Poverty Line households	40	33.33
Total number of households		120	

*Source: Field data.

3.3.4. Access to basic amenities

Piped water sources are the primary source of drinking water for a very large proportion of households (80%). The supply of piped water is linked to the public stands located within the village. A few households (13.3%) have tap water connection inside the house and use hand pump/bore well water (6.67%) for drinking water purposes. Details of main source of drinking water are given in Table 3.7.

Table 3.7: Main Source of Drinking Water

S. No.	Main Source of Drinking Water	No. of households	%
1	Tap in the house	16	13.33
2	Common tap	96	80.00
3	Hand pump/ bore well	8	6.67
Total		120	100.0

*Source: Field data

The members of the household collect drinking water from public stands. The results of the

survey indicate that the average distance from the main drinking water source is 170m. It was also noticed that, the average time is approximately 12minutes to go, collect the drinking water from the nearby sources and come back. Details of proximity to drinking water sources are given in Table 3.8.

Table 3.8: Distance & time taken for drinking water collection

S. No.	Particulars	Distance/Duration
1	Average distance from main source of drinking water in meter	170
2	Average time taken to go, collect water & come back in minutes	12

**Source: Field data*

In India, it is prevalent that drinking water collection is predominantly the responsibility of women. However, the data gathered during the household survey shows that both men and women in the family are involved in the collection of drinking water in the majority (73%) of households. Only female members collect the drinking water in one-fifth of households (20%). Details of gender-wise drinking water collection are given in Table 3.9.

Table 3.9: Involvement in drinking water collection

S. No.	Particulars	% of households
1	Households where only men collects drinking water	6.67
2	Households where only women collects drinking water	20.00
3	Households where both men & women collects water	73.33
Total		100.0

**Source: Field data*

Toilet access is critical for enhancing people's sanitation and health outcomes. The finding indicates that most (73.4%) of households have toilet facilities. Approximately 13.3% of households reported using community toilets in the sub-project area, while comparable proportions of households do not have toilet facilities. Details of sanitation facilities are given in Table 3.10.

Table 3.10: Type of Sanitation Facilities

S. No	Type of Toilet	No. of households	%
1	Pour flush	88	73.4
2	Community toilet	16	13.3
3	No Toilet	16	13.3
Total Households		120	100

**Source: Field data*

In the sub-project area, the majority of households surveyed indicated that they have access to

basic facilities such as schools, public transport (bus), community halls, common service centres, etc. Approximately 87% of households reported that public buses were available for transport, while the rest had to rely on local vehicles or arrangements of their own. Few households (33.3%) have opined that they have access to ambulance facilities for institutional delivery. Most of the households reported that they have anganwadies and primary school facilities. About 60% households reported that they have secondary school, and 46.7% households have reported the presence of public health facilities within or near to the village. Details of basic amenities availability reported by households are given in Table 3.11.

Table 3.11: Availability of basic amenities

S. No.	Particulars	No. of households	%
1	Public transport (Bus)	104	86.7
2	Ambulance facilities	40	33.3
3	Local market for sell or purchase	38	31.7
4	Anganwadi/Play school	104	86.7
5	Primary school in/near the village	104	86.7
6	Secondary school in/near the village	72	60.0
7	Sub-centre/ primary health centre in/near the village	56	46.7
8	Hospital	24	20.0
9	Village knowledge centre/Common service centre	64	53.3
10	Community hall	80	66.7
11	Youth club/ Social club/ Environment club	8	6.7
Total households		120	100.0

**Source: Field data*

3.3.5. Major Economic Activities

The average land holding size is 1.32 hectare in the project area. Agriculture is the most important economic activity for households, with 60% of the households surveyed engaging in it (Figure 3.2). Other important economic activities are service in private sector (26.7%), other self-employed activities (26.7%), wage labour in agriculture (20.0%) and trade or business (20.0%). In activities such as non-agricultural wage labour, livestock rearing, private sector service and other self-employed activities, male members are more involved.

Other self-employed activities involve cooking masters, operators, contractors and mechanic. Activities, such as agriculture and trade or business, are carried out where both men and women make equal contributions. About 50.0% of women were engaged in the jobs in government service sector and about 33.3% in trade or business. It is important to note here that, in addition to their role in carrying out the household chores, women members often take part in some of the important economic activities. Details regarding gender-based role in major economic

activities are given in Table 3.12.

Table 3.12: Major economic activities of households

S. No.	Particulars	% of Households	Involvement by %		
			% men	% women	% both
1	Agriculture/cultivation	60.0	33.3	0.0	66.7
2	Wage labour (Agriculture)	20.0	0.0	100.0	0.0
3	Wage labour (Non-agriculture)	13.3	100.0	0.0	0.0
4	Livestock	6.7	100.0	0.0	0.0
5	Service in Govt sector	13.3	50.0	50.0	0.0
6	Service in private sector	26.7	75.0	25.0	0.0
7	Trade or business	20.0	33.3	33.3	33.3
8	Other self-employed activity	26.7	75.0	0.0	25.0

**Source: Field data*

3.3.6. Cropping pattern

Black gram and maize with 53.3% households (each) cultivating it is the main crop cultivated or produced in the sub-project area. Cotton (33.3%), chilli (13.5%), green gram (13.3%) and pearl millet (13.3%) are other crops grown. Details of the cropping pattern observed from household surveys are given in Table 3.13. In public consultations, villagers recorded that black gram, green gram, maize, turmeric, yam, pearl millet, cotton, banana, sorghum, paddy, sesbania, curry leaves, pepper, drumstick, cucumber, coriander, coconut, lemon, guava and chilli are the crops being cultivated in the sub-project area.

Table 3.13: Major Cropping Pattern

S. No.	Type of Crops	No. of Households	%
1	Black gram (Dal)	64	53.3
2	Chilli	16	13.3
3	Cotton	40	33.3
4	Cucumber	8	6.7
5	Green gram	16	13.3
6	Maize	64	53.3
7	Pearl millet	16	13.3
8	Sunflower	8	6.7
Total Households		120	

**Source: Field data*

3.3.7. Average yield of major crops

The average yield per household is highest for maize among the main crops (25.13 quintal). This is accompanied by pearl millet and sunflower, both of which have a household average production of 25 quintals. Green gram with an average output of 2.0 quintals per household and

black gram with an average production of 3.6 quintals per household are the lowest yield crops. As a greater number of households cultivate it and average yield is higher, the overall earning is highest from maize. Many households also grow green gram, but the overall earnings are lowest due to lower average yield. Details of the crop yield and their earnings to the households are given in Table 3.14.

Table 3.14: Average Yield of Major Crops

S. No.	Type of Crop	Number of Households	%	Total Yield (Quintal)	Average Yield (Quintal)	Total Cost in INR.
1	Black gram (Dal)	64	53.3	232	3.63	6,80,816
2	Chilli	16	13.3	96	6.00	8,16,000
3	Cotton	40	33.3	240	6.00	8,35,200
4	Cucumber	8	6.7	80	10.00	2,40,000
5	Green gram	16	13.3	32	2.00	1,28,000
6	Maize	64	53.3	1608	25.13	23,36,800
7	Pearl millet	16	13.3	400	25.00	4,88,000
8	Sunflower	8	6.7	200	25.00	6,60,000
Total Households		120			-	

**Source: Field data*

3.3.8. Average annual income

The average annual income per household is found as about INR.2,50,000. The economy of the sub-project area is primarily dependent on agriculture (60%) followed by private service/job (26.7%), and other self-employed activities (26.7%). In terms of the amount of average annual income, other self-employed activities have the highest average (INR.1,95,625) followed by trade or business (INR.1,52,000) and service/jobs in government sector (INR.1,38,000). Details of average annual income are given in Table 3.15.

Table 3.15: Average Annual Income

S. No.	Source of Income	No. of households	% of households	Avg. Annual Income in INR.
1	Agriculture	72	60	1,09,222
2	Wage labour (Agriculture)	24	20	18,667
3	Wage labour (non-agriculture)	16	13.3	93,000
4	Livestock	8	6.7	30,000
5	Service in Govt. sector	16	13.3	1,38,000
6	Service in private sector	32	26.7	1,08,250
7	Trade or business	24	20	1,52,000
8	Other self-employed activity	32	26.7	1,95,625

S. No.	Source of Income	No. of households	% of households	Avg. Annual Income in INR.
	Total households	120		

*Source: Field data

3.3.9. Average annual expenditure

The results show that the annual average household expenditure in the sub-project region is INR 1,12,156, of which the largest expenditure is incurred on agriculture (29.6%). This is followed by food spending (23.0%) and transportation expenditure (9.0%). Health and education account for 4.4% and 7.0%, respectively, of the average spending. Around 3.3% of total household spending is spent on gas. Details of average annual expenditure are given in Table 3.16.

Table 3.16: Average Annual Expenditure

S. No.	Type of expenditure	Average Annual Expenditure (INR.)	%
1	Food	25,760	23.0
2	Transportation/conveyance	10,047	9.0
3	Clothing	5,020	4.5
4	Health	4,933	4.4
5	Education	7,900	7.0
6	Interest payment on loans	1,790	1.6
7	Social functions/festival	3,000	2.7
8	Agriculture (such as seeds, hiring of farm implements etc.)	33,167	29.6
9	Minor consumer items (Soap, powder)	4,233	3.8
10	Electric Bill	2,087	1.9
11	House Maintenance	4,433	4.0
12	Animal Husbandry	3,173	2.8
13	Gas	3,700	3.3
14	Others	2,913	2.6
Grand total (1-14)		1,12,156	100.0

*Source: Field data

3.3.10. Possession of durable goods

The commonly possessed durable items among the surveyed households in the sub-project area are television (100.0%), mobile (93.3%), gas connection (93.3%) and motor cycle/scooter (80.0%) and bicycles (53.3%). Luxury items such as air conditioning (13.3%), washing machine (13.3%) and computer/laptop (33.3%) are available in few households.

Details on the use of durable goods by gender were also collected in the primary survey. The results show that both men and women in the family use products such as radio, cell phones,

television, air conditioner and refrigerator. Goods such as bicycles, tractors, generator pump and motorcycle/scooter are primarily used by male family members, while female family members mainly use LPG gas cylinders and washing machines. Details of the possession of durable items are given in Table 3.17.

Table 3.17: Possession of durable goods

S. No.	Particulars	% of Households	User by %		
			Men	Women	Both
1	Radio	6.7	0.0	0.0	100.0
2	Mobile	93.3	3.0	2.0	95.0
3	Bicycle	53.3	90.0	3.5	6.5
4	Tractor	20.0	100.0	0.0	0.0
5	Pump set with generator	20.0	90.0	0.0	10.0
6	Television	100.0	2.0	1.5	96.5
7	LPG Connection/ Gas Cylinder	93.3	1.0	98.0	1.0
8	Computer/laptop	33.3	45.0	15.0	40.0
9	Air conditioner	13.3	0.0	0.0	100.0
10	Refrigerator	46.7	0.0	0.0	100.0
11	Washing machine	13.3	0.2	78.8	21.0
12	Motor cycle/scooter	80.0	96.0	1.0	3.0
13	Car	0.0	0.0	0.0	0.0
14	Total Households		120		

**Source: Field data*

3.3.11. Household indebtedness

A considerable proportion (40%) of the households in the sub-project area has taken loans. During the consultation, it was discovered that individuals are not in the habit of taking loans unless and until there is an emergency. Banks and cooperative societies are the main sources of taking loan. Depending on the type of bank and intent of loans, the interest rate charged by the bank ranges from 5% to 9%, while cooperative societies charge 6% as loan interest. Details of loan amount taken are given in Table 3.18.

Table 3.18: Average Amount Taken from Different Sources and Interest Rate

S. No.	Source	Number of Households	Average Amount Taken (INR)	Interest Rate
1	Bank	24	3,66,000	5% to 9%
2	Cooperative society	24	4,20,000	6%

**Source: Field data*

3.3.12. Benefits from schemes

Gender disaggregated information about the coverage of development schemes and financial

inclusion was collected in the household survey. The result indicates that development schemes have benefited about 86.7% of households. Interestingly, about 84.6% of female family members are benefitted. During consultation, qualitative information shows that most women members have served under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme.

As far as financial inclusion is concerned, it has been recorded that most households (86.7%) have bank account. The majority (38.5%) of households have bank accounts for all family members, while the men and women of the family have separate accounts in 30.8% of households. Details of proportion of households benefitted under development schemes are given in Table 3.19.

Table 3.19: Coverage under development schemes

S. No.	Particulars	% of Households	Beneficiary by %					
			Men	Women	Both	Joint	All family members	
1	Households benefitted under development schemes	86.7	0.0	84.6	15.4	-	-	
2	Families having bank account	86.7	15.4	7.7	30.8	7.7	38.5	
3	Total Households	120						

**Source: Field data*

In the sub-project area, the survey collected information also on the social security programmes such as social or health insurance. The result reveals that 80% of households have social or health insurances. Among the households that have insurance policies, schemes predominantly protect men in about 50% of cases, while insurance schemes protects both men and women in 25.0% of cases. Details of insurance coverage are given in Table 3.20.

Table 3.20: Insurance status

S. No.	Particulars	% of households	Beneficiary by %		
			Men	Women	Both
1	Households having social/health insurance scheme	80.0	50.0	25.0	25.0
Total Households		120			

**Source: Field data*

3.3.13. Major illness

Approximately 14% of households in the sub-project area indicated that their family member had suffered a significant illness over the last year. Among the major diseases identified by households, 47.1% of households report non-communicable diseases such as asthma and ear

trouble. A further 5.8% of households have registered cancer. Details of illness reported by households are given in Table 3.21. As per the qualitative information gathered during the consultation some of the people in the area had COVID-19 during the last one year.

Table 3.21: Type of Illness

S. No.	Type of Disease/Illness	No. of Households	%
1	Asthma	8	47.1
2	Ear problem	8	47.1
3	Cancer	1	5.8
Total households reported illness		17	100.0

**Source: Field data*

3.3.14. Engagement of women in various economic activities

A significant proportion of households (40%) reported that women are engaged in agriculture where they spend most of their time. A few households reported that women are also engaged in agricultural labour (20.0%), services (20.0%) and petty trade or business such as running tea shop or petty shop (13.3%). It is noticed that women engaged in farming are also engaged in 100 days work under MGNREGA scheme. Since the contribution of time for MGNREGA work is lower in a year and farming becomes more of a focus for women, these women members are considered in the analysis as involved in cultivation activities. Details of economic activities involved by women are given in Table 3.22.

Table 3.22: Type of economic activities involved by women

S. No.	Activities	No. of Households	%
1	Agriculture/cultivation	48	40.0
2	Petty Trade & Business	16	13.3
3	Agricultural Labour	24	20.0
4	Services	24	20.0
Total Households		120	

**Source: Field data*

3.3.15. Women's voice in decision making

With regard to women's say in decision-making, most of the households surveyed (80%) in the sub-project region indicated that women are actively involved in decision-making on various aspects of family issues, such as children's health and education, financial matters, the purchase of assets and the family's daily activities. The same situation is also expressed in the FGDs, in which women have claimed that they are equally involved in their families' decisions on money, education, health, assets, family matters and social functions. They played an equal part in taking ownership of the purchased properties and assets as well.

Details of the women's role in decision making are given in Table 3.23.

Table 3.23: Women's say in decision making

S. No.	Issues	Number of Households	%
1	Financial matters	96	80.0
2	Education of child	96	80.0
3	Health care of child	96	80.0
4	Purchase of assets	96	80.0
5	Day to day activities	96	80.0
6	On social functions and marriages	96	80.0
Total households		120	

**Source: Field data*

3.3.16. Status on electricity

All households surveyed (100%) are electrified in the sub-project area. Details are given in Table 3.24.

Table 3.24: Status on Electrification

S. No.	Particulars	No. of households	%
1	Electrified Houses	120	100
Total Households		120	

**Source: Field data*

The primary source of electrification is the government grid. Household electrification was carried out a long time ago. Households have been electrified for the last 24 years, as per the results of the study. The availability of electricity is not a concern, since it is observed that the average time available for electricity is 23.3 hours per day. Details of electricity availability are given in Table 3.25.

Table 3.25: Average Usage Pattern of Electricity

S. No.	Particulars	Numbers
1	Average Years of Electrification	24
2	Average Hours of availability of electricity per day	23.3

**Source: Field data*

Households primarily use electricity for lighting purposes. As almost all households use gas for cooking purposes, no households use electricity for cooking purposes. For agricultural purposes, there are only eight households that use electricity for pumping of water. This is mainly because rain-fed farming is practised by the majority of farmers in the sub-project area and rain-fed crops such as maize, black gram, green gram, groundnut, pearl millet and cotton are mainly cultivated. Details of usage of electricity are given in Table 3.26. Almost all households (93.3%) are happy with the current supply of electricity, as households have electricity available almost all the time.

Table 3.26: Purpose of Electricity Use

S. No.	Purpose	No. of households	%
1	Lighting	120	100.0
2	Pumping water for agriculture	8	6.7
Total Households		120	

**Source: Field data*

3.3.17. Other alternate fuel consumption

In addition to using gas cylinders primarily for cooking, two-thirds (66.7%) of households use other non-electric energy sources. For cooking, about 26.7 percent of households use kerosene/diesel. Some households record the use of firewood (40.0%) as a non-electric energy source as an additional source for cooking since it is readily available and also to minimize their costs from kerosene/diesel. Details of non-electric sources for cooking are given in Table 3.27.

Table 3.27: Non-Electric Energy Sources

S. No.	Source of Usage	No. of households	%
1	Kerosene/diesel	32	26.7
2	Firewood	48	40.0

**Source: Field data*

3.3.18. Impact on Indigenous Peoples or Schedule Tribe

Under Article 342 of the Constitution, the Government of India considers, for the purpose of identifying indigenous groups [Scheduled Tribes (ST)], the following characteristics:

- (i) Tribes' primitive traits;
- (ii) Distinctive culture;
- (iii) Shyness with the public at large;
- (iv) Geographical isolation; and
- (v) Social and economic backwardness before notifying them as a Scheduled Tribe.

Indigenous people fundamentally have a distinct social and cultural identity from the 'mainstream' culture that makes them vulnerable to being ignored or marginalised in the processes of development. Indigenous peoples may be described as STs, which have no modern means of subsistence, with distinctive cultures and are characterised by socio-economic backwardness. Cultural continuity also characterises indigenous people.

Constitution of India identifies schedule areas which are primarily populated by such people. The sub-project located in the state of Tamil Nadu which has no schedule area. Furthermore, except for some temporary impacts on the loss of crops on transmission lines, land acquisition is not expected in the project. Therefore, in the project, no effect on the indigenous community is

envisaged.

With respect to transmission lines, the consequences of the loss of crops are temporary in nature. Loss of trees and temporary restriction of land are foreseen during construction under the base of the tower. Transmission lines are built in such a way that settlement and habitat areas are avoided. The sub-project area does not come under any notified area as mentioned in the constitution of India and the socio-economic sample survey recorded that there are no scheduled tribe households in the study area.

4. CONSULTATION

4.1. Objective of Public Consultations

Following are the main objectives of the consultations:

- Make people aware about the project and its potential impacts with proposed mitigation measures.
- Understand the opinions of the people affected, with respect to the loss of land, assets and compensation.
- Establish detailed cooperation for the successful execution of the project between all stakeholders
- To enhance awareness about the implementation schedule, compensation methods, grievances redress mechanism etc. and obtaining opinions on continued participation.

4.2. Methods of Consultations

In the sub-project area, informal public consultations and focus group discussions (FGDs) among women were done to acquire the views/opinions of the people about the project and the status of women in the community. Methods used for public consultations with concerned stakeholders are described in Table 4.1.

Table 4.1: Method of Consultations

Stakeholders	Purpose	Method
Local People/ Villagers/ Affected Persons	<ul style="list-style-type: none"> • For sharing information about the project • Seeking their views on the route alignment and any concerns for further improvement • Seeking their views on compensation and payment for various losses • Discuss about the general Eligibility and Entitlement and Compensation. • Discuss about Institutional setup and Grievance Redress Mechanism • Seeking their participation during the project implementation 	<ul style="list-style-type: none"> • Public consultation in informal way at various location/ villages along the transmission line routes
Discussions among the women	<ul style="list-style-type: none"> • To know about the general status of women • To make the women aware about the project and potential impacts 	<ul style="list-style-type: none"> • Focused Group Discussions

4.3. Public Consultations in the sub-project area

During the month of January 2021, public consultations were carried out along the transmission

line of the sub-project. These informal public consultations were held at 18 locations with a total of 105 participants (all are males). Table 4.2 summarizes the details on number of participants and the summary findings of the consultations are provided in Table 4.3. Details on each public consultation along with the responses and list of participants are provided in Annexure 3. The consultation results show that the majority of villagers are aware of the project and of the possible impacts of the project. During the project implementation, different opinions, suggestions and hesitations of the people can be considered by the executing agency and the contractor to address these issues.

Table 4.2: Summary of participants in the public consultations

S. No.	Name of the transmission line	No. of public consultations	Male participants	Female participants	Total participants
1	Erection of 400 kV DC line on DC tower with ACSR Quad Moose conductor from Virudhunagar 765/400 kV SS to Kayathar 400/230/110 kV SS	18	105	0	105

Table 4.3: Summary findings of public consultations

Issues Discussed	People's Views and Perception
General perception about the project	Almost all villagers indicated that they were aware of the transmission line project as they saw or heard the visit of officials during the recent detailed survey. In general, people thought that the project might help to boost the state's power supply and transmission, although it may not be of direct benefit to them. At the same time, the majority of the consultation indicated that the proposed project would ensure a greater supply of electricity to other remote regions of the country, where the availability of adequate electricity is a problem.
Support of local people for the proposed project	People from most villages agreed to provide support for the project. During the implementation of the project, they also expressed their support, especially if villagers are given job opportunities during the tower erection activities. There are certain areas where the villagers are not in favour of the project. Such areas are Irukkankudi and K. Mettupatti in Virudhunagar district and Ilanthapatti, Koththali and Kadalaiyur in Thoothukudi district. They are not satisfied with the proposed project because they are worried that their farming activities and crop production, which is their only livelihood, will be affected by the project. It was explained to the people during the consultation that TANTRANSCO shall take the views of affected

Issues Discussed	People's Views and Perception
	individuals into account and construction schedule will follow off the crop season.
Critical issue and concern by the local people for the project	<p>During the consultation, the majority of the villagers claimed that the construction of the tower would affect the value of their property. Furthermore, during the construction stage, agricultural and allied operations would also be affected. Farming relies more on rainfall (rain-fed lands) rather than irrigation. Therefore, there was apprehension that the disruption of farming operations and the loss of land value would have an impact on their earnings and possibly the living conditions of the household in the long term. Fear of groundwater depletion is also a major concern shared by a few villagers because of experience from other projects such as wind turbines and solar panel installations that have been introduced in the region.</p> <p>It was explained to the villagers that there would be no permanent impact due to the project. It was informed that in addition to providing compensation for the loss of standing crops and trees, the project provides compensation of 20 percent of the land value under the RoW and also 100 percent of the land value compensation under the tower foundation. The fear of groundwater depletion is also discussed and informed that there will be no such effects due to tower installations in this project.</p>
Criteria to be considered during project design, operation stage and construction	A few villagers expressed that the approach way to tower construction should not be destructive to their crops. Choosing of alternative routes which does not affect the crop lands is mostly preferred. It was explained that the damage of crops in the approach way would be minimum and suitable compensation will be paid for damaged crops.
Employment potential in the project	Most of the villagers suggested that local people should be involved in the job/employment opportunities during project implementation. A few of them expressed the apprehension that job opportunity may not be provided to the local villagers and it may be given to the existing workers of concerned engineering company responsible to construct the towers and transmission lines.
Compensation expected in case of loss of crops	During the consultation, most individuals expressed that they want cash compensation at the market rate level for crop loss and land loss due to tower installation and stringing. Some villagers held the opinion that they should be granted maximum compensation according to the prevailing market rate because their crop yield is valuable. It was explained that the impact on crop is minimal and the project provides compensation for the damaged crop at market rate.
Perceived loss	Most of the villagers expressed apprehension that the value of their precious farm land will be reduced due to overhead HT line and tower

Issues Discussed	People's Views and Perception
	installation. Some of them noted that nobody would buy the land that has towers built in the event of an emergency requirement. For households that depend on agriculture as their primary source of income, the loss of valuable farmland due to the tower base and the disruption of agricultural activities would lead to a decrease in crop yield, resulting in a decrease in household income. It was explained during the consultation that 100% of the land value would be compensated for the restriction of land below the tower base and there would be no change of land ownership.
Safety issues	Most villagers have no problem regarding the safety. In some villages, villagers felt that HT lines are not safe for human beings. A few villagers pointed out that power transmission line is not safe during rainy season; working in the agriculture field under the HT line is often dangerous and fearful; increased heat due to high tension line; the high sound from the HT line generates fear among the people; standing for a long time under the transmission line has harmful effect on the body. It was informed to the people that appropriate mitigation steps would be taken in compliance with international safety standards.

4.4. Gender consultations

During the month of January 2021, consultations were conducted among women community through focus group discussions (FGDs) at five sites, with a total of 33 women participants. The locations are described in Table 4.4 and summary findings of the gender consultations are described in Table 4.5. Details on each gender consultation along with responses and list of participants are provided in Annexure 5.

Table 4.4: Locations and Participants (Gender Consultations)

S. No.	Name of Village	Taluk & District	No. of women participants
1	K. Mettupatti	Sattur, Virudhunagar	6
2	Sirukulam	Sattur, Virudhunagar	5
3	Therku Vandanam	Kovilpatti, Thoothukkudi	8
4	Thennampatti	Ottapidaram, Thoothukkudi	9
5	Ayyakottaiyur	Ettayapuram, Thoothukkudi	5
Total			33

Table 4.5: Findings on gender consultations

Issues Discussed	Women's views and perception
Primary occupation of women	Women are engaged mainly in household work. Furthermore, they do farming on their own farmland. Non-agricultural work such as wage labour in MGNREGA work, construction work, fireworks, match box manufacturing and livestock rearing are also done by a large number of women. Women have also been active in petty businesses such as running petty shops/ tea shops and services such as nursing and teaching.
Natures of jobs mainly performed by the women members	Women are involved in farming, wage work and employed in factories, in addition to the normal household work. Most women in non-agricultural wage labour do MGNREGA work, such as cleaning the environment during festival seasons, cleaning shrubs, cleaning water bodies, etc. Drinking water collection is also an everyday practice for women.
Inequality in the receipt of wages, payments, for the work that the women perform	Depending on the nature and difficulty level of the work, almost all women reported that they earned less pay compared to men. Women receive less than the amount received by male members for agricultural labour. In non-agricultural work and construction work, the disparity in the receipt of salaries is also noted.
Role of women in the decision- making of the household	Almost all women accepted that, along with the male equivalent, women have an equal share of household decisions on important issues such as children's education, asset acquisition, and financial matters. Working women have more authority over the use of their resources, but after discussion with other family members they take the decision. Some of the women stated that their views have prevailed in matters such as education and involvement in community social functions.
Views and concerns about the project	Women had little awareness about the project, and they are of the view that they would not be impacted by the transmission line project.

5. ANNEXURE

Annexure 1: Details of villages considered for the socio-economic assessment of the sub-project area

S. No.	Name of the villages within Study area	HH Survey conducted Villages within study area	Taluk as per Census 2011	District
1	Mallanayakkanpatti	Nallamanayakkanpatti	Sattur	Virudhunagar
2	Irukkankudi	Melamadai		
3	Kalingumettupatti	N. Mettupatti (Nenmani)		
4	Nenmeni	Nenmeni		
5	Ayyampatti	Ayyampatti		
6	Uppatur	Uppattur		
7	Kottur	Ayyakottaiyur	Ettayapuram	Thoothukkudi
8	Pikkilipatti	Urulaikudi		
9	Urulaikudi			
10	Varadampatti			
11	Kadalaiyur	Kadalaiyur		
12	Tippanuttu	Sinnamalaikkundru		
13	Usilampatti			
14	Chennayampatti	Lingampatti	Kovilpatti	
15	Sivandipatti	Sivandipatti		
16	Kodukkambarai	Kodukkambarai		
17	Duraiyur	Duraiyur		
18	Theethanpatti	Koppampatti		
19	Koppampatti			
20	Pommuswamipuram			
21	Puthupatti			
22	Elanthapatti	Kuruvinatham		
23	Therku Vandanam	Therku Vandanam		
24	Chokkalingapuram	Kuppanapuram		
25	Malaipatti	Malaipatti	Ottapidaram	
26	Iravanpatti	Thennampatti		
27	Thennampatti			
28	Kottali	Kottali		
29	Parivillikottai	Parivillikottai		
30	Govindapuram	Govindapuram		

Annexure 2:Details on Public Consultations

Consultation 01

Village	Irukkankudi
Tehsil/Mandal	Sattur
District	Virudhunagar
Tribal or Non-Tribal area	Non-Tribal Area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No
What is your opinion about this project?	Not have a clear idea
Do you support this project?	May support
How do you think the project will affect you?	Impact may be due to heavy power carrying in the transmission line
Do you face any problem regarding current electricity supply?	Nil
Do you think that the project is necessary?	Not directly related to us. But in general point of view, it is necessary for power supply in the State
What are your main concerns/issues about the project?	Impacts crop land
Can you suggest how to best address your concerns/issues?	We suggest to choose alternative area other than agriculture land
Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	No awareness about it
What negative impacts do you think the project will have?	No awareness about it
How safe do you think or consider the electric transmission line?	We feel it would be safe.
Any criteria you would like to be considered for project design, construction and operation stage?	We want to avoid loss of crops
How long have you been living in this area?	Nearly 45 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	It depends on the land owners concern
Is the consultation useful?	Yes

Do you think that the local people would like to get regular information regarding the project?	Yes. We require regular information.
Would you support and participate during the implementation of project?	Yes
Any suggestion/opinion, etc.	We want the government to consider the farmer's interest

List of participants = Total 4 (Male-4 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Senthamarai	46	Male	12 th	Panchayat leader
2	Subburaj	34	Male	B.A.	Panchayat secretary
3	Gurusamy	38	Male	10 th	Operator
4	Vignesh Kumar	25	Male	8 th	Agricultural labourer

Consultation 02

Village	K. Mettupatii
Tehsil/Mandal	Sattur
District	Virudhunagar
Tribal or Non-Tribal area	Non-Tribal Area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No
What is your opinion about this project?	Not have a clear idea
Do you support this project?	No support if the tower bases covers agricultural lands
How do you think the project will affect you?	It will affect the agricultural lands and crop yield
Do you face any problem regarding current electricity supply?	Yes. Transformers are less. Voltage problem exists
Do you think that the project is necessary?	Not directly related to them. But in general point of view, it is necessary for power supply in the State
What are your main concerns/issues about the project?	Impacts Crop land
Can you suggest how to best address your concerns/issues?	We suggest to choose alternative area other than agriculture land
Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	No awareness about it
What negative impacts do you think the project will have?	Land value depreciation occurs, even compensation is given. Agricultural land owners

	will be affected if towers cover the agricultural land.
How safe do you think or consider the electric transmission line?	We don't feel it would be safe. Transmission line is not safe during rainy season; working in the agriculture field under the high-tension line is always risk and fearful
Any criteria you would like to be considered for project design, construction and operation stage?	We want to avoid loss of crops
How long have you been living in this area?	Nearly 60 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation is not enough. We urge to alternate the route/tower bases if they come on the agricultural land
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. We require regular information.
Would you support and participate during the implementation of project?	Yes
Any suggestion/opinion, etc.	We want the government to consider the farmer's interest

List of participants = Total 7 (Male-7 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Packiaraj	33	Male	10 th	Farmer
2	Pandi	65	Male	Literate but no formal education	Farmer
3	Sethu Rangunatha Boopathy	46	Male	6 th	Agricultural labourer
4	Mariappan	50	Male	Literate but no formal education	Cooking master
5	Marimuthu	42	Male	10 th	Agricultural labourer

S. No.	Name	Age	Sex	Education	Occupation
6	Balamurugan	27	Male	B.Sc.	Unemployed
7	Mariappan	55	Male	3 rd	Farmer

Consultation 03

Village	Nenmeni
Tehsil/Mandal	Sattur
District	Virudhunagar
Tribal or Non-Tribal area	Non-Tribal Area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No
What is your opinion about this project?	People in other regions of the State will get benefitted due to power supply
Do you support this project?	Support
How do you think the project will affect you?	No awareness about it
Do you face any problem regarding current electricity supply?	Frequent current disruption is there
Do you think that the project is necessary?	Not directly related to us. But in general point of view, it is necessary for power supply in the State
What are your main concerns/issues about the project?	No main issues
Can you suggest how to best address your concerns/issues?	Nil
Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	No awareness about it
What negative impacts do you think the project will have?	Since the transmission line passes out of the village, we have no negative impacts on them
How safe do you think or consider the electric transmission line?	We don't feel it would be safe. There is increased heat due to high tension line; the high sound from the HT line creates fear among the people.
Any criteria you would like to be considered for project design, construction and operation stage?	We want to avoid loss of crops
How long have you been living in this area?	20-25 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation

Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. We require regular information.
Would you support and participate during the implementation of project?	Yes
Any suggestion/opinion, etc.	We want the government to consider the farmer's interest

List of participants = Total 5 (Male-5 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Balamurugan	24	Male	6 th	Driver
2	Kaviarasan	21	Male	12 th	Sound service operator
3	Prabhakaran	29	Male	8 th	Driver
4	Rajamuniyandi	36	Male	Diploma	Cooking master
5	Kaleeswaran	30	Male	7 th	Mechanic

Consultation 04

Village	Ayyampatti
Tehsil/Mandal	Sattur
District	Virudhunagar
Tribal or Non-Tribal area	Non-Tribal Area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	We heard of the project while officials have come here to survey the property.
What is your opinion about this project?	It will help people in other parts of the State with respect to electricity connectivity
Do you support this project?	Support
How do you think the project will affect you?	Farmers and their crop lands as well as private land owners may get affected
Do you face any problem regarding current electricity supply?	Nil

Do you think that the project is necessary?	Not connected to us directly. But, from a general point of view, the power supply in the state is important
What are your main concerns/issues about the project?	Nil
Can you suggest how to best address your concerns/issues?	Nil
Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	No perception
What negative impacts do you think the project will have?	No perception
How safe do you think or consider the electric transmission line?	Safe
Any criteria you would like to be considered for project design, construction and operation stage?	No suggestion
How long have you been living in this area?	Nearly 40 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. We require regular information.
Would you support and participate during the implementation of project?	Yes
Any suggestion/opinion, etc.	We want the government to consider the farmer's interest

List of participants = Total 5 (Male-5 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Siva	48	Male	9 th	Farmer
2	Raja	52	Male	6 th	Farmer
3	Gokul	44	Male	10 th	Farmer
4	Palani	45	Male	8 th	Agriculture labourer
5	Muthu	50	Male	8 th	Farmer

Consultation 05

Village	Uppaththur
Tehsil/Mandal	Sattur
District	Virudhunagar
Tribal or Non-Tribal area	Non-Tribal Area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	A few people in the group have heard about the project, while the officials came here for land survey
What is your opinion about this project?	People in other regions of the State will get benefitted
Do you support this project?	Support
How do you think the project will affect you?	No awareness about it
Do you face any problem regarding current electricity supply?	Nil
Do you think that the project is necessary?	Not directly related to us. But in general point of view, it is necessary for power supply in the State
What are your main concerns/issues about the project?	No main issues
Can you suggest how to best address your concerns/issues?	Nil
Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	No perception
What negative impacts do you think the project will have?	No perception
How safe do you think or consider the electric transmission line?	Safe
Any criteria you would like to be considered for project design, construction and operation stage?	No suggestion
How long have you been living in this area?	Nearly 50 years

Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. We require regular information.
Would you support and participate during the implementation of project?	Yes
Any suggestion/opinion, etc.	We want the government to consider the farmer's interest

List of participants = Total 4 (Male-4 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Ramasamy	67	Male	5 th	Farmer
2	Tirupati	55	Male	5 th	Security
3	Ramasamy	64	Male	7 th	Farmer
4	Kichappan	73	Male	6 th	Agricultural labourer

Consultation 06

Village	Sivanthipatti
Tehsil/Mandal	Kovilpatti
District	Thoothukkudi
Tribal or Non-Tribal area	Non-Tribal Area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	The group said that they know about the project three months ago while the officers came to take land survey for the project
What is your opinion about this project?	The project tends to improve the power distribution in the State
Do you support this project?	We will support
How do you think the project will affect you?	They felt that the crop land and the crops been cultivated under the tower or near may get affected. In case of barren land, they felt no problem. Small land owners may get affected largely.
Do you face any problem regarding current electricity supply?	The group is not fully satisfied about the electricity supply. Even though after complaints register, transformer fault is not been addressed

Do you think that the project is necessary?	It is not directly necessary for them. However, in general, power supply is necessary
What are your main concerns/issues about the project?	They felt that the land value would get decreased due to the tower construction in the concerned land
Can you suggest how to best address your concerns/issues?	In case the tower area covers the agriculture land or land with pump set, we want to avoid the land and want to place the tower nearby with no such feature. In case of barren land, no problem
Specifically, what concerns/issues do you have on the implementation of the project?	Land value depreciation and crop loss or productivity loss
What positive impacts and/or benefits do you think the project will have?	No direct impacts for us The project improves the power supply in the State
What negative impacts do you think the project will have?	Land value depreciation and crop loss or productivity loss. Fear of groundwater depletion as we perceived that wind mill construction, done earlier, have resulted in such depletion
How safe do you think or consider the electric transmission line?	We felt it would be safe.
Any criteria you would like to be considered for project design, construction and operation stage?	The path to tower construction should not be destructive to our crops.
How long have you been living in this area?	About 60 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation at best rate. Some requires equivalent size of land on road side.
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. We require regular information.
Would you support and participate during the implementation of project?	Yes. Support. We will also participate in jobs during project implementation
Any suggestion/opinion, etc.	We want the government to consider the farmer's interest

List of participants = Total 8 (Male-8 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Sorna Thangam	59	Male	Literate but no formal education	Farmer

2	Srinivasan	72	Male	Literate but no formal education	Farmer
3	Muniasamy	56	Male	5 th	Farmer
4	Ramachandran	55	Male	5 th	Agricultural labourer
5	Aathirajan	63	Male	5 th	Farmer
6	Narayanan	43	Male	5 th	Farmer
7	Manikandan. S	31	Male	5 th	Agricultural labourer
8	Pachamala Nadar	82	Male	3 rd	Retired

Consultation 07

Village	K. Theethampatti
Tehsil/Mandal	Kovilpatti
District	Thoothukkudi
Tribal or Non-Tribal area	Non-Tribal Area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	A few people in the group have heard about the project, while the officials came here for land survey
What is your opinion about this project?	Improvement of infrastructure related to power transmission
Do you support this project?	Yes.
How do you think the project will affect you?	We felt it won't affect as the tower and RoW passes mainly on the barren lands
Do you face any problem regarding current electricity supply?	Yes. Frequent power cut encountered. Voltage fluctuation is there. In night times, power supply is negligible or low. Heavy loads are not been able to withstand. Two phase current is available for six hours and three phase for six hours in a day. We can't able to organize family or social functions as heavy load has making problem.
Do you think that the project is necessary?	Not directly related to them. But in general point of view, it is necessary for power supply in the State
What are your main concerns/issues about the project?	Agriculture land will be affected, if the tower construction and implementation activity passes on the agriculture land.

Can you suggest how to best address your concerns/issues?	We want diversion of route if such agriculture land got affected during the construction and implementation
Specifically, what concerns/issues do you have on the implementation of the project?	Agriculture land will be affected, if the tower construction and implementation activities pass on the agriculture land.
What positive impacts and/or benefits do you think the project will have?	No awareness about it
What negative impacts do you think the project will have?	Land value depreciation and crop loss or productivity loss.
How safe do you think or consider the electric transmission line?	We felt it would be safe.
Any criteria you would like to be considered for project design, construction and operation stage?	The path to tower construction should not be destructive to their crops.
How long have you been living in this area?	Nearly 70 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation at best rate.
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. We require regular information.
Would you support and participate during the implementation of project?	Yes. Support. We will also participate in jobs during project implementation
Any suggestion/opinion, etc.	We want the government to consider the farmer's interest

List of participants = Total 8 (Male-8 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Kanagaraj	72	Male	5 th	Farmer
2	Velusamy	63	Male	5 th	Farmer
3	Suresh Kumar	46	Male	10 th	Farmer
4	Murugalingam	52	Male	3 rd	Agricultural labourer
5	Balakumar	56	Male	3 rd	Farmer
6	Poiyamoli	34	Male	12 th	Farmer
7	Balasubramaniam	55	Male	Literate but no formal education	Farmer
8	Ravichandran	39	Male	8 th	Contractor

Consultation 08

Village	Koppampatti
Tehsil/Mandal	Kayathar (Kovilpatti)
District	Thoothukkudi
Tribal or Non-Tribal area	Non-Tribal Area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	A few people in the group have heard about the project, while the officials came here for land survey
What is your opinion about this project?	Power supply will be enhanced in non-electrified areas
Do you support this project?	Support
How do you think the project will affect you?	No affect for agriculture in general. Only the specific land owners will get affected.
Do you face any problem regarding current electricity supply?	Nil
Do you think that the project is necessary?	Not directly related to them. But in general point of view, it is necessary for power supply in the State
What are your main concerns/issues about the project?	Nil
Can you suggest how to best address your concerns/issues?	Nil
Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	No awareness about it
What negative impacts do you think the project will have?	Land value depreciation
How safe do you think or consider the electric transmission line?	We feel it would be safe.
Any criteria you would like to be considered for project design, construction and operation stage?	The path to tower construction should not be destructive to their crops.
How long have you been living in this area?	Nearly 60 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation at best rate.
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. We require regular information.

Would you support and participate during the implementation of project?	Yes. Support. We will also participate in jobs during project implementation
Any suggestion/opinion, etc.	We want the government to consider the farmer's interest

List of participants = Total 6 (Male-6 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Nallamuthu	60	Male	8 th	Farmer
2	Ilangovan	55	Male	8 th	Farmer
3	Sakthivel	40	Male	9 th	Agricultural labourer
4	Jeyaganesh	36	Male	7 th	Driver
5	Velusamy	79	Male	4 th	Retired
6	Chennappan	48	Male	8 th	Tea shop owner

Consultation 09

Village	Chokkalingapuram
Tehsil/Mandal	Kovilpatti
District	Thoothukkudi
Tribal or Non-Tribal area	Non-Tribal Area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	A few members of the community have heard about the project, while officials have come here to survey the property.
What is your opinion about this project?	In non-electrified areas, the power supply would be strengthened.
Do you support this project?	Support
How do you think the project will affect you?	It does not affect agriculture in general. It would only impact particular land owners.
Do you face any problem regarding current electricity supply?	Nil
Do you think that the project is necessary?	Not connected directly to them. But, from a general point of view, the power supply in the state is important
What are your main concerns/issues about the project?	Nil

Can you suggest how to best address your concerns/issues?	Nil
Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	No awareness about it
What negative impacts do you think the project will have?	Depreciation of land value
How safe do you think or consider the electric transmission line?	We feel it would be safe.
Any criteria you would like to be considered for project design, construction and operation stage?	The path to building towers should not be harmful to their crops.
How long have you been living in this area?	Nearly 50 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation at best rate.
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. We require regular information.
Would you support and participate during the implementation of project?	Yes, Support.
Any suggestion/opinion, etc.	We want the government to consider the farmer's interest

List of participants = Total 5 (Male-5 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Subburaj	32	Male	8 th	Agricultural labourer
2	Vaiyannan	60	Male	Illiterate	Farmer
3	Sathish	50	Male	8 th	Farmer
4	Boopathy	46	Male	10 th	Agricultural labourer
5	Prem	49	Male	7 th	Farmer

Consultation 10

Village	Ilanthapatti
Tehsil/Mandal	Kayathar (Kovilpatti)
District	Thoothukkudi
Tribal or Non-Tribal area	Non-Tribal Area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	A few people in the group have heard about the project, while the officials came here for land survey five months ago
What is your opinion about this project?	The group felt that the project will affect their agricultural land and the crops which are mainly rainfed
Do you support this project?	No support
How do you think the project will affect you?	Agricultural land will get affected
Do you face any problem regarding current electricity supply?	Yes. Heavy load problem. Three phase current is available for only three months in year and in the rest of months only two phase current
Do you think that the project is necessary?	Not directly related to them. But in general point of view, it is necessary for power supply in the State
What are your main concerns/issues about the project?	The group felt that the project will affect their agricultural land and the crops which are mainly rainfed
Can you suggest how to best address your concerns/issues?	We want to choose alternative area other than agriculture land
Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	No awareness about it
What negative impacts do you think the project will have?	Crop land mainly got affected and loss of crops. Since agriculture is mainly depends on rainfed, we feel damage will be on our crop lands/crops
How safe do you think or consider the electric transmission line?	We feel it would be safe.
Any criteria you would like to be considered for project design, construction and operation stage?	We want to avoid loss of crops
How long have you been living in this area?	Nearly 50 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation at best rate.

Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. We require regular information.
Would you support and participate during the implementation of project?	No. We have no support during project implementation
Any suggestion/opinion, etc.	We want to avoid the HT line in the village

List of participants = Total 7 (Male-7 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Nayinar	51	Male	5 th	Farmer
2	Ramar	56	Male	5 th	Agricultural labourer
3	M. Shanmugaraj	36	Male	8 th	Farmer
4	Karuppasamy	45	Male	6 th	Agricultural labourer
5	K. Karuppasamy	51	Male	5 th	Farmer
6	Alagumalai	39	Male	10 th	Construction worker
7	Thangamuthu	45	Male	5 th	Construction worker

Consultation 11

Village	Koththali
Tehsil/Mandal	Kayathar (Kovilpatti)
District	Thoothukkudi
Tribal or Non-Tribal area	Non-Tribal Area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	Yes
What is your opinion about this project?	We feel this project is like other wind mill and solar power projects, which are already implemented in the area
Do you support this project?	No support
How do you think the project will affect you?	Agricultural land and well in the land will be affected
Do you face any problem regarding current electricity supply?	Nil
Do you think that the project is necessary?	Not directly related to them. But in general point of view, it is necessary for power supply in the State
What are your main concerns/issues about the project?	Impacts crop land
Can you suggest how to best address your concerns/issues?	We suggest to choose alternative area other than agriculture land
Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	No awareness about it

What negative impacts do you think the project will have?	Crop productivity will be reduced. Even after the construction of towers, the effect will be continued and affect the land
How safe do you think or consider the electric transmission line?	We feel it would be safe.
Any criteria you would like to be considered for project design, construction and operation stage?	We want to avoid loss of crops
How long have you been living in this area?	Nearly 50 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation at best rate. For agricultural land with well, we want more compensation than the rainfed land
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. We require regular information.
Would you support and participate during the implementation of project?	No. We wish no support during project implementation
Any suggestion/opinion, etc.	We want to avoid the HT line in the village

List of participants = Total 6 (Male-6 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Masanamuthu	38	Male	9 th	Panchayat leader
2	Manthiramurthy	49	Male	6 th	Farmer
3	Karuppasamy	38	Male	10 th	Farmer
4	Isakkimuth	39	Male	5 th	Farmer
5	Thangapandi	40	Male	5 th	Farmer
6	Bagavathyraj	60	Male	5 th	Panchayat official

Consultation 12

Village	Kodukkamparai
Tehsil/Mandal	Kovilpatti
District	Thoothukkudi
Tribal or Non-Tribal area	Non-Tribal Area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	A few people in the group have heard about the project, while the officials came here for land survey.
What is your opinion about this project?	The group felt that the project won't affect the people in the area largely
Do you support this project?	Support
How do you think the project will affect you?	No affect for agriculture in general. Only the land owners will get affected.

Do you face any problem regarding current electricity supply?	Nil
Do you think that the project is necessary?	Not directly related to us. But in general point of view, it is necessary for power supply in the State
What are your main concerns/issues about the project?	Nil
Can you suggest how to best address your concerns/issues?	Nil
Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	No awareness about it
What negative impacts do you think the project will have?	Land value depreciation
How safe do you think or consider the electric transmission line?	We feel it would be safe.
Any criteria you would like to be considered for project design, construction and operation stage?	The path to tower construction should not be destructive to their crops.
How long have you been living in this area?	Nearly 60 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation at best rate.
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. We require regular information.
Would you support and participate during the implementation of project?	Yes. Support. We will also participate in jobs during project implementation
Any suggestion/opinion, etc.	Government should consider the farmer's interest

List of participants = Total 6 (Male-6 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Selvam	39	Male	12 th	Farmer
2	Shanmugavel	40	Male	5 th	Agricultural labourer
3	Sathish	42	Male	12 th	Farmer
4	Ganesh	40	Male	12 th	Mechanic
5	Bhoominathan	75	Male	8 th	Tea shop owner
6	Maheshwaran	52	Male	9 th	Business

Consultation 13

Village	Peekkilipatti
Tehsil/Mandal	Ettayapuram
District	Thoothukkudi
Tribal or Non-Tribal area	Non-Tribal Area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	The group have heard about the project, while the officials came here for land survey
What is your opinion about this project?	People in other regions of the State will get benefitted
Do you support this project?	Support
How do you think the project will affect you?	In general, no affect. But land owners will get affected
Do you face any problem regarding current electricity supply?	Nil
Do you think that the project is necessary?	Not directly related to us. But in general point of view, it is necessary for power supply in the State
What are your main concerns/issues about the project?	No main issues
Can you suggest how to best address your concerns/issues?	Nil
Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	No perception
What negative impacts do you think the project will have?	Only land owners get affected. Few in the group expressed the fear of ground water depletion.
How safe do you think or consider the electric transmission line?	No safety. We have a fear that standing for a long time under the transmission line has harmful effect on the body.
Any criteria you would like to be considered for project design, construction and operation stage?	No suggestion
How long have you been living in this area?	Nearly 50 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. We require regular information.

Would you support and participate during the implementation of project?	Yes
Any suggestion/opinion, etc.	We want the government to consider the farmer's interest

List of participants = Total 6 (Male-6 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Irulappan	70	Male	10 th	Farmer
2	Karuppasamy	60	Male	5 th	Farmer
3	Maniraj	27	Male	5 th	Farmer
4	Perumal	63	Male	8 th	Farmer
5	Cholaippan	40	Male	Literate but no formal education	Farmer
6	Chinnakaruppaiah	55	Male	3 rd	Farmer

Consultation 14

Village	Varathampatti
Tehsil/Mandal	Ettayapuram
District	Thoothukkudi
Tribal or Non-Tribal area	Non-Tribal Area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	Yes
What is your opinion about this project?	Improvement of infrastructure related to power transmission
Do you support this project?	Support
How do you think the project will affect you?	In general, no affect. But land owners will get affected
Do you face any problem regarding current electricity supply?	Nil
Do you think that the project is necessary?	Not directly related to us. But in general point of view, it is necessary for power supply in the State
What are your main concerns/issues about the project?	No main issues
Can you suggest how to best address your concerns/issues?	Nil
Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	No perception

What negative impacts do you think the project will have?	Land value depreciation. The group expressed the fear of ground water depletion.
How safe do you think or consider the electric transmission line?	Safe
Any criteria you would like to be considered for project design, construction and operation stage?	No suggestion
How long have you been living in this area?	45-50 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. We require regular information.
Would you support and participate during the implementation of project?	Yes
Any suggestion/opinion, etc.	We want the government to consider the farmer's interest

List of participants = Total 5 (Male-5 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Raasu	44	Male	7 th	Mason
2	Thangasamy	53	Male	6 th	Farmer
3	Murugan	54	Male	8 th	Farmer
4	Lakshmana Perumal	73	Male	8 th	Farmer
5	Subramanian	63	Male	Illiterate	Hotel worker

Consultation 15

Village	Zamin Usilampatti
Tehsil/Mandal	Ettayapuram
District	Thoothukkudi
Tribal or Non-Tribal area	Non-Tribal Area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	Yes, during the officials survey
What is your opinion about this project?	People in other regions of the State will get benefitted
Do you support this project?	Support
How do you think the project will affect you?	Land will get affected during construction process

Do you face any problem regarding current electricity supply?	Nil
Do you think that the project is necessary?	Not directly related to us. But in general point of view, it is necessary for power supply in the State.
What are your main concerns/issues about the project?	No main issues
Can you suggest how to best address your concerns/issues?	Nil
Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	No perception
What negative impacts do you think the project will have?	No significant negative impacts. Temporary effect on land will be there. However, we are aware that the construction will happen after harvest of crops
How safe do you think or consider the electric transmission line?	Safe
Any criteria you would like to be considered for project design, construction and operation stage?	No suggestion
How long have you been living in this area?	Nearly 30 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. We require regular information.
Would you support and participate during the implementation of project?	Yes
Any suggestion/opinion, etc.	We want the government to consider the farmer's interest

List of participants = Total 5 (Male-5 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Siva	21	Male	B.F.A	Student
2	Rajesh	28	Male	B.Sc.	Service in private sector
3	Muthuramkumar	27	Male	B.E.	Service in private sector
4	R.S. Dhanraj	18	Male	B.E.	Student
5	Saravana Kumar	35	Male	B. Litt.	Service in private sector

Consultation 16

Village	Kadalaiyur
Tehsil/Mandal	Ettayapuram
District	Thoothukkudi
Tribal or Non-Tribal area	Non-Tribal Area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	Yes, during MEIL officials did the survey
What is your opinion about this project?	People in other regions of the State will get benefitted
Do you support this project?	A few may not support
How do you think the project will affect you?	Farm lands will get affected
Do you face any problem regarding current electricity supply?	Nil
Do you think that the project is necessary?	Not directly related to us. But in general point of view, it is necessary for power supply in the State
What are your main concerns/issues about the project?	They felt impacts from power line would cause reduced crop production
Can you suggest how to best address your concerns/issues?	Alternative route/tower locations
Specifically, what concerns/issues do you have on the implementation of the project?	The land under the tower yields less production than the land not affected by tower
What positive impacts and/or benefits do you think the project will have?	Development of infrastructure in the country
What negative impacts do you think the project will have?	Since irrigation is very less in the area and most farms are rainfed, the productivity will get reduced due to the lines.
How safe do you think or consider the electric transmission line?	Not safe. High power transmission may affect their health
Any criteria you would like to be considered for project design, construction and operation stage?	No suggestion
How long have you been living in this area?	Nearly 30 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Even though cash compensation is available, we feel the land value get reduced in the future and so to compensate them by giving equivalent lands

Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. We require regular information.
Would you support and participate during the implementation of project?	Yes. We will participate in the implementation
Any suggestion/opinion, etc.	We want the government to consider the farmer's interest

List of participants = Total 7 (Male-7 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Mariappasamy	50	Male	B.A. B.L	Panchayat official
2	Madasamy	48	Male	5 th	Construction worker
3	Muniasamy	38	Male	8 th	Construction worker
4	Mariappan	65	Male	8 th	Retired
5	Angappan	63	Male	9 th	Retired
6	Pitchai	63	Male	8 th	Retired
7	Murugan	50	Male	6 th	Retired

Consultation 17

Village	Tippanuthu
Tehsil/Mandal	Ettayapuram
District	Thoothukkudi
Tribal or Non-Tribal area	Non-Tribal Area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	While the officials came here for land surveys, the group learned about the initiative.
What is your opinion about this project?	In non-electrified areas, the power supply would be strengthened.
Do you support this project?	Support
How do you think the project will affect you?	In general, no affect. But land owners will get affected
Do you face any problem regarding current electricity supply?	Nil
Do you think that the project is necessary?	Not directly related to us. But in general point of view, it is necessary for power supply in the State
What are your main concerns/issues about the project?	No main issues
Can you suggest how to best address your concerns/issues?	Nil

Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	No perception
What negative impacts do you think the project will have?	Only land owners get affected.
How safe do you think or consider the electric transmission line?	No awareness about the safety issues
Any criteria you would like to be considered for project design, construction and operation stage?	No suggestion
How long have you been living in this area?	Nearly 50 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. We require regular information.
Would you support and participate during the implementation of project?	Yes
Any suggestion/opinion, etc.	We want the government to consider the farmer's interest

List of participants = Total 5 (Male-5 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Mugesh	52	Male	5 th	Farmer
2	Saravanan	55	Male	6 th	Agricultural labourer
3	Mariappan	54	Male	6 th	Farmer
4	Suresh	58	Male	8 th	Farmer
5	Venkat	55	Male	3 rd	Farmer

Consultation 18

Village	Urulaikudi
Tehsil/Mandal	Ettayapuram
District	Thoothukkudi
Tribal or Non-Tribal area	Non-Tribal Area

Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	The group have heard about the project, while the officials came here for land survey
What is your opinion about this project?	Power supply will be enhanced in non-electrified areas
Do you support this project?	Support
How do you think the project will affect you?	In general no affect. But land owners will get affected
Do you face any problem regarding current electricity supply?	Nil
Do you think that the project is necessary?	Not directly related to us. But in general point of view, it is necessary for power supply in the State
What are your main concerns/issues about the project?	No main issues
Can you suggest how to best address your concerns/issues?	Nil
Specifically, what concerns/issues do you have on the implementation of the project?	Nil
What positive impacts and/or benefits do you think the project will have?	No perception
What negative impacts do you think the project will have?	Only land owners get affected. Few in the group expressed the fear of ground water depletion.
How safe do you think or consider the electric transmission line?	No safety. It may affect their health if prolong movement near the towers.
Any criteria you would like to be considered for project design, construction and operation stage?	No suggestion
How long have you been living in this area?	Nearly 50 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Cash compensation
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	Yes. We require regular information.
Would you support and participate during the implementation of project?	Yes
Any suggestion/opinion, etc.	We want the government to consider the farmer's interest

List of participants = Total 6 (Male-6 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Shanmugam	58	Male	Literate but no formal education	Farmer
2	Narayanan	47	Male	5 th	Farmer
3	Lakshmanan	47	Male	5 th	Farmer
4	Vignesh	53	Male	7 th	Farmer
5	Ammaippan	45	Male	10 th	Farmer
6	Lingeswaran	52	Male	5 th	Farmer

Annexure 3: Details of Gender Consultations

Consultation 01	
Location/ place of FGD	Village: K. Mettupatti (Sattur taluk, Virudhunagar). Location: Near village entrance
Where do you live and how long have you lived there?	About 70 years
What do you like most about living in this area?	All basic amenities such as drinking water, school, hospital, bus facility is available here.
What is the primary occupation?	Fireworks factory workers, match box factory workers, agricultural labour, animal husbandry
Please tell us as to how you spend your time (daily routine)?	Household activities, farming and agricultural labours
Opinion on the importance of education for the people and specifically of the girls and women in your area.	Great importance is being given for the education particularly for the girl children
Educational level of community people in your locality/area	Majority have secondary level education. Few have graduate/post graduate level education
Types of education facilities (formal and non-formal education, its distance) available in the village / neighbourhood and parent's perception on quality of education. Access and services to the girls.	School is available for up to tenth standard education in the village. For higher education, students have to avail the facility in Nenmeni. Students are using the local bus facility to reach the schools.
Reasons for non-enrolment and dropout amongst children & youth. (Male & Female)	No dropouts
Perceived importance of girl's education and reasons for sending/not sending girls to school	Girl's education is given importance. They are sending them to school regularly. Even though parents are uneducated or less educated, they want their children to pursue higher education for their life improvement.
Type of engagement of children in household activities (try to know about the girls) and the extent to which they directly contribute to the earning of the household (type of occupations engaged in).	Children are not engaged in economic activities/occupation. However, at free time, girl children help their parents in household works and in farming-related activities as well as livestock rearing. Regarding occupation, women are mostly engaged in nursing and teaching related activities.

Existing skills and traditional skills amongst the adolescent girls and women that must be revived /encouraged.	They want to acquire skills such as tailoring, and computer education as there is no training services in or near their area. They felt computer education is must for women to apply for government schemes/ assistance and other online services
What are the barriers in terms of resources, availability, transport, locations of trainings if any, for pursuing vocational courses by women of your community? Also, the barriers from the family side (like lack of time, etc).	Non-availability of transportation is the main barrier to pursue vocational courses for women.
Is there any organization, government, private or NGO running any vocational courses for the adolescents and women in area?	Nil
Do the women of the households in the community have ownerships of the property in the community, like houses, land, etc. The reasons for having or not having ownership rights.	Yes they have ownerships. Properties/assets are being bought in their names also. No barriers to have ownerships of property
Please tell us what are the natures of jobs mainly performed by the women of your community? (Besides household work, their engagement in government / private sectors, small scale business, agriculture, animal husbandry).	Farming, agricultural labour, animal husbandry, works in fireworks and match box factories
Is there is any form of inequality in the receipt of wages, payments, rewards, etc for the work that the women perform? What are the underlying factors for this prevalence of inequalities?	Yes they have inequality in wages where men get INR.400 and women get INR.200 per day in non-agricultural jobs. The inequality is due to the nature of the job and difficulty level. The women in the community accept the inequality in wages/payments.
Is the woman who are working and earning have the ultimate decision on the use of their money?	Yes. They have their role. Male counterparts are consulting with females regarding their opinions and decisions
What role do the women of the household have in the decision-making process of the household? Do you feel you have equal share along with the male counterpart in any household decisions?	Yes. They have equal share in taking the decisions.
Is there any form of inequality or the cases of male dominating the women in the decision-making process at the household level?	No such issues
Is there any community-based organization (like NGO's, SHGs, etc) for the women of your	Self-help groups (such as Vaigai and Thamarai SHGs) are available and many women are being active members in it.

community? If yes, what are the activities of those organizations and the role of the women in it?	Mainly the SHGs use the collected money to provide loans for the women to do enterprises.
Do the women of your community are members of any political bodies? If yes what role they play in terms of their involvement and participation?	Not engaging in such activities due to non-interest
General health facilities available and the perceived satisfaction on quality of services & affordability.	Primary health centre is available in their village and it provides basic health treatments in a satisfactory manner. Particularly, during pregnancy times, women availing the services in the centre are happy and healthy.
Types of commonly prevalent diseases among the community? Are there any specific ailments affecting the women of your community?	No major diseases.
Is there any provision of special health care services available near to your village/ neighbourhood? If yes, perception on the quality of care.	Yes. Recently special health care services have been introduced in the village and its services are satisfactory.
Do the women feel safe in going outside in the neighbourhood during day time and night time? What are the problems or fears they perceived for their movements?	In night times, they feel not safe to go around as there is little common light facilities.
Do the women face any kind of domestic violence at their home? If yes what are the reasons?	No
Is dowry system prevalent among your community? Do the women of your community face problems for marriage of their girls due to dowry? What is their perception on this system?	No
General Remarks if any	They want toilet facilities to be improved in the village as open/community toilet usage is prevalent.

List of women participants = 6

S. No.	Name	Relation to the head of the household	Age	Education	Occupation
1	Muthumariammal	Wife	45	12 th	Village leader (farming)
2	V. Pechiammal	Wife	30	M.Com., B.Ed.	Housewife
3	Vijayamariammal	Wife	46	10 th	Farmer
4	Bharathamatha	Head	73	2 nd	Farmer
5	Amutha. M	Wife	35	12 th	Farmer

6	Jeyalakshmi	Wife	23	12 th	Housewife
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Consultation 02

Location/ place of FGD	Village: Sirukulam (Sattur Taluk, Virudhunagar) Location: near water collection centre
Where do you live and how long have you lived there?	About 40 years
What do you like most about living in this area?	All basic amenities such as drinking water, school, hospital, bus facility is available here.
What is the primary occupation?	Farming, agricultural labour, animal husbandry
Please tell us as to how you spend your time (daily routine)?	Household activities, farming and agricultural labour
Opinion on the importance of education for the people and specifically of the girls and women in your area.	Great importance is being given for the education particularly for the girl children
Educational level of community people in your locality/area	Majority have secondary level education.
Types of education facilities (formal and non-formal education, its distance) available in the village / neighbourhood and parent's perception on quality of education. Access and services to the girls.	School is available for up to tenth standard education in the village. Students are using the local bus facility to reach the schools.
Reasons for non-enrolment and dropout amongst children & youth. (Male & Female)	No dropouts
Perceived importance of girl's education and reasons for sending/not sending girls to school	Girl's education is given importance. They are sending them to school regularly. Even though parents are uneducated or less educated, they want their children to pursue higher education for their life improvement.
Type of engagement of children in household activities (try to know about the girls) and the extent to which they directly contribute to the earning of the household (type of occupations engaged in).	Children are not engaged in economic activities/occupation. However, at free time, girl children help their parents in household works and in farming-related activities as well as livestock rearing.
Existing skills and traditional skills amongst the adolescent girls and women that must be revived /encouraged.	They want to acquire skills such as tailoring, and computer education as there is no training services in or near their area.

What are the barriers in terms of resources, availability, transport, locations of trainings if any, for pursuing vocational courses by women of your community? Also, the barriers from the family side (like lack of time, etc).	Non-availability of transportation is the main barrier to pursue vocational courses for women.
Is there any organization, government, private or NGO running any vocational courses for the adolescents and women in area?	Nil
Do the women of the households in the community have ownerships of the property in the community, like houses, land, etc. The reasons for having or not having ownership rights.	Yes they have ownerships. Properties/assets are being bought in their names also. No barriers to have ownerships of property
Please tell us what are the natures of jobs mainly performed by the women of your community? (Besides household work, their engagement in government / private sectors, small scale business, agriculture, animal husbandry).	Farming, agricultural labour, animal husbandry
Is there is any form of inequality in the receipt of wages, payments, rewards, etc for the work that the women perform? What are the underlying factors for this prevalence of inequalities?	Yes they have inequality in wages where men get Rs. 400 and women get Rs. 200 per day in non-agricultural jobs. The inequality is due to the nature of the job and difficulty level. The women in the community accept the inequality in wages/payments.
Is the woman who are working and earning have the ultimate decision on the use of their money?	Yes. They have their role. Male counterparts are consulting with females regarding their opinions and decisions
What role do the women of the household have in the decision-making process of the household? Do you feel you have equal share along with the male counterpart in any household decisions?	Yes. They have equal share in taking the decisions.
Is there any form of inequality or the cases of male dominating the women in the decision-making process at the household level?	No such issues
Is there any community-based organization (like NGO's, SHGs, etc) for the women of your community? If yes, what are the activities of those organizations and the role of the women in it?	Self-help groups are available and many women are being active members in it. Mainly the SHGs use the collected money to provide loans for the women to do enterprises.
Do the women of your community are members of any political bodies? If yes what role they play in terms of their involvement and participation?	Not engaging in such activities due to non-interest

General health facilities available and the perceived satisfaction on quality of services & affordability.	Primary health centre is available in their village and it provides basic health treatments in a satisfactory manner. Particularly, during pregnancy times, women availing the services in the centre are happy and healthy.
Types of commonly prevalent diseases among the community? Are there any specific ailments affecting the women of your community?	No major diseases.
Is there any provision of special health care services available near to your village/ neighbourhood? If yes, perception on the quality of care.	Nil
Do the women feel safe in going outside in the neighbourhood during day time and night time? What are the problems or fears they perceived for their movements?	Safe. No safety issues
Do the women face any kind of domestic violence at their home? If yes what are the reasons?	No
Is dowry system prevalent among your community? Do the women of your community face problems for marriage of their girls due to dowry? What is their perception on this system?	No
General Remarks if any	Nil

List of women participants=5

S. No.	Name	Relation to the head of the household	Age	Education	Occupation
1	Poornima	Wife	45	10 th	Housewife
2	Jeyachandra	Wife	35	12 th	Housewife
3	Valli	Wife	48	8 th	Housewife
4	Shanthi	Wife	42	6 th	Housewife
5	Sulochanna	Wife	39	6 th	Housewife

Consultation 03

Location/ place of FGD	Village: TherkuVandanam (Kovilpatti Taluk, Thoothukkudi district). Location: Near e-sevai centre
Where do you live and how long have you lived there?	We are living in this village since marriage and some since birth
What do you like most about living in this area?	People's unity
What is the primary occupation?	We are engaged mainly in agriculture and 100-days work under MGNREGA scheme

Please tell us as to how you spend your time (daily routine)?	Household works such cooking, cleaning, collection of water and washing, farming/100-days works at specific times, in leisure time watching television or chatting with friends in the surrounding houses and taking rest.
Opinion on the importance of education for the people and specifically of the girls and women in your area.	Great importance is being given for the education particularly for the girl children
Educational level of community people in your locality/area	Majority have secondary level education. Women are pursuing/pursued undergraduate level education
Types of education facilities (formal and non-formal education, its distance) available in the village / neighbourhood and parent's perception on quality of education. Access and services to the girls.	For school level education, students have to reach Nagampatti which is about 6 km from their village. For college education, girls have travel to Kovilpatti, as they have no college facilities in or near their village. Bus facilities are there to access the school and college education.
Reasons for non-enrolment and dropout amongst children & youth. (Male & Female)	Family problem is main reason for non-enrolment/drop out. Compare to females, males are normally get drop-out from schools and they go for works in shops
Perceived importance of girl's education and reasons for sending/not sending girls to school	Girl's education is given importance. We are sending them to school regularly. Even though parents are uneducated or less educated, they want their children to pursue higher education for their life improvement.
Type of engagement of children in household activities (try to know about the girls) and the extent to which they directly contribute to the earning of the household (type of occupations engaged in).	Children are not engaged in economic activities/ occupation. However, at free time, children help their parents in household works and in farming-related activities as well as livestock rearing.
Existing skills and traditional skills amongst the adolescent girls and women that must be revived /encouraged.	There are women here who acquired tailoring and computer education. Such skills is need to be further expanded among women in the community
What are the barriers in terms of resources, availability, transport, locations of trainings if any, for pursuing vocational courses by women of your community? Also, the barriers from the family side (like lack of time, etc).	No barriers

Is there any organization, government, private or NGO running any vocational courses for the adolescents and women in area?	Nil
Do the women of the households in the community have ownerships of the property in the community, like houses, land, etc. The reasons for having or not having ownership rights.	Yes they have ownerships. Properties/assets are being bought in their names also. No barriers to have ownerships of property
Please tell us what are the natures of jobs mainly performed by the women of your community? (Besides household work, their engagement in government / private sectors, small scale business, agriculture, animal husbandry).	In addition to household work, women are engaged in farming, agricultural labour, 100 days works in MGNREGA, running petty shops/tea shops and doing livestock rearing.
Is there is any form of inequality in the receipt of wages, payments, rewards, etc for the work that the women perform? What are the underlying factors for this prevalence of inequalities?	Yes they have inequality in wages where men get INR.500 and women get INR.200 per day in non-agricultural jobs. The inequality is due to the nature of the job and difficulty level. The women in the community accept the inequality in wages/payments.
Is the woman who are working and earning have the ultimate decision on the use of their money?	Yes. They have their role. Male counterparts are consulting with females regarding their opinions and decisions
What role do the women of the household have in the decision-making process of the household? Do you feel you have equal share along with the male counterpart in any household decisions?	Yes. They have equal share in taking the decisions.
Is there any form of inequality or the cases of male dominating the women in the decision-making process at the household level?	No such issues
Is there any community-based organization (like NGO's, SHGs, etc) for the women of your community? If yes, what are the activities of those organizations and the role of the women in it?	Self-help groups (SHGs) are available and many women are being active members in it. Mainly the SHGs use the collected money to provide loans for the women to support their business such as petty shops/tea shops
Do the women of your community are members of any political bodies? If yes what role they play in terms of their involvement and participation?	Yes. Women are being members in political parties, elected as ward members and councilors. There is no hindrance to engage in such services.
General health facilities available and the perceived satisfaction on quality of services & affordability.	Primary health centre (PHC) is available in their village and it provides basic health treatments in a satisfactory manner. Particularly, during pregnancy times,

	women availing the services in the centre are happy and healthy.
Types of commonly prevalent diseases among the community? Are there any specific ailments affecting the women of your community?	No major diseases. Few women have asthma problem.
Is there any provision of special health care services available near to your village/ neighbourhood? If yes, perception on the quality of care.	PHC is functioning well. Child births are happening in the centres.
Do the women feel safe in going outside in the neighbourhood during day time and night time? What are the problems or fears they perceived for their movements?	Yes. No fear of insecurity
Do the women face any kind of domestic violence at their home? If yes what are the reasons?	No
Is dowry system prevalent among your community? Do the women of your community face problems for marriage of their girls due to dowry? What is their perception on this system?	No
General Remarks if any	Nil

List of women participants=8

S. No.	Name	Relation to the head of the household	Age	Education	Occupation
1	Rubi	Wife	44	8 th	MGNREGA worker
2	Kuthiraiammal	Wife	40	10 th	MGNREGA worker
3	Muthulakshmi	Wife	43	3 rd	Farmer
4	Lakshmi	Wife	37	5 th	Farmer
5	Mariammal	Wife	23	10 th	Farmer
6	Malaimmal	Head	70	5 th	MGNREGA worker
7	Gomathi	Head	63	Literate but no formal education	MGNREGA worker
8	Shanmugathai	Wife	65	Literate but no formal education	Agricultural labourer

Consultation 04

Location/ place of FGD	Village: Thennampatti (Ottapidaram Taluk, Thoothukkudi). Location: In Panchayat office waranda
Where do you live and how long have you lived there?	About 55 years
What do you like most about living in this area?	All basic amenities in the village and the agriculture-based environment in the village
What is the primary occupation?	Primary occupation is agricultural labour, construction workers
Please tell us as to how you spend your time (daily routine?)	Household works such cooking, cleaning, collection of water and washing, work in their own farms and some will go for construction work labourers, in leisure time watching television or chatting with friends in the surrounding houses and taking rest.
Opinion on the importance of education for the people and specifically of the girls and women in your area.	Great importance is being given for the education particularly for the girl children
Educational level of community people in your locality/area	Majority have secondary level education.
Types of education facilities (formal and non-formal education, its distance) available in the village / neighbourhood and parent's perception on quality of education. Access and services to the girls.	Primary school is available in the village. For middle and secondary level education, students have to go Kayathar, Kadambur and Chillangulam which are about 12 km away from the village. School bus facilities are there to reach the schools
Reasons for non-enrolment and dropout amongst children & youth. (Male & Female)	No dropouts
Perceived importance of girl's education and reasons for sending/not sending girls to school	Girl's education is given importance. They are sending them to school regularly. Even parents are uneducated or less educated, they want their children to pursue higher education for their life improvement.
Type of engagement of children in household activities (try to know about the girls) and the extent to which they directly contribute to the earning of the household (type of occupations engaged in).	Children are not engaged in economic activities/occupation. However, at free time, girl children help their parents in household works and in farming-related activities as well as livestock rearing. Regarding occupation, women are mostly engaged in nursing and teaching related activities.
Existing skills and traditional skills amongst the adolescent girls and women that must be revived /encouraged.	Tailoring, typewriting and computer education
What are the barriers in terms of resources, availability, transport, locations of trainings if any, for pursuing vocational courses by	No barriers

women of your community? Also, the barriers from the family side (like lack of time, etc).	
Is there any organization, government, private or NGO running any vocational courses for the adolescents and women in area?	Nil
Do the women of the households in the community have ownerships of the property in the community, like houses, land, etc. The reasons for having or not having ownership rights.	Yes they have ownerships. Properties/assets are being bought in their names also. No barriers to have ownerships of property
Please tell us what are the natures of jobs mainly performed by the women of your community? (Besides household work, their engagement in government / private sectors, small scale business, agriculture, animal husbandry).	Farming, construction work labour, 100 days works in MGNREGA, petty shops, tea shops, animal husbandry;
Is there is any form of inequality in the receipt of wages, payments, rewards, etc for the work that the women perform? What are the underlying factors for this prevalence of inequalities?	Yes, they have inequality in wages where men get INR.300 and women get INR.200 per day in non-agricultural jobs. The inequality is due to the nature of the job and difficulty level. The women in the community accept the inequality in wages/payments.
Is the woman who are working and earning have the ultimate decision on the use of their money?	Yes. They have their role. Male counterparts are consulting with females regarding their opinions and decisions
What role do the women of the household have in the decision-making process of the household? Do you feel you have equal share along with the male counterpart in any household decisions?	Yes. They have equal share in taking the decisions.
Is there any form of inequality or the cases of male dominating the women in the decision-making process at the household level?	No such issues
Is there any community-based organization (like NGO's, SHGs, etc) for the women of your community? If yes, what are the activities of those organizations and the role of the women in it?	Self-help groups are available and many women are being active members in it. Mainly the SHGs use the collected money to provide loans for the women to do enterprises.
Do the women of your community are members of any political bodies? If yes what	Yes; Women are being members in political parties.

role they play in terms of their involvement and participation?	
General health facilities available and the perceived satisfaction on quality of services & affordability.	Primary health centre is available in their village and it provides basic health treatments in a satisfactory manner. Particularly, during pregnancy times, women availing the services in the centre are happy and healthy.
Types of commonly prevalent diseases among the community? Are there any specific ailments affecting the women of your community?	No major diseases.
Is there any provision of special health care services available near to your village/ neighbourhood? If yes, perception on the quality of care.	Nil
Do the women feel safe in going outside in the neighbourhood during day time and night time? What are the problems or fears they perceived for their movements?	Yes. No fear of insecurity
Do the women face any kind of domestic violence at their home? If yes what are the reasons?	No
Is dowry system prevalent among your community? Do the women of your community face problems for marriage of their girls due to dowry? What is their perception on this system?	No
General Remarks if any	Nil

List of women participants=9

S. No.	Name	Relation to the head of the household	Age	Education	Occupation
1	Kasiammal	Wife	40	7 th	MGNREGA worker
2	Lakshmi	Wife	41	10 th	MGNREGA worker
3	Subbulakshmi	Wife	34	10 th	MGNREGA worker
4	Velankanni	Wife	36	10 th	MGNREGA worker
5	Kaliammal	Wife	48	8 th	MGNREGA worker
6	Pattu	Wife	39	5 th	MGNREGA worker
7	Baghyalakshmi	Wife	43	5 th	Farmer
8	Ramalakshmi	Wife	48	4 th	Farmer
9	Velachchi	Wife	50	3 rd	Farmer

Location/ place of FGD	Village: Ayyakottaiur (Ettayapuram Taluk, Thoothukkudi).
Where do you live and how long have you lived there?	About 55 years
What do you like most about living in this area?	All basic amenities in the village
What is the primary occupation?	Primary occupation is agricultural labour, construction workers
Please tell us as to how you spend your time (daily routine?	Household works such cooking, cleaning, water collection and washing, work in their own farms and some will go for construction work labourers, in leisure time watching television or chatting with friends in the surrounding houses and taking rest.
Opinion on the importance of education for the people and specifically of the girls and women in your area.	Great importance is being given for the education particularly for the girl children
Educational level of community people in your locality/area	Majority have secondary level education.
Types of education facilities (formal and non-formal education, its distance) available in the village / neighbourhood and parent's perception on quality of education. Access and services to the girls.	Primary school is available in the village. School bus facilities are there to reach the schools
Reasons for non-enrolment and dropout amongst children & youth. (Male & Female)	No dropouts
Perceived importance of girl's education and reasons for sending/not sending girls to school	Girl's education is given importance. They are sending them to school regularly. Even though parents are uneducated or less educated, they want their children to pursue higher education for their life improvement.
Type of engagement of children in household activities (try to know about the girls) and the extent to which they directly contribute to the earning of the household (type of occupations engaged in).	Children are not engaged in economic activities/occupation. However, at free time, girl children help their parents in household works and in farming-related activities as well as livestock rearing. Regarding occupation, women are mostly engaged in nursing and teaching related activities.
Existing skills and traditional skills amongst the adolescent girls and women that must be revived /encouraged.	Tailoring, typewriting and computer education
What are the barriers in terms of resources, availability, transport, locations of trainings if any, for pursuing vocational courses by women of your community? Also, the	No barriers

barriers from the family side (like lack of time, etc).	
Is there any organization, government, private or NGO running any vocational courses for the adolescents and women in area?	Nil
Do the women of the households in the community have ownerships of the property in the community, like houses, land, etc. The reasons for having or not having ownership rights.	Yes they have ownerships. Properties/assets are being bought in their names also. No barriers to have ownerships of property
Please tell us what are the natures of jobs mainly performed by the women of your community? (Besides household work, their engagement in government / private sectors, small scale business, agriculture, animal husbandry).	Farming, construction work labour, 100 days works in MGNREGA, petty shops, tea shops, animal husbandry;
Is there is any form of inequality in the receipt of wages, payments, rewards, etc for the work that the women perform? What are the underlying factors for this prevalence of inequalities?	Yes they have inequality in wages where men get INR.300 and women get INR.200 per day in non-agricultural jobs. The inequality is due to the nature of the job and difficulty level. The women in the community accept the inequality in wages/payments.
Is the woman who are working and earning have the ultimate decision on the use of their money?	Yes. They have their role. Male counterparts are consulting with females regarding their opinions and decisions
What role do the women of the household have in the decision-making process of the household? Do you feel you have equal share along with the male counterpart in any household decisions?	Yes. They have equal share in taking the decisions.
Is there any form of inequality or the cases of male dominating the women in the decision-making process at the household level?	No such issues
Is there any community-based organization (like NGO's, SHGs, etc) for the women of your community? If yes, what are the activities of those organizations and the role of the women in it?	Self-help groups are available and many women are being active members in it. Mainly the SHGs use the collected money to provide loans for the women to do enterprises.
Do the women of your community are members of any political bodies? If yes what	No roles in political bodies due to non-interest

role they play in terms of their involvement and participation?	
General health facilities available and the perceived satisfaction on quality of services & affordability.	Primary health centre is available in their village and it provides basic health treatments in a satisfactory manner.
Types of commonly prevalent diseases among the community? Are there any specific ailments affecting the women of your community?	No major diseases.
Is there any provision of special health care services available near to your village/ neighbourhood? If yes, perception on the quality of care.	Nil
Do the women feel safe in going outside in the neighbourhood during day time and night time? What are the problems or fears they perceived for their movements?	Yes. No fear of insecurity
Do the women face any kind of domestic violence at their home? If yes what are the reasons?	No
Is dowry system prevalent among your community? Do the women of your community face problems for marriage of their girls due to dowry? What is their perception on this system?	No
General Remarks if any	Nil

List of women participants=5

S. No.	Name	Relation to the head of the household	Age	Education	Occupation
1	Meena	Wife	34	8 th	Housewife
2	Savithri	Wife	44	6 th	Housewife
3	Punitha	Wife	45	8 th	Housewife
4	Gouthami	Wife	40	6 th	Housewife
5	Kanagaselvi	Wife	42	12 th	Housewife

SOCIAL ASSESSMENT REPORT
FOR
765KV DC TRANSMISSION LINE FROM K. LAKSHMIPURAM
IN DINDIGUL DISTRICT TO VELUR IN TIRUPPUR DISTRICT,
TAMIL NADU (REACH 2)

APRIL 2021

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Annexure I: Detailed findings of Public Consultation

Annexure II: Detailed findings of Gender Consultation

1 EXECUTIVE SUMMARY

This report captures the socio-economic assessment of the sub-project for the proposed Reach 2 of the 765 kV Transmission Line from Virudhunagar to Coimbatore. It is a sub-project under the construction of various transmission line assets in the State of Tamil Nadu to improve power supply to industrial demand centres in Chennai-Kanyakumari Industrial Corridor. The Reach 2 of the 765 kV Transmission Line is from K. Lakshmpuram in Dindigul District to Velur in Tiruppur District and stretches over 95 Km. The line traverse through Dindigul District and Tiruppur District.

Socio-economic assessment of the community living within the defined study area were carried out using both primary and secondary data sources. The primary data collection comprised of 1) household survey to understand their socio-economic status, 2) public consultation to understand the perception of the people about the proposed project, and 3) gender consultation to determine and understand the role and value of women in the village and their family. The Household survey was conducted in 19 villages with 123 sample households. A total of 18 public consultations and 9 gender consultations were conducted.

Secondary data have been compiled from census of India reports and government department websites to describe the district profiles on relevant indicators. Socio-economic findings based on the household survey were presented in this report. The report also described major crossing details, type of land and trees to be affected due to tower construction and stringing.

During the public consultation villagers felt that the project would bring economic growth to the region and the State of Tamil Nadu. People in general felt that the proposed T/L should not cross through agriculture land. The affected people expressed their concerns that they would incur loss in terms of land, yield and income. Some of them suggested that the alignment of the route should be done in such a way that the T/L passes through government land and barren land rather than agriculture land. Some others informed that the construction work is being executed by migrant workers from other states rather than from the local area.

It was explained to the people during the consultation that 100% of the land value would be compensated for the restriction of land below the tower base and there would be no change of land ownership. The landowner can continue the farming activities after the construction is over.

Some of the affected people expressed their concern on the delay in non-receipt of compensation. In a few villages it was shared that the local lawyers are instigating some affected people to demand higher compensation. It was informed to the affected people that the process of payment of compensation is time consuming as assessment of affected land, tree and crop and other processes takes time. The relevant TANTRANSOCO officials will be intimated to address this issue to ensure timely payment of compensation.

2 PROJECT DESCRIPTION

2.1 Overview

The proposed sub-project covers the Reach 2 of the 765 kV Transmission Line from the 765/400 kV Virudhunagar Substation to 765/400 kV Coimbatore Substation. Tamil Nadu Transmission Corporation Limited (TANTRANSCO) is the executing agency (EA) and the implementing agency (IA).

The project's impact is aligned to enhance the industrial development and renewable energy generation in Tamil Nadu. The project's outcome is to improve power supply to industrial demand centres in Chennai-Kanyakumari Industrial Corridor. The proposed project will improve operational efficiency and quality of power, reliability of the system and at the same time will reduce losses due to interconnection with TNEB network and hence virtual up-gradation to higher voltage level and better voltage profile. Evacuation of power to both the local areas and regions outside the state will boost overall economic development of the state due to extra revenues generated by power sold outside the state because of availability of additional power evacuation infrastructure.

2.2 Sub-project Description

The total length of the Reach 2 of the 765 kV Transmission Line between K.Lakshmipuram in Dindigul District to Velur in Tiruppur District is about 95 Km and it majorly passes over agricultural lands. The transmission line stretch is represented in Figure 2.1.

Figure 2.1 Google Map showing the Proposed 765 kV Transmission Line Route from K. Lakshmipuram, Dindigul District to Velur, Tiruppur District



Source: Google Earth, Image Date: 11th February 2021

Legend:

- Angle Points showing (T/L) Line
- 1 Km Boundary (Study Area)

2.3 Transmission Line Route

2.3.1 Transmission Line Route Selection

The selection of the route was made considering the following factors

- **Forest Land:** The route selection considered the best option to avoid forest land as much as possible
- **Habitation:** The route was chosen to avoid incidence of clustered settlements, common access routes and pathways, markets, and community structures to the extent possible.
- **Length:** The routes in which the transmission lines are to be laid were considered for their shortest route to reduce the footprint along the stretch.
- The route for laying the transmission lines complies with the following
 - Accessibility of the line for construction as well as for maintenance for its total life span
 - Avoidance of human settlements/habitation, and leaving adequate land for the growth and expansion of the respective villages / towns along which the lines run.
 - Densely vegetated / forested areas have been avoided

The details of the taluk and district across which 95km stretch of the transmission line passes is presented in Table 2.1.

Table 2.1 Transmission Line Details

Angle Points	District Traversed	Taluk Traversed	Route Length (Km)
AP1 to AP15	Dindigul	Nilakkottai	9.908
AP15 to AP34	Dindigul	Nilakkottai	9.631
AP 34 - AP52	Dindigul	Nilakkottai & Attur	10.226
AP52 to AP65	Dindigul	Attur & Dindigul	12.396
AP 65 to AP74	Dindigul	Dindigul	10.184
AP74 to AP87	Dindigul	Attur, Dindigul & Oddanchatram	10.362
AP87 to AP96	Dindigul	Oddanchatram	10.437
AP96 - AP109	Dindigul	Oddanchatram	10.674
AP109 to AP120	Dindigul & Tiruppur	Oddanchatram & Dharapuram	12.000

Table 2.2 Summary and salient features of the proposed project

S.No	Details	Description
1	Line Length estimated	94.54
2	Total Angle Points	120
3	Total Nos. of River Crossing	1

4	Total Nos. of road crossings	22
5	Total Nos. of rail line crossings	3
6	Total Nos. of HT line crossings	16
7	Name of the District	Dindigul & Tiruppur
8	Number of revenue villages	37

2.4 Impact on Land

Based on the information provided by the contractor, it is to be noted that a total of 268 transmission towers will be erected. The details of the towers are given in Table 2.3.

Table 2.3 Details of Towers and Type of Land

Name of Transmission Line	Length in Km	Total Number of Towers	Towers to be placed in Govt. Land	Tower to be placed in Private Waste Land	Tower to be placed on Private Crop land
765 kV from K. Lakshmipuram (Dindigul Dist.) to Velur (Tiruppur Dist.)	95	268	8	40	220

Source: KEC International Limited

2.5 Trees to be Affected

The number of trees to be cut for the purpose of clearing the RoW is calculated based on the inventory survey conducted by the Contractor. As per the inventory survey, total number of trees to be affected is 18706 of which 17863 are fruit trees and 843 are non-fruit trees (Table 2.4). As far as fruit trees are concerned, these are mostly coconut tree, mango tree, and neem tree, and are found in patches as well as scattered along the RoW. Details on species wise trees affected due to the proposed project are provided in Table 2.5.

Table 2.4 Types of Trees within RoW

Name of Transmission Line	Number of Fruit Trees	Number of Non-Fruit Trees	Total Trees Affected
765 kV from K. Lakshmipuram (Dindigul Dist.) to Velur (Tiruppur Dist.)	17863	843	18706

Table 2.5 Details of species wise Trees to be Cut within RoW

S.No	Tree Species	Scientific Name	No. of Trees to be Cut
1	Coconut Tree	<i>Cocos nucifera</i>	6316
2	Palmyra Tree	<i>Borassus flabellifer</i>	2631
3	Mango Tree	<i>Mangifera indica</i>	1710
4	Guava Tree	<i>Pisidium gujava</i>	1291
5	Neem Tree	<i>Azadirachta indica</i>	2361
6	Tamarind Tree	<i>Tamarindus indicus</i>	1996
7	Teak Tree	<i>Tectona grandis</i>	351
8	Banyan Tree	<i>Ficus benghalensis</i>	5
9	White Gulmohar	<i>Delonix elata</i>	110

S.No	Tree Species	Scientific Name	No. of Trees to be Cut
10	Indian goose	<i>Phyllanthus emblica</i>	591
11	Madras thorn	<i>Pithecellobium dulce</i>	142
12	Drumstick tree	<i>Moringa oleifera</i>	787
13	Swamp pea	<i>Sesbania grandiflora</i>	180
14	Gulmohar	<i>Delonix regia</i>	113
15	Tree of heaven	<i>Ailanthus excelsa</i>	122
	Total		18706

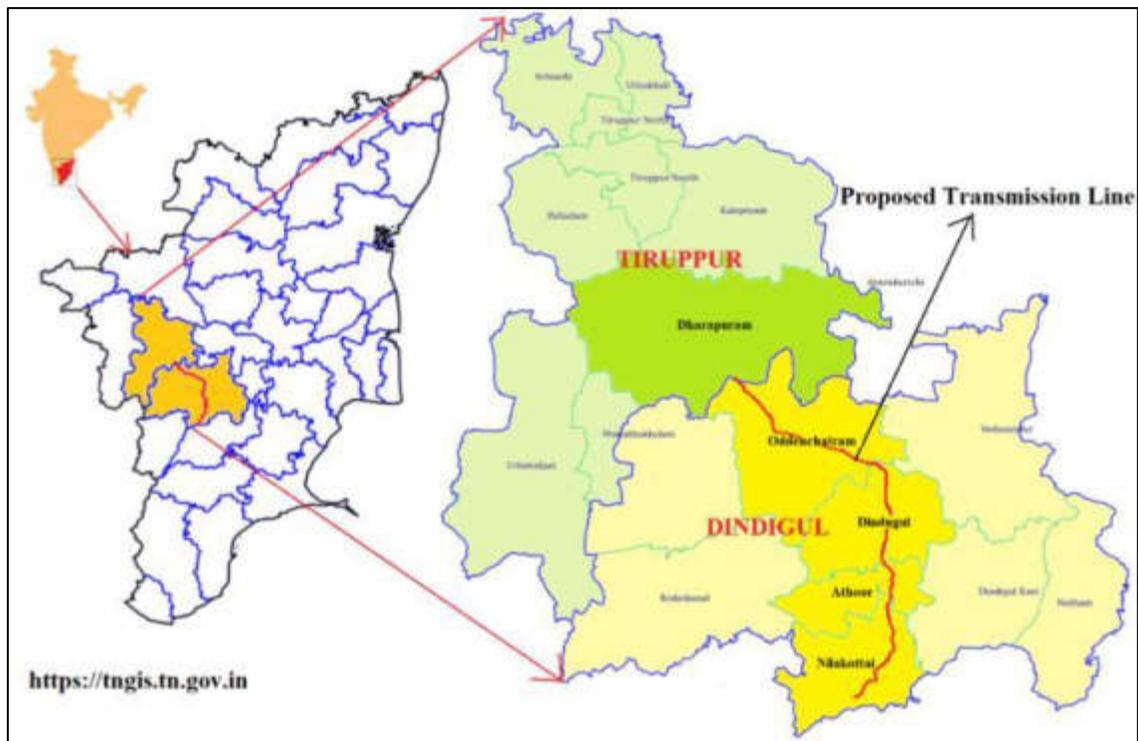
3 SCOPE AND METHODOLOGY

3.1 Overview

The proposed Transmission Line (T/L) from K.Lakshmpuram, Dindigul District to Velur, Tiruppur District, Tamil Nadu stretches over 95 Km. The T/L traverse through Dindigul District and Tiruppur District. For the purpose of socioeconomic assessment, a study area within 1 km on either side of the proposed T/L was considered and the villages that lie within the study area were chosen for the collection of data.

The primary data collection comprised of 1) household survey to understand their socio-economic status, 2) public consultation to understand the perception of the people about the proposed project, and 3) gender consultation to determine and understand the role and value of women in the village and their family. The Taluks through which the line passes illustrated in Figure 3.1.

Figure 3.1 Administrative Map of the Study Area



3.2 Methodology of Survey

In order to identify the villages within the study area, the T/L route was superimposed on the Survey of India Toposheet as well as plotted in the Google Earth. Besides identification of the villages other features such as the geographical features, site sensitivity such as forest areas, river / water body, Highways / Railways crossings, land use pattern of the Tower footprint area and RoW, etc. were recorded along the T/L line as part of the desktop assessment. Based on the desktop assessment findings, the villages that lie within the study area were targeted during the primary household survey.

3.2.1 Household Survey

In the villages that lie within the study area especially in close proximity to the proposed T/L, socioeconomic household survey was undertaken. In the proposed stretch of 95km about 37

villages lie within the study area. Of which, 19 villages were covered for household survey which included a total sample size of 123 households (Table 3.1). The villages adjoining the stretch that has been deviated from the initial alignment were given priority for undertaking the household survey. The findings of the survey are presented in following chapter.

Table 3.1 List of Villages Surveyed for Household Survey

S. No	District	Taluk	Village
1	Dindigul	Nilakottai	Silukkuvarpatti
2			Pillaiyarnatham
3			Lakshmipuram
4			Kattunaickenpatti
5			Sakkayanayakanur
6		Athoor	Munnilaikottai
7			Veerakkal
8			Athipatti
9			Vellaimaalaiatti
10		Dindigul	Nagappanpatti
11			Odaipatti
12			Mallapuram
13			Konoor
14			Ramagoundanpatti
15		Oddanchatram	Nettiyapatti
16			Nachaiyappan Gounder Valasu
17			Muthunayakanpati
18			Chinnayagoundan Valasu
19			Perumal Koil Valasu

3.2.2 Public Consultation

Public consultation to understand the perception of the people about the proposed project was undertaken during the period between 18th December and 24th December 2020, and between 8th March and 12th March 2021. Public consultation was conducted with the people of the villages that lie within 500m from the proposed T/L and the participants included the general villagers as well as the project affected people. A total of 116 persons participated in the consultations inclusive of both men and women of different age groups and occupations.

3.2.3 Gender Consultation

The gender consultations were conducted in the villages within the study area of the proposed T/L. The consultation covered various aspects such as the level of education provided to women, the importance education to girl child, involvement of women in decision making etc. The gender consultation was undertaken during the period between 8th March and 12th March 2021 in 9 villages with 34 participants. The villages where the consultations were undertaken are Silkuvarpatti, Nettiyapatti, Veerakkal, Kattunayakan Patti, Munnilaikottai, Muthunaickenpatti, Perumal Koil Valasu, Lakshmipuram, and Pillaiyarnatham.

4 SOCIO ECONOMIC PROFILE

4.1 General

The socioeconomic household survey was conducted in 19 villages with a total sample size of 123 households. The sampled households were surveyed between 8th and 12th March 2021.

4.2 District Profile

The secondary data sources provide important data and information at district level. The project affected district Dindigul has a higher urban population as compared to the proportion of rural populations. The proportion of scheduled caste in the district is about 20.95% and this is comparable with the state scheduled caste proportion of 20.01%. The proportion of scheduled tribes is 0.37% (less than 1%) in the district and the proportion is 1.10% for the state. The data on selected indicators for the project affected district as well as for Tamil Nadu is given in the below Table 4.1.

Table 4.1 Profile of project affected district and Tamil Nadu

Indicator/Parameter	Dindigul	Tamil Nadu
Total population	2159775	72,147,030
% of Rural population	62.59	51.60
% of Urban population	37.41	48.40
% of SC population	20.95	20.01
% of ST population	0.37	1.10
Sex Ratio	998	996
Literacy Rate	76.26	80.09
Male Literacy Rate	84.23	86.77
Female Literacy Rate	68.33	73.44
Life Expectancy at Birth (Male)	65.89	64.97
Life Expectancy at Birth (Female)	69.16	68.85
Infant Mortality Rate (2013-14)	13.0	21.0
Maternal Mortality Rate	43.17	68.0
% of HHs covered with drinking water supply	80.68%	NA
% of HHs with toilet facilities (2014)	59.30	48.29*
Per capita income during 2011- 12 at constant prices (In INR)	56,376	63,996
% of BPL HHs (2013-14)	28.95	NA
Worker participation rate (Total)	51.17	45.6
Worker participation rate (Male)	61.56	59.3
Worker participation rate (Female)	40.76	31.8
Total worker (Main and Marginal)	1,105,155	32,884,681
% of Cultivator	14.97	12.92
% of Agriculture Labourers	42.34	29.21
% workers in HH industry	2.79	4.15
% of other workers	39.90	53.72
Total cultivated area (In hectares)	NA	NA
Average size of agriculture land holdings	1.07	NA
Total forest area (In hectares)	138,923	NA
Electricity generation from thermal (In million unit)	Nil	NA
Electricity generation from wind mill (In million unit)	444.62	NA
Number of working factories (Registered)	3,880	NA
Number of small-scale industries	3,880	NA
Number of medium & large-scale industries	NA	NA

*The data is for the year 2011

Sources: District Statistical Hand Books (2019-20); District Human Development Reports (2017), State Planning Commission, Tamil Nadu; District Census Handbook, Directorate of Census Operations, Tamil Nadu.

4.3 Socioeconomic Survey Findings

4.3.1 Demography

The sample household survey (123 sample households) finding shows that the average household size is 4 members. Approximately 74.5% households reported that they are staying in nuclear families. This is one of the main reasons for a small household size in the sub-project area. The sex ratio of the sub-project area is 946 females per 1000 males. All the surveyed households reported that they reside in rural settlements. Details are given in Table 4.2.

Table 4.2 Demographic Feature

S. No.	Particulars	Sub-project Area
1	Total Household	123
2	Sex Ratio	946
3	Average Household Size	4
4	% of HHs reside in rural area	100

Source: Socioeconomic Survey, March, 2021

Regarding the social groups, the survey findings show that the majority (91.05%) of the households belong to Other Backward Class (OBC). Nearly 8.13% of households belong to the scheduled caste category. In the subproject area there are no households belonging to scheduled tribes (ST) as per the survey findings. Details are given in Table 4.3.

Table 4.3 Households by Social Group

S. No.	Particulars	No. of HHs	%
1	General	01	0.81
2	Scheduled Caste (SC)	10	8.13
3	Other Backward Class (OBC)	112	91.05
4	Scheduled Tribe (ST)	00	0.0
5	TOTAL	123	

Source: Socioeconomic Survey, March, 2021

4.3.2 Literacy and Education

Among the surveyed households in the subproject area, the male literacy rate (86.8%) is slightly higher than the literacy rate among females (82.4%). This suggests that in terms of literacy women are not lagging much behind the men. When compared to the difference between male and female literacy rates in Tamil Nadu (13.4 percentage points), the gap in the subproject area is much lower (4.4%). Details are given in Table 4.4.

Table 4.4 Literacy Status

S. No.	Particulars	Sub-Project Area	Tamil Nadu (Census 2011)
1	Overall Literacy Rate	78.3	80.1
2	Male Literacy Rate	86.8	86.8
3	Female Literacy Rate	82.4	73.4

Source: Socioeconomic Survey, March, 2021

The levels of educational attainment across genders are almost same as per the household survey in the subproject area. As shown in Table 4.5, no noticeable differences were found

between the male and female education attainment levels. In case of diploma holders proportion of females are slightly higher than that of males.

Table 4.5 Gender Desegregated Education Achievement

S. No.	Education Level	Male		Female		Total	
		No.	%	No.	%	No.	%
1	Primary	44	17.46	41	17.30	85	17.38
2	Middle	73	28.97	68	28.69	141	28.83
3	Secondary	52	20.63	48	20.25	100	20.45
4	Graduate/Post-graduate	41	16.27	38	16.03	79	16.16
5	Diploma	23	9.13	25	10.55	48	9.82
6	Illiterate	19	7.54	17	7.17	36	7.36
TOTAL		252	100	237	100	489	100

Source: Socioeconomic Survey, March, 2021

4.3.3 Vulnerability

The household survey in the subproject area captured vulnerabilities of household on selected parameters. The project defines vulnerable households as households headed by women, households with physically handicapped/disabled family members and those below the poverty line (BPL) household. There are only three types of vulnerability found among the households surveyed. Only 1.62% households are female headed households. There are 2.43% households having physically challenged persons. The finding in the sub-project area shows that 67 households (54.47%) belong to below poverty line. Details are given in Table 4.6.

Table 4.6 Vulnerability Feature of HHs

S. No.	Particulars	No. of HH	%
1	Female Headed Households	02	1.62
2	HHs having physically challenged persons	03	2.43
3	Below Poverty Line Households	67	54.47
Total number of HHs		123	
Note: Multiple Response			

Source: Socioeconomic Survey, March, 2021

4.3.4 Access to Basic Amenities

For a very high proportion of households (88.61%), piped water supply is the main source of drinking water. Piped water supply is connected to public stand points which are situated within the villages. Very few households use hand pump (8.94%). Details are given in Table 4.7.

Table 4.7 Main Source of Drinking Water

S. No.	Main Source of Drinking Water	No. of HH	%
1	Piped Supply	109	88.61
2	Hand Pump	11	8.94
3	Others	03	2.43
TOTAL		123	

Source: Socioeconomic Survey, March, 2021

Household members collect drinking water from public stand points. The survey findings show that the average distance from a main source of drinking water is about 85 meters. It was also found that the average time taken to go, collect water and come back is nearly 30 minutes. The qualitative information reveals that though members cover a short distance for collection of drinking water they have to wait for some time to collect drinking water due to a long queue at the public stand point. Details are given in Table 4.8.

Table 4.8 Distance & Time taken for Drinking Water Collection

S. No.	Particulars	m
1	Average distance from main source of drinking water in meter.	85
2	Average time taken to go, collect water & come back in minutes.	30

Source: Socioeconomic Survey, March, 2021

It is very common in India that collection of drinking water is primarily the responsibility of women in a family. The information collected during the household survey reveals that in majority (50.8%) of the households only women in the family are involved in collection of drinking water. About 44.6% households reported that both men and women collect the drinking water in a family. Details are given in Table 4.9.

Table 4.9 Involvement in drinking water collection

S. No.	Particulars	% of HH
1	Households where only men collects drinking water	4.6
2	Households where only women collects drinking water	50.8
3	Households where both men & women collects water	44.6
TOTAL		100.0

Source: Socioeconomic Survey, March, 2021

Access to toilet is very important to improving sanitation as well as health outcomes of people. Regarding sanitation facilities, the survey finding shows that all the surveyed households have their own pour flush toilets. Details are given in Table 4.10.

Table 4.10 Type of Sanitation Facilities

S. No.	Type of Toilet	No. of HH	%
1	Pour flush	123	100
2	Community toilet	00	0.0
3	No Toilet	00	0.0
TOTAL		123	

Source: Socioeconomic Survey, March, 2021

The surveyed households in the sub-project area reported that they have availability of basic amenities such as school, public health facility, public transport (bus), local market etc. About 82.9% of the households reported availability of public buses for transportation while the rest rely on local vehicles or own arrangements. About 52.03% households reported that they have access to ambulance facilities for institutional delivery. About 49.59% households reported that they have primary school facilities in the village. About 45.52% households reported that they have secondary school. About 80.48% households reported that they generally use respective 'Taluka' as the Local Market for sell or purchase in large scale but for day-to-day purchasing, people generally use small shops available in the villages. Details are given in Table 4.11.

Table 4.11 Availability of Basic Amenities

S. No.	Particulars	No. of HH	%
1	Public transport (Bus)	102	82.9
2	Ambulance facilities	64	52.03
3	Local market for sell or purchase	99	80.48

4	Primary school in the village	61	49.59
5	Secondary school in/ near the village	56	45.52
6	Sub-centre/PHC in/ near the village	62	50.40
TOTAL HHs		123	

Source: Socioeconomic Survey, March, 2021

4.3.5 Major Economic Activities

The most important economic activity of the households is agriculture and Wage Labour (agriculture) with 56.10% of surveyed households is engaged in both the activities. Other important economic activities are business (26.02%), professional service (30.89%), and private job (24.39%). The survey captured information on family members' contribution to the major economic activities across gender. There are important activities in which both the men and women have significant contribution. It is pertinent to mention here that women members also take part in some of the important economic activities in addition to their involvement to perform the household activities. Details are given in Table 4.12.

Table 4.12 Major Economic Activities of Households

S. No.	Particulars	% of HHs	Investment By %		
			% Men	% Women	% Both
1	Agriculture	56.10	22.5	2.2	75.3
2	Government Job	14.63	63.2	35.4	1.4
3	Private Job	24.39	77.3	9.6	13.1
4	Business	26.02	62.4	3.1	34.5
5	Wage Labour (Agriculture)	56.10	37.5	7.8	54.7
6	Professional service	30.89	55.7	21.4	22.9
7	Other self-employed activity	8.13	74.5	13.3	12.2

Source: Socioeconomic Survey, March, 2021

4.3.6 Cropping Pattern

The major crop cultivated or produced in the subproject area is Pulses (Dal) with 54.47% households cultivate it. Other important crops cultivated are Rice (43.90%), Maize (52.85%), and Ground Nut (41.46%). Details are given in Table 4.13.

Table 4.13 Major Cropping Pattern

S. No.	Type of Crops	No. of HH	%
1	Pulses (Dal)	67	54.47
2	Rice	54	43.90
3	Maize	65	52.85
4	Ground Nut	51	41.46
5	Vegetables	33	26.82
6	Banana	39	31.70
7	Chilli	23	18.69

Source: Socioeconomic Survey, March, 2021

4.3.7 Average Yield of Major Crops

Among the major crops, the average yield per household is highest for rice (12.9 quintal). This is followed by Pulse (Dal) with the average production of 8.3 quintal per household. The lowest yield crop is Maize having an average production of 1.8 quintal per household. Details are given in Table 4.14.

Table 4.14.

Table 4.14 Average Yield of Major Crops

S. No.	Type of Crops	No. of HH	% of HH	Total Yield (Quintal)	Average Yield (Quintal)
1	Pulses (Dal)	67	54.47	554	8.3
2	Rice	54	43.90	701	12.9
3	Maize	65	52.85	119	1.8
4	Ground Nut	51	41.46	127	2.5

Source: Socioeconomic Survey, March, 2021

4.3.8 Average Annual Income

The average annual household income of surveyed households is INR 2,39,940.00. The economy of the households of the subproject area is predominantly dependent on agriculture and wage labour (each 56.10% of HHs) followed by professional service (30.89% of HHs), business (26.02% of HHs), private service/job (24.39% of HHs) and Government Job (14.63% of HHs). In terms of the amount of average annual income, agriculture have the highest average (INR 198966.67) followed by govt. service/job holders (INR 144666.67). Details are given in Table 4.15.

Table 4.15 Average Annual Income

S. No.	Source of Income	No. of HH	% of HHs	Average Annual Income (in Rs.)
1	Agriculture	69	56.10	198966.67
2	Government Job	18	14.63	144666.67
3	Private Job	30	24.39	111100.00
4	Business	32	26.02	110187.50
5	Wage Labour	69	56.10	43695.65
6	Professional service	38	30.89	75868.42
7	Pension	12	9.76	21916.67
8	Others	10	8.13	16000.00
Total HH		123		2,39,940.00

Source: Socioeconomic Survey, March, 2021

4.3.9 Average Annual Expenditure

The findings show that the annual average expenditure per household in the subproject area is INR 1,94,653 out of which the major expenditure is incurred on food (40.2%). This is followed by expenditure on transportation (11.0%) and clothing (7.5%). Health and education account for 4.4% and 6.5% of the average expenditure respectively. Details are given in Table 4.16.

Table 4.16 Average Annual Expenditure

S. No.	Type of Expenditure	Average Annual Expenditure (in Rs.)	%
1	Food	78250.50	40.2
2	Transportation/Conveyance	21411.83	11.0
3	Clothing	14598.97	7.5
4	Health	8564.73	4.4
5	Education	12652.44	6.5
6	Interest payment on loans	973.26	0.5
7	Social functions/festival	6812.85	3.5
8	Agriculture (such as seeds, hiring of farm implements etc.)	13236.40	6.8

S. No.	Type of Expenditure	Average Annual Expenditure (in Rs.)	%
9	Minor consumer items (Soap, powder)	6618.20	3.4
10	Electric Bill	4866.32	2.5
11	House Maintenance	4282.36	2.2
12	Animal Husbandry	2919.79	1.5
13	Fuel/LPG Gas	14598.97	7.5
14	Others	4866.32	2.5
Grand TOTAL		1,94,653	100.00

Source: Socioeconomic Survey, March, 2021

4.3.10 Possession of Durable Goods

The commonly possessed durable goods among the surveyed households in the subproject area are mobile (95.93%), television (90.24%), gas connection (82.11%), Bicycle (85.37%) etc. Majority of the surveyed households have motor cycle/scooter (78.86%). However, lesser households have luxury items such as refrigerators (23.58%), computer/laptop (26.83%), washing machine (46.34%), and car (7.32%).

The survey also obtained information on use of the durable goods by gender. The findings show that items such as radio, mobile, television, and refrigerator is used by both men and women of the family. However, goods such as bicycles, tractor, pump set with generator and motor cycle/scooter are mainly used by men member of the family while washing machines and gas is mainly used by the women members of the family. Details are given in Table 4.17.

Table 4.17 Possession of Durable Goods

S. No.	Particulars	% of HHs	Uses by %		
			Men	Women	Both
1	Radio	34.96	4.50	3.00	92.50
2	Mobile	95.93	3.50	2.05	94.45
3	Bicycle	85.37	86.5	5.0	8.5
4	Tractor	4.07	92.5	0.0	7.5
5	Pump set with generator	21.14	84.45	0.0	15.55
6	Television	90.24	1.04	1.50	97.46
7	L.P.G Connection/Gas Cylinder	82.11	1.35	97.46	1.19
8	Computer/laptop	26.83	64.48	3.07	32.45
9	Refrigerator	23.58	1.15	4.30	94.55
10	Washing Machine	46.34	0.5	86.44	13.06
11	Motor cycle/Scooter	78.86	97.35	0.97	1.68
12	Car	7.32	88.48	0.0	11.52
Total Households			123		

Source: Socioeconomic Survey, March, 2021

4.3.11 Household Indebtedness

Among the households in the subproject area, it was revealed during the consultation that people are usually not in the habit of taking loan unless and until it is of emergency. During the survey 11 households reported that they took loans, out of which 8 households taken the loan from the Bank whereas 3 households have taken the loan from the Self-Help Groups (SHGs) available in the villages. They were not comfortable to share the information regarding details of loan such as amount taken and interest rate etc.

Table 4.18 Loan Taken from Different Sources

S. No.	Source	No. of HH	Average Amount Taken (in Rs.)	Interest Rate
1	Bank	8	NA	NA
2	SHG	3	NA	NA

Source: Socioeconomic Survey, March, 2021

4.3.12 Benefits from Schemes

The household survey collected gender disaggregated information regarding coverage of development schemes and financial inclusion. The finding shows that about 73.17% of households have benefitted under development schemes. Most of the benefits (85.5%) are availed by women members of the family. Qualitative information during consultation reveals that most of the women members got the ration card under the 'Antyodya' scheme. Regarding the financial inclusion it was reported that almost 95.12% households have bank account. Majority (66.67%) of households have separate accounts for man and woman in the family. In 6.45% families only men members have bank accounts; and in 5.51% families only women members have bank accounts. Details are given in Table 4.19.

Table 4.19 Coverage under Development Schemes

S. No.	Particulars	% of HHs	Beneficiary by %			
			Men	Women	Both	Joint
1	HHs benefitted under development schemes	73.17	4.05	85.50	10.45	NA
2	Families having bank account	95.12	6.45	5.51	66.67	21.37

Source: Socioeconomic Survey, March, 2021

The survey collected information on coverage of social protection schemes such as social or health insurance in the subproject area. The finding shows that only 17.89% have social or health insurance schemes. Of the households having insurance schemes, in about 31.82% cases schemes mainly cover the men while only in 13.64% cases the insurance covers the women and in about 54.55% cases the insurance covers both the men and women members. Details are given in Table 4.20.

Table 4.20 Insurance Status

S. No.	Particulars	% of HHs	Beneficiary by %		
			Men	Women	Both
1	HHs having social/ health insurance scheme	17.89	31.82	13.64	54.55
Total HHs			123		

Source: Socioeconomic Survey, March, 2021

4.3.13 Major Illness

In the subproject area, only one household reported that their family member experienced major illness related to Kidney problem during the last one year. Qualitative information from the consultations underscores the fact that people in the area are usually healthy due to good food habits. Some of the people in the area had COVID-19 during the last one year. Details are given in Table 4.21.

Table 4.21 Type of major illness

S. No.	Type of Disease/ Illness	No. of HH	%
1	Kidney problem	01	0.81
Total HHs		123	

Source: Socioeconomic Survey, March, 2021

4.3.14 Engagement of Women in Various Activities

All the surveyed households reported that women are engaged in household work where they spend most of their time. A sizeable proportion of households reported that women are also engaged in cultivation (32.52%), agricultural labour (14.63%), non-agricultural labour (33.33%) and animal husbandry (6.50%). Details are given in Table 4.22.

Table 4.22 Type of Activities for Women

S. No.	Activities	No. of HH	%
1	Cultivation	40	32.52
2	Trade & Business	6	4.88
3	Agricultural Labour	18	14.63
4	Non-Agricultural Labour	41	33.33
5	Small home-based enterprises run by women	7	5.69
6	Service	3	2.44
7	Household Work	123	100.0
8	Animal Husbandry	8	6.50
9	Diary/Poultry/Sheep rearing	8	6.50
Total HHs		123	

Source: Socioeconomic Survey, March, 2021

4.3.15 Women's Voice in Decision Making

Regarding women's voice in decision making, almost all the surveyed households in the subproject area reported that women are actively involved in decision making on various aspects concerned to family such as health & education of children, financial matters, purchase of assets and every day activities of the family. Details are given in Table 4.23.

Table 4.23 Women's Say in Decision Making

S. No.	Issues	No. of HH	%
1	Financial Matters	117	95.12
2	Education of Child	113	91.87
3	Health Care of Child	119	96.75
4	Purchase of assets	109	88.62
5	Day to day activities	119	96.75
6	On social functions and marriages	98	79.67
Total HHs		123	

Source: Socioeconomic Survey, March, 2021

4.3.16 Status of Electricity

All surveyed households (100%) in the sub project area are electrified. Details are given in Table 4.24.

Table 4.24 Status on Electrification

S. No.	Particulars	No. of HH	%
1	Electrified Houses	123	100
Total HHs		123	

Source: Socioeconomic Survey, March, 2021

The main source of electrification is government grid and electricity is supplied from the government grid. Electrification of the households has been done long time ago. As per the findings of the survey, average households have been electrified for the last 27 years. The availability of electricity is not an issue as the average hours of availability of electricity is reported to be 20.7 hours in a day. Details are given in Table 4.25.

Table 4.25 Average Usage Pattern of Electricity

S. No.	Particulars	Numbers
1	Average Years of Electrification	27
2	Average Hours of Availability of Electricity Per Day	20.7

Source: Socioeconomic Survey, March, 2021

Households mainly use electricity for lighting purposes. As per the findings of survey all the households in the subproject area use the electricity for lighting purpose. Only one household reported that they are using electricity for cooking purposes. There are 34 households who use electricity for pumping water for agricultural purposes. Details are given in Table 4.26.

Table 4.26 Purpose of Electricity Use

S. No.	Purpose	No. of HH	%
1	Lighting	123	100.0
2	Cooking	1	0.81
3	Pumping Water for Agriculture	34	27.64
Total HHs		123	

Source: Socioeconomic Survey, March, 2021

Almost all the households (99.18%) are satisfied with the current electricity supply & availability to the households.

4.3.17 Other Alternate Fuel Consumption

Majority (59.35%) of households uses other non-electric energy sources even the availability of electricity in the house is good. About 8.94% of the households use kerosene/diesel for household activities. Use of battery (8.13%) and gas (42.28%) as non-electric energy sources is also reported by some households. Details are given in Table 4.27.

Table 4.27 Non-Electric Energy Sources

S. No.	Source of Usage	No. of HH	%
1	Kerosene/Diesel	11	8.94
2	Battery	10	8.13
3	LPG Gas	52	42.28
Total HHs		123	

Source: Socioeconomic Survey, March, 2021

5 CONSULTATION

5.1 Consultations

Informal public consultations were carried out with the villagers along the proposed T/L in order to ensure that the affected people and other stakeholders are informed and consulted during the social assessment.

5.2 Objective of Consultations

Following are the objectives of the public consultations:

- Make people aware about the project and its potential impacts with proposed mitigation measures.
- Understand the opinions of the people affected, with respect to the loss of land, assets and compensation.
- Establish detailed cooperation for the successful execution of the project between all stakeholders
- To enhance awareness about the implementation schedule, compensation methods, grievances redress mechanism etc. and obtaining opinions on continued participation.

5.3 Public Consultations in the sub-project Area

Public Consultations were carried out along the transmission line from 19th to 23rd December 2020. These activities were conducted at 18 locations through informal public meetings having a total 116 participants (95 male participants and 21 female participants). Summary details on the locations and number of participants are provided in

Table 5.1 and the summary findings of the consultations are provided in Table 5.2. Details on each public consultation along with the responses and list of participants are provided in Annexure II.

Findings of the consultations suggest that there is a mixed opinion about the proposed project where some people raise their concern about the potential loss of land, lack of knowledge of the criteria for compensation estimation, and delay in the receipt of compensation.

Table 5.1 Locations and Participants (Public Consultations)

S.No	Nearest Tower No.	Village Name	Panchayat	Taluk	Number of Participants		
					Male	Female	Total
1	1	Lakshmipuram	Kulichettipatti	Nilakottai	12	0	12
2	8	Pillayarnatham	Pillayarnatham	Nilakottai	2	1	3
3	17	Silkvarpatti	Silkvarpatti	Nilakottai	2	0	2
4	28	Kattunayakanpatti	Nariyuthu	Nilakottai	3	1	4
5	28	Sillalapatti	Ammanayakanur	Nilakottai	2	1	3
6	37	Samburakottai	Samburakottai	Nilakottai	3	2	5
7	50/0	Kendichempatti	Seevalsiragu	Athoor	5	0	5
8	52/2	Jeevalsaraju Pudukkottai Village	Jeevalsaragu	Athoor	3	1	4

9	55	Munnilaikottai	Ariyanallur	Aathur	3	1	4
10	58/2	Koothampatti	Veerakal	Athoor	3	2	5
11	63	Konoor	Konoor	Dindigul	20	2	22
12	70/0	S Vadipatti	Silvarpatti	Dindigul	12	2	14
13	72/6	Ramakaundapatti	Kurunatha-nayakanur	Dindigul	6	0	6
14	72/6	Poolangulam	Nadupatti	Dindigul	4	2	6
15	78/2 78/1	Sullerumbu	Sullerumbu	Dindigul	5	2	7
16	95	Nachiappar Gaundar Valasu	Sindhalapatti	Dindigul	3	2	5
17	100	Chinnaiyagoundan Valasu	Mandavadi	Oddan-chatram	2	1	3
18	103/2	Perumal Koil Valasu	Poosaripatti	Oddan-chatram	5	1	6
		Total			95	21	116

Table 5.2 Summary Findings of Public Consultations

Issues Discussed	People's View and Perception
General Perception about the project	<ul style="list-style-type: none"> Most of the villagers were well aware of the proposed T/L project. People in general are feeling that the proposed T/L should not traverse agriculture land.
Support of local people for the proposed project	<ul style="list-style-type: none"> The people of the villages welcome the project. However, they demand proper compensation for the land owners for the loss they would incur. The project affected persons (PAPs) do not welcome the project due to the loss they would incur in terms of land, yield and income. <p>It was explained during the consultations that there would be no permanent impact on crop land and yield due to the project. In addition to providing compensation for the loss of standing crops and trees during construction, the landowner can continue the farming activities after the construction is over.</p>
Critical issue and concern by the local people for the project	<ul style="list-style-type: none"> Since most of the villagers are not aware about the exact location and RoW of the proposed T/L, people are expressing their concerns towards loss of their land and crop. It was explained during the consultations that such information will be shared with the affected people by the field official once the owner of the land is identified through Village Administrative Officer. In a few villages the people have limited knowledge / awareness of the grievance redress mechanism to present their concerns to the concerned authority.
Criteria to be considered during project design, operation stage and construction	<ul style="list-style-type: none"> The alignment of the route should be done in such a way that the T/L passes through barren land rather than agriculture land. It would be of great relief if the towers of the T/L are located in government land.
Employment potential due to project	<ul style="list-style-type: none"> The project is being executed by migrant workers from other states rather than from the local area. The T/L can lead to development of new industries and factories, but there is no guarantee that contractor would hire people from the villages along the line.

Compensation expected in case of loss of crops	<ul style="list-style-type: none"> Majority of the people expressed their concern on delay in receipt of compensation. It was explained that the process of payment of compensation is time consuming as assessment of affected land, tree and crop and other processes takes time. In a few villages it was shared that the local lawyers are instigating some affected people to demand higher compensation.
Perceived loss	<p>The following concerns were raised by the participants due to erection of towers in the agriculture land</p> <ul style="list-style-type: none"> Hindrance to the agriculture activities Land cannot be used for constructing houses or any other commercial buildings Land cannot be used for growing tall trees within the row Difficulty in ploughing the field <p>It was explained that 100% of the land value would be compensated for the restriction of land below the tower base and there would be no change of land ownership. The landowner can continue the farming activities after the construction is over.</p>
Health and Safety issues	<p>Some of the villagers mentioned the following health and safety issues:</p> <ul style="list-style-type: none"> The transmission line is unsafe during lightning or heavy rain. During rainy seasons, the current gets carried through the water droplets The power line could cause health concerns to farmers who spend most of the day in their land. <p>It was informed during the consultations that all the appropriate mitigation steps would be taken into account in compliance with international safety standards.</p>

5.4 Gender Consultation in the sub-project Area

Gender Consultations were carried out at some villages along the transmission line from 08th March to 12th March 2021. A total of 9 gender consultations were conducted with a total 34 women participants. The details on the locations and number of participants are provided in Table 5.3 and the summary findings of the consultations are provided in Table 5.4. Details on each gender consultation along with the responses and list of participants are provided in Annexure III.

Table 5.3 Locations and number of participants for Gender Consultations

S. No	Village Name	Panchayat	Taluk	No. of Participants
1	Lakshmipuram	Kulichettipatti	Nilakottai	4
2	Pillayarnatham	Pillayarnatham	Nilakottai	6
3	Silkvarpatti	Silkvarpatti	Nilakottai	5
4	Kattunayakan Patti	Nariyuthu	Nilakottai	3
5	Veerakal	Veerakal	Aathoor	4
6	Munnilaikottai	Munnilaikottai	Aathoor	3
7	Nettiyapatti	Mangarai	Dindigul	3
8	Muthunaickenpatti	Muthunaickenpatti	Oddanchatram	3
9	Perumal Koil Valasu	Poosaripatty	Oddanchatram	3
	Total			34

Table 5.4 Summary Findings of Gender Consultations

Issues Discussed	People's View and Perception
Primary occupation of women	<ul style="list-style-type: none"> • Agricultural wage labour • Non-Agriculture wagemlabour • Small business owners
Natures of jobs mainly performed by the women members	<ul style="list-style-type: none"> • They are involved in agricultural work, mostly assisting their husbands in the field. • Women are also involved in small scale businesses such as convenient stores and small restaurants.
Inequality in the receipt of wages, payments for the work that the women perform	<ul style="list-style-type: none"> • In majority of the villages, their wages are less than the men workers due to the kind of work and ability to undertake certain works.
Role of women in the decision-making of the HH	<ul style="list-style-type: none"> • In most of the villages, women are given equal opportunity as that of men in making decisions at home. • All decisions are made by the head of the family after consultation with the women members of the family.
Views and concerns about the project	<ul style="list-style-type: none"> • Loss of income for the land owner due to loss of land from erection of towers • Damage to lands due to movement of vehicles • In some villages, the women are unaware of the project <p>It was explained that 100% of the land value would be compensated for the restriction of land below the tower base. Also, there will be compensation for the loss of standing crops and trees during construction,</p>
Health and Safety issues	<ul style="list-style-type: none"> • No health issues were expressed by the participants during the consultation.

ANNEXURE I – PUBLIC CONSULTATION FINDINGS

Public Consultation - 1

Public Consultation 1	
Name of the Transmission Line package	Reach-II - KEC International Limited
Type of TL line (New/revised)	Revised
Village	Silkvarpatti
Tehasil/Mandal	Nilakottai
District	Dindigul
Distance from the Line (km)	200m
Date of Consultation	19.12.2020
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	The project is beneficial however, there are losses to few of our village people on whose land the towers would be erected
Do you support this Project	Yes.
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	80 5 Acre
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. 35 100%
What is average hours of electricity per day for domestic consumption?	24
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	80 Households 300 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Ground nut, Flowers (Jasmine and Chrysanthemum), Maize
Average Yielding of the major crops and how many season and what is the price per quintals	Ground nut - 1500 Kg/Acre Flowers - 800 Kg/Acre
How do you think that the project will benefit you	It won't benefit us as the line won't supply electricity to our village
What negative impacts do you think the project will have	Loss of land leading to low income, effect due to electric field, electrocution if the line falls down
What are your main concerns/issues about the project	The compensation for loss of land should be estimated in a proper manner.
Can you suggest how best to address your concerns/issues	Avoid agriculture land
Specifically, what concerns/issues do you have on the implementation of the project	The electric field would affect the people who work in the field under the line. The land value will reduce due to the passage of line. Less land will be available for agriculture The agriculture production will lessen due to the tower erection and trees cannot be planted under the line.
How safe do you think or consider the Transmission?	It is not safe

Public Consultation 1	
Any criteria you would like to be considered for project design, construction and operation stage?	The lands should not be damaged due to the movement of vehicle over agriculture land.
How long have you been living in this area?	35 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	Loss of employment w.r.t agriculture labours due to loss of land
How can women participate more in the project and What is needed to ensure that women can participate in the project?	A representation from the women self help group should be present during the consultation process
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	

List of Participants

Name of Village		Silkvarpatti			
No. of Participants		Total 2 (Male-2 and Female-0)			
S.No	Name	Age	Sex	Education	Occupation
1	Ranganaidu	52	Male	Graduate	Farmer
2	Arumairaj	43	Male	12th Grade	Farmer

Public Consultation - 2

Public Consultation 2	
Name of the Transmission Line package	Reach-II - KEC International Limited
Type of TL line (New/revised)	Revised
Village	Kattunayakanpatti
Tehasil/Mandal	Nilakottai
District	Dindigul
Distance from the Line (km)	300m
Date of Consultation	20.12.2020
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	There is no benefit to the village people due to the project, but it will benefit the development of our state
Do you support this Project	Most of the respondents support the project.
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	150 4 Acre
Are all houses electrified? Yes/No	Yes.
For how many years, the village is electrified?	40
What % of village is electrified	100%
What is average hours of electricity per day for domestic consumption?	20

Public Consultation 2	
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	150 Households 1000 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Maize, Groundnut
Average Yielding of the major crops and how many season and what is the price per quintals	Ground nut - 1500 Kg/Acre Maize - 35 Bags /Acre
How do you think that the project will benefit you	It won't benefit us as the line won't supply electricity to our village
What negative impacts do you think the project will have	Loss of land and livelihood for marginal farmers
What are your main concerns/issues about the project	The compensation should be estimated in a proper manner.
Can you suggest how best to address your concerns/issues	Provide proper compensation to the affected persons
Specifically, what concerns/issues do you have on the implementation of the project	The electric field would affect the people who work in the field under the line. Less land will be available for agriculture.
How safe do you think or consider the Transmission?	Not sure of the safety of transmission line
Any criteria you would like to be considered for project design, construction and operation stage?	None
How long have you been living in this area?	36 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	Not sure about the impact to women
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	

List of Participants

Name of Village		Kattunayakanpatti			
No. of Participants		Total 4 (Male-3 and Female-1)			
S. No	Name	Age	Sex	Education	Occupation
1	Murugesan	48	Male	8th Grade	Farmer
2	Rajamani	43	Female	8th Grade	Farmer
3	Pandiaraj	45	Male	8th Grade	Farmer
4	Irudhayaraj	45	Male	5th Grade	Farmer

Public Consultation - 3

Public Consultation 3	
Name of the Transmission Line package	Reach-II - KEC International Limited
Type of TL line (New/revised)	Revised
Village	Lakshmipuram
Tehasil/Mandal	Nilakottai
District	Dindigul
Distance from the Line (km)	150m
Date of Consultation	19.12.2020
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	There is no benefit to the village people due to the project, but it will benefit the development of our state
Do you support this Project	Even if we object the project, there won't be any change in the implementation of the project
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	200 2 Acre
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. 25 100%
What is average hours of electricity per day for domestic consumption?	24
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	200 Households 1500 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Flowers (Jasmine and Chrysanthemum), Groundnut
Average Yielding of the major crops and how many season and what is the price per quintals	Ground nut - 1500 Kg/Acre Flowers - 800 Kg/Acre
How do you think that the project will benefit you	It would support the development of industries in the surrounding area
What negative impacts do you think the project will have	Loss of land to the land owners whose livelihood depends on the agricultural yield
What are your main concerns/issues about the project	Agricultural activity would be limited due to restriction on the type of crops to be cultivated under the line.
Can you suggest how best to address your concerns/issues	The towers can be realigned a bit further away from the village from its current location
Specifically, what concerns/issues do you have on the implementation of the project	The electric field would affect the people who work in the field under the line. Less land will be available for agriculture.
How safe do you think or consider the Transmission?	It may not safe.
Any criteria you would like to be considered for project design, construction and operation stage?	None
How long have you been living in this area?	28 years

Public Consultation 3	
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	The monthly income of the family of the land owner will be affected
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	

List of Participants

Name of Village		Lakshmpuram			
No. of Participants		Total 12 (Male-12 and Female-0)			
S.No	Name	Age	Sex	Education	Occupation
1	Rajendran	65	Male	12th Grade	Retired Teacher
2	Tulasimanikandan	40	Male	8th Grade	Farmer
3	Azhagar	65	Male	5th Grade	Farmer
4	Karuthakannan	65	Male	5th Grade	Farmer
5	Maharaj	40	Male	Illiterate	Farmer
6	Elumalai	39	Male	Graduate	Farmer
7	Anbazhagan	28	Male	Graduate	Finance Sector
8	Raman	65	Male	5th Grade	Labourer
9	Subbaiah	39	Male	7th Grade	Labourer
10	Sasikumar	40	Male	12th Grade	Farmer
11	Jagatheeshkumar	34	Male	12th Grade	Flouriculturist
12	Jagadeesh	27	Male	8th Grade	Farmer

Public Consultation - 4

Public Consultation 4	
Name of the Transmission Line package	Reach-II - KEC International Limited
Type of TL line (New/revised)	Revised
Village	Jeevalsaraju Pudukkottai
Tehasil/Mandal	Aathoor
District	Dindigul
Distance from the Line (km)	400m
Date of Consultation	20.12.2020
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	The project is required for the economic growth of the region

Public Consultation 4	
Do you support this Project	Yes, we support the project, but proper compensation should be given to affected people of our village
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	500 3 Acre
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. 30 100%
What is average hours of electricity per day for domestic consumption?	24
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	500 Households 4000 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Maize, Groundnut
Average Yielding of the major crops and how many season and what is the price per quintals	Ground nut - 1500 Kg/Acre Maize - 35 Bags /Acre
How do you think that the project will benefit you	It will improve the economic status of the areas where the industries are to be developed, but it won't bring any change to our village.
What negative impacts do you think the project will have	Loss of land and limitation in the type of crop to be cultivated under the line.
What are your main concerns/issues about the project	Land estimation for compensation is done at lower cost
Can you suggest how best to address your concerns/issues	The tower can be shifted to a barren land
Specifically, what concerns/issues do you have on the implementation of the project	The electric field and the buzzing noise from the conductors (corona effect) may affect the people who work in the field under the line. Less land will be available for agriculture.
How safe do you think or consider the Transmission?	It may not be safe
Any criteria you would like to be considered for project design, construction and operation stage?	Try to erect the towers on barren lands than in agriculture land
How long have you been living in this area?	35 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	Not sure how the project would affect women
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	

List of Participants

Name of Village		Jeevalsaraju Pudukkottai			
No. of Participants		Total 4 (Male-3 and Female-1)			
S.No	Name	Age	Sex	Education	Occupation
1	Muthuraj	39	Male	10th Grade	Farmer
2	Ilavarasi	35	Female	10th Grade	Farmer
3	Selvaraj	52	Male	5th Grade	Farmer
4	Jesuraj	36	Male	12th Grade	Worker
5	Rajkumar	47	Male	10th Grade	Business

Public Consultation - 5

Public Consultation 5	
Name of the Transmission Line package	Reach-II - KEC International Limited
Type of TL line (New/revised)	Revised
Village	Kendichempatti
Tehasil/Mandal	Aathoor
District	Dindigul
Distance from the Line (km)	400m
Date of Consultation	20.12.2020
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	The project is required for the development of our district and region.
Do you support this Project	Yes. We support the project
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	100 3 Acre
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. 25 100%
What is average hours of electricity per day for domestic consumption?	24
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	100 Households 400 persons
What is the general economic activities in the area	Agriculture and Wage Labour
What are the major crops and how many crops you cultivate in a year?	Maize and Cockscomb
Average Yielding of the major crops and how many season and what is the price per quintals	Cockscomb - 6 Tonne/Acre Maize - 35 Bags /Acre
How do you think that the project will benefit you	The project would not benefit us directly as the project does not distribute power to the village
What negative impacts do you think the project will have	Due to the project the water level will recede

Public Consultation 5	
What are your main concerns/issues about the project	The estimation for compensation should be done properly.
Can you suggest how best to address your concerns/issues	The tower can be shifted few meters away.
Specifically, what concerns/issues do you have on the implementation of the project	The electric field will affect the people of the village, the land value will be affected due to passage of transmission line.
How safe do you think or consider the Transmission?	Transmission lines are not considered to be safe
Any criteria you would like to be considered for project design, construction and operation stage?	The location of towers shall be shifted further away.
How long have you been living in this area?	35 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	Not sure how the project would affect women
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	

List of Participants

Name of Village		Kendichempatti			
No. of Participants		Total 5 (Male-5 and Female-0)			
S.No	Name	Age	Sex	Education	Occupation
1	Balaraman	58	Male	5th Grade	Farmer
2	Perumal	48	Male	5th Grade	Tea Shop
3	Kalaiaarasu	48	Male	6th Grade	Labourer
4	Arul	39	Male	10th Grade	Farmer
5	Ganesan	42	Male	8th Grade	Labourer

Public Consultation - 6

Public Consultation 6	
Name of the Transmission Line package	Reach-II - KEC International Limited
Type of TL line (New/revised)	Revised
Village	Samburakottai
Tehasil/Mandal	Nilakottai
District	Dindigul
Distance from the Line (km)	300m
Date of Consultation	21.12.2020
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	The project will benefit the state but not our village.

Public Consultation 6	
Do you support this Project	Yes. We welcome this government sponsored project
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	600 3 Acre
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. 30 100%
What is average hours of electricity per day for domestic consumption?	24
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	600 Households 2500 persons
What is the general economic activities in the area	Agriculture and Wage Labour
What are the major crops and how many crops you cultivate in a year?	Jasmine
Average Yielding of the major crops and how many season and what is the price per quintals	Flowers - 800 Kg/Acre
How do you think that the project will benefit you	The project will create loss in terms of agriculture yield due to limitation in the plantation of trees beneath the line
What negative impacts do you think the project will have	The land value will reduce
What are your main concerns/issues about the project	The compensation should be given as promised.
Can you suggest how best to address your concerns/issues	-
Specifically, what concerns/issues do you have on the implementation of the project	The land value will reduce and the complete land cannot be utilized to the fullest extent due to tower erection.
How safe do you think or consider the Transmission?	Transmission lines are not safe
Any criteria you would like to be considered for project design, construction and operation stage?	A preliminary consultation with the village people should be conducted
How long have you been living in this area?	50 Years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	None
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	

List of Participants

Name of Village		Samburakottai			
No. of Participants		Total 5 (Male-3 and Female-2)			
S.No	Name	Age	Sex	Education	Occupation
1	Elango	47	Male	5th Grade	Labourer
2	Saraswathi	42	Female	8th Grade	Labourer
3	Muthukumar	45	Male	8th Grade	Farmer
4	Jayaseelan	38	Male	Graduate	Finance Sector
5	Muthammal	36	Female	8th Grade	Labourer

Public Consultation - 7

Public Consultation 7	
Name of the Transmission Line package	Reach-II - KEC International Limited
Type of TL line (New/revised)	Revised
Village	Koothampatti
Tehasil/Mandal	Athoor
District	Dindigul
Distance from the Line (km)	350m
Date of Consultation	21.12.2020
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	The project is necessary but the alignment can be rerouted
Do you support this Project	Yes, we welcome the project as it is necessary for the development of our state
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	800 2.5 Acre
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. 30 100%
What is average hours of electricity per day for domestic consumption?	24
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	800 Households 4000 persons
What is the general economic activities in the area	Agriculture and Wage Labour
What are the major crops and how many crops you cultivate in a year?	Maize and Dal
Average Yielding of the major crops and how many season and what is the price per quintals	Maize - 35 Bags /Acre Dal - 20 bags / acre
How do you think that the project will benefit you	It will not benefit us but it will benefit the government
What negative impacts do you think the project will have	The project will affect the land value

Public Consultation 7	
What are your main concerns/issues about the project	Proper compensation estimation should be done.
Can you suggest how best to address your concerns/issues	By making proper estimation for compensation.
Specifically, what concerns/issues do you have on the implementation of the project	The land value will reduce and no buyers would come forward to buy the land.
How safe do you think or consider the Transmission?	The project would affect due to damage to the power lines
Any criteria you would like to be considered for project design, construction and operation stage?	Avoidance of agriculture land should be given importance at the planning stage.
How long have you been living in this area?	48 Years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cash would help us greatly
What will be the impacts of the project on women and men?	None
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	

List of Participants

Name of Village		Koothampatti			
No. of Participants		Total 5 (Male-3 and Female-2)			
S.No	Name	Age	Sex	Education	Occupation
1	Sellamuthu	45	Male	10th Grade	Farmer
2	Muthulakshmi	35	Female	12th Grade	Farmer
3	Perumal	60	Male	10th Grade	Farmer
4	Muthamma	52	Female	Illiterate	Farmer
5	Palanisamy	49	Male	12th Grade	Business

Public Consultation - 8

Public Consultation 8	
Name of the Transmission Line package	Reach-II - KEC International Limited
Type of TL line (New/revised)	Revised
Village	Konoor
Tehasil/Mandal	Dindigul
District	Dindigul
Distance from the Line (km)	400m
Date of Consultation	21.12.2020
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	We don't have opinion.
Do you support this Project	Yes, we welcome the project as it is necessary for the development of our state

Public Consultation 8	
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	800 4 Acre
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. 30 100%
What is average hours of electricity per day for domestic consumption?	23
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	800 Households 4000 persons
What is the general economic activities in the area	Agriculture and Wage Labour
What are the major crops and how many crops you cultivate in a year?	Maize
Average Yielding of the major crops and how many season and what is the price per quintals	Maize - 35 Bags /Acre
How do you think that the project will benefit you	There is not benefit for us due to the project
What negative impacts do you think the project will have	The loss of land will affect many people
What are your main concerns/issues about the project	Hindrance to agriculture Damage to path should be restored,
Can you suggest how best to address your concerns/issues	The concerns mentioned should be addressed properly either by the contractor or the project official.
Specifically, what concerns/issues do you have on the implementation of the project	The agriculture practice and the production will be affected.
How safe do you think or consider the Transmission?	The passage of transmission cannot be considered safe for our village people
Any criteria you would like to be considered for project design, construction and operation stage?	Avoidance of agriculture land should be given importance at the planning stage.
How long have you been living in this area?	65 Years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	A monetary compensation in any form is fine with us as long as the compensation is properly estimated and paid on time.
What will be the impacts of the project on women and men?	We are not sure how it will affect the women.
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	

List of Participants

Name of Village	Konoor				
No. of Participants	Total 22 (Male-20 and Female-2)				
S.No	Name	Age	Sex	Education	Occupation

1	Rajeswari	46	Female	10th Grade	Labourer
2	Muthulakshmi	42	Female	8th Grade	Labourer
3	Sakthivel	36	Male	12th Grade	Farmer
4	Adhilingam	63	Male	8th Grade	Farmer
5	Veeritham	52	Male	8th Grade	Farmer
6	Muthiah	48	Male	8th Grade	Farmer
7	Ganapathy	28	Male	6th Grade	Farmer
8	Mottaisamy	45	Male	5th Grade	Farmer
9	Gopalsamy	45	Male	5th Grade	Farmer
10	Jayaram	62	Male	3rd Grade	Labourer
11	T. Ganapathy	63	Male	5th Grade	Labourer
12	P. Thirumalaisamy	62	Male	8th Grade	Labourer
13	V. Parumal	62	Male	5th Grade	Labourer
14	K. Marimuthu	65	Male	8th Grade	Labourer
15	Arumugam	64	Male	8th Grade	Labourer
16	Santhamani	60	Male	6th Grade	Labourer
17	Venkataraman	62	Male	5th Grade	Labourer
18	Velusamy	54	Male	8th Grade	Labourer
19	Elangovan	52	Male	10th Grade	Tea Shop
20	Murugesan	48	Male	12th Grade	Business

Public Consultation - 9

Public Consultation 9	
Name of the Transmission Line package	Reach-II - KEC International Limited
Type of TL line (New/revised)	Revised
Village	Ramagaundan Patti
Tehasil/Mandal	Dindigul
District	Dindigul
Distance from the Line (km)	
Date of Consultation	09.03.2024
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	We have no opinion on the project
Do you support this Project	It is a government project. Even if we oppose it the project will be implemented.
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	100 3 Acre
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. 40 100%
What is average hours of electricity per day for domestic consumption?	20

Public Consultation 9	
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	110 Households 600 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Maize and Onion
Average Yielding of the major crops and how many season and what is the price per quintals	Maize - 35 Bags /Acre Onion - 3.5 tonne/acre
How do you think that the project will benefit you	There won't be any benefit due to the project
What negative impacts do you think the project will have	The land would be lost for cultivation due to tower erection.
What are your main concerns/issues about the project	Hindrance to agriculture No proper estimation of compensation for land loss
Can you suggest how best to address your concerns/issues	The compensation should be given in time
Specifically, what concerns/issues do you have on the implementation of the project	The agriculture practice and the production will be affected.
How safe do you think or consider the Transmission?	With the passage of transmission of power, it cannot be considered safe for our village people.
Any criteria you would like to be considered for project design, construction and operation stage?	Conducting a consultation with the village people would be better, before the start of the work.
How long have you been living in this area?	50 Years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	A monetary compensation in any form would be accepted
What will be the impacts of the project on women and men?	There won't be much of an impact on women
Is the consultation useful	Yes, it was very useful.
Do you think that the local people would like to get regular information regarding the Project?	Yes, of course
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	

List of Participants

Name of Village		Ramagoundanpatti			
No. of Participants		Total 6 (Male-6 and Female-0)			
S.No	Name	Age	Sex	Education	Occupation
1	Palanisamy	56	Male	10th Grade	Farmer
2	Murugan	50	Male	5th Grade	Farmer
3	Selvaraj	52	Male	8th Grade	Farmer
4	Rengasamy	56	Male	8th Grade	Farmer
5	Subramani	54	Male	10th Grade	Farmer
6	Palanisamy	68	Male	5th Grade	Farmer

Public Consultation - 10

Public Consultation 10	
Name of the Transmission Line package	Reach-II - KEC International Limited
Type of TL line (New/revised)	Revised
Village	Poolangulam
Tehasil/Mandal	Dindigul
District	Dindigul
Distance from the Line (km)	500m
Date of Consultation	21.12.2020
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	We only heard through some discussion with our neighbouring village
What is your opinion about this Project	We don't want the project to be implemented
Do you support this Project	We may welcome if the towers are erected on the barren land which are present on the other side of the village lake.
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	70 1.5 Acre
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. 48 100%
What is average hours of electricity per day for domestic consumption?	18
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	70 Households 200 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Rice
Average Yielding of the major crops and how many season and what is the price per quintals	Rice - 15 quintal per acre
How do you think that the project will benefit you	The project will not benefit us
What negative impacts do you think the project will have	The land would be lost for cultivation hence the livelihood will be affected.
What are your main concerns/issues about the project	Hindrance to agriculture
Can you suggest how best to address your concerns/issues	We don't have any suggestions
Specifically, what concerns/issues do you have on the implementation of the project	The agriculture practice and the production will be affected.
How safe do you think or consider the Transmission?	The project is not safe
Any criteria you would like to be considered for project design, construction and operation stage?	None
How long have you been living in this area?	45
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Only if the project is implemented in our village we can talk about compensation.

Public Consultation 10	
What will be the impacts of the project on women and men?	There may be some impact on their health due to the radiation from the power lines
Is the consultation useful	Yes, it was very useful as we now know that the line will surely pass through our village land
Do you think that the local people would like to get regular information regarding the Project?	Yes, of course
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	

List of Participants

Name of Village		Poolangulam			
No. of Participants		Total 6 (Male-4 and Female-2)			
S.No	Name	Age	Sex	Education	Occupation
1	Perumalsaamy	59	Male	5th Grade	Farmer
2	Selvaraj	57	Male	5th Grade	Labourer
3	Mayilsamy	59	Male		Labourer
4	Manikandan	48	Male	10th Grade	Farmer
5	Annapooranam	45	Female	8th Grade	Homemaker
6	Meenakshi	49	Female	10th Grade	Farmer

Public Consultation - 11

Public Consultation 11	
Name of the Transmission Line package	Reach-II - KEC International Limited
Type of TL line (New/revised)	Revised
Village	S Vadipatti
Tehasil/Mandal	Dindigul
District	Dindigul
Distance from the Line (km)	21.12.2020
Date of Consultation	09.03.2026
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes, we have heard about the project.
What is your opinion about this Project	If the project benefits our state, then it is good.
Do you support this Project	We will welcome the project if the compensation estimation is made right.
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	60 2 Acre
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. 50 100%
What is average hours of electricity per day for domestic consumption?	20
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No

Public Consultation 11	
What is the composition of People in the Village? Number of total households: Population of the Village:	65 Households 300 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Maize
Average Yielding of the major crops and how many season and what is the price per quintals	Maize - 36 Bags /Acre
How do you think that the project will benefit you	We don't know how the project will benefit our village
What negative impacts do you think the project will have	The land would be lost for cultivation and the livelihood may be affected.
What are your main concerns/issues about the project	Hindrance to agriculture Land value will reduce
Can you suggest how best to address your concerns/issues	It would be good if they realign the stretch
Specifically, what concerns/issues do you have on the implementation of the project	The agriculture will be affected. The land will be damaged due to construction work The land value will reduce due to the project
How safe do you think or consider the Transmission?	The villagers do not consider the line to be safe
Any criteria you would like to be considered for project design, construction and operation stage?	They can increase the height of the conductors.
How long have you been living in this area?	55
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Compensation by cash would help us in our agricultural investments
What will be the impacts of the project on women and men?	Not sure about the impact to women
Is the consultation useful	Yes, it was useful to know about the project
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	

List of Participants

Name of Village		S Vadipatti			
No. of Participants		Total 14 (Male-12 and Female-2)			
S.No	Name	Age	Sex	Education	Occupation
1	Mariappan	55	Male	5th Grade	Labourer
2	Subramani	48	Male	8th Grade	Labourer
3	Nagaraj	45	Male	10th Grade	Labourer
4	Palaniammal	41	Female	8th Grade	Homemaker
5	Manimekalai	50	Female	5th Grade	Homemaker
6	Ponnusamy	43	Male	8th Grade	Farmer
7	Murugesan	42	Male	10th Grade	Labourer

8	Jaykumar	40	Male	12th Grade	Worker
9	Subramanian	56	Male	5th Grade	Tea Shop
10	Chinnasamy	51	Male	8th Grade	Farmer
11	Murugan	43	Male	10th Grade	Farmer
12	Gunasekaran	67	Male	8th Grade	Labourer
13	Palanisamy	65	Male	5th Grade	Labourer
14	Perumal	57	Male	10th Grade	Labourer

Public Consultation - 12

Public Consultation 12	
Name of the Transmission Line package	Reach-II - KEC International Limited
Type of TL line (New/revised)	Revised
Village	Pillayarnatham
Tehasil/Mandal	Nilakottai
District	Dindigul
Distance from the Line (km)	450m
Date of Consultation	20.12.2020
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	The project is beneficial however, a few of our village people will be affected on whose land the towers would be erected
Do you support this Project	Most of the respondents support the project.
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	300 2 Acre
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. 35 100%
What is average hours of electricity per day for domestic consumption?	22
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	300 Households 1000 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Chrysanthemum, Maize, Groundnut and Sorghum
Average Yielding of the major crops and how many season and what is the price per quintals	Chrysanthemum- 4500 Kg/Acre Sorghum 900 kg /Acre
How do you think that the project will benefit you	It won't benefit us as the line won't supply electricity to our village
What negative impacts do you think the project will have	Loss of land and Market value of land will decrease
What are your main concerns/issues about the project	Few expressed that compensation amount should be higher.
Can you suggest how best to address your concerns/issues	There should be higher compensation amount for land

Public Consultation 12	
Specifically, what concerns/issues do you have on the implementation of the project	We can't grow trees since the height is the major concern in the TL project
How safe do you think or consider the Transmission?	T/L will be causing noise during cloudy and rainy season
Any criteria you would like to be considered for project design, construction and operation stage?	The land should be restored after construction of tower
How long have you been living in this area?	64 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	There may be impact to women.
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	

List of Participants

Name of Village		Pillayarnatham			
No. of Participants		Total 3 (Male-2 and Female-1)			
S.No	Name	Age	Sex	Education	Occupation
1	Kandasamy	65	Male	SSLC	Farmer
2	Rajathi	55	Female	8th Grade	Homemaker
3	Radhakrishnan	48	Male	10th Grade	Farmer

Public Consultation - 13

Public Consultation 13	
Name of the Transmission Line package	Reach-II - KEC International Limited
Type of TL line (New/revised)	Revised
Village	Samburakottai
Tehasil/Mandal	Nilakottai
District	Dindigul
Distance from the Line (km)	350m
Date of Consultation	20.12.2020
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	There is no benefit to the village people due to the project, but it will benefit the development of our state
Do you support this Project	Most of the respondents support the project.
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	300 2 Acre

Public Consultation 13	
Are all houses electrified? Yes/No	Yes.
For how many years, the village is electrified?	50
What % of village is electrified	100%
What is average hours of electricity per day for domestic consumption?	22
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	125 Households 650 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Chrysanthemum, Maize, Groundnut, Cotton, Vegetables Bajra Dwar dall, Small onion and Sorghum
Average Yielding of the major crops and how many season and what is the price per quintals	Ground nut - 750 Kg/Acre Cotton - 600 /Acre
How do you think that the project will benefit you	It won't directly benefit us
What negative impacts do you think the project will have	Loss of land and Market value of land will be decreased
What are your main concerns/issues about the project	Appropriate compensation should be given
Can you suggest how best to address your concerns/issues	Provide higher compensation to the affected persons
Specifically, what concerns/issues do you have on the implementation of the project	Tall trees for wood and fruit cannot grow under TL Loss of income
How safe do you think or consider the Transmission?	It may not safe
Any criteria you would like to be considered for project design, construction and operation stage?	The land should be restored after construction
How long have you been living in this area?	40 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	Not sure about the impact to women
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	

List of Participants

Name of Village	Samburakottai				
No. of Participants	Total 5 (Male-3 and Female-2)				
S.No	Name	Age	Sex	Education	Occupation

1	Elango	47	Male	5th Grade	Labourer
2	Saraswathi	42	Female	8th Grade	Labourer
3	Muthukumar	45	Male	8th Grade	Farmer
4	Jayaseelan	38	Male	Graduate	Finance Sector
5	Muthammal	36	Female	8th Grade	Labourer

Public Consultation - 14

Public Consultation 14	
Name of the Transmission Line package	Reach-II - KEC International Limited
Type of TL line (New/revised)	Revised
Village	Munnilaikottai
Tehasil/Mandal	Athoor
District	Dindigul
Distance from the Line (km)	400m
Date of Consultation	20.12.2020
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	There is no benefit to the village people due to the project, but it will benefit the development of our state
Do you support this Project	Most of the respondents support the project.
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	150 2.5 Acre
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. 50 100%
What is average hours of electricity per day for domestic consumption?	21
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	300 Households 650 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Chrysanthemum, Maize, Groundnut, Cotton, Vegetables Bajra Dwar dall, Small onion and Sorghum
Average Yielding of the major crops and how many season and what is the price per quintals	Ground nut - 800 Kg/Acre Cotton - 600 /Acre
How do you think that the project will benefit you	It won't benefit us directly
What negative impacts do you think the project will have	Reduction in land market value
What are your main concerns/issues about the project	Heard through some known persons that some delay in getting compensation
Can you suggest how best to address your concerns/issues	Provide higher compensation to the affected persons
Specifically, what concerns/issues do you have on the implementation of the project	Less land may be available for agriculture.

Public Consultation 14	
How safe do you think or consider the Transmission?	Not sure of the safety of transmission line
Any criteria you would like to be considered for project design, construction and operation stage?	The land should be restored after construction of tower
How long have you been living in this area?	36 years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	Not sure about the impact to women
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	

List of Participants

Name of Village		Munnalakottai			
No. of Participants		Total 4 (Male-3 and Female-1)			
S.No	Name	Age	Sex	Education	Occupation
1	Charles	41	Male	12th Grade	Pvt Sector
2	Amalrani	36	Female	9th Grade	Labourer
3	Govindraaj	32	Male	5th Grade	Business
4	Nagaraj	50	Male	6th Grade	Tea Stall

Public Consultation - 15

Public Consultation 15	
Name of the Transmission Line package	Reach-II - KEC International Limited
Type of TL line (New/revised)	Revised
Village	Sillalapatti
Tehasil/Mandal	Nilakottai
District	Dindigul
Distance from the Line (km)	550m
Date of Consultation	21.12.2020
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	There is no benefit to the village people due to the project, but it will benefit the development of our state
Do you support this Project	Most of the respondents support the project.
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	80 2 Acre
Are all houses electrified? Yes/No	Yes.
For how many years, the village is electrified?	50
What % of village is electrified	100%

Public Consultation 15	
What is average hours of electricity per day for domestic consumption?	22
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	80 Households 300 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Chrysanthemum, Maize, Groundnut, Cotton, Vegetables Bajra Dwar dall, Small onion and Sorghum
Average Yielding of the major crops and how many season and what is the price per quintals	Maize -500 Kg/Acre Groundnut - 750Kg /Acre Cotton - 500 /Acre Small Onion - 2000 kg /Acre
How do you think that the project will benefit you	It won't benefit us directly
What negative impacts do you think the project will have	Loss of land and decrease in market value of land
What are your main concerns/issues about the project	Some delay in payment of compensation
Can you suggest how best to address your concerns/issues	Provide proper compensation to the affected persons
Specifically, what concerns/issues do you have on the implementation of the project	Tall trees for wood and fruit cannot grow due to the height of TL line
How safe do you think or consider the Transmission?	Not sure of the safety of transmission line
Any criteria you would like to be considered for project design, construction and operation stage?	The land should be restored after construction
How long have you been living in this area?	28 Years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	Not sure about the impact to women
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	

List of Participants

Name of Village		Sillalapatti			
No. of Participants		Total 3 (Male-2 and Female-1)			
S.No	Name	Age	Sex	Education	Occupation
1	Arulraj	42	Male	8th Grade	Farmer
2	Kumari	38	Female	10th Grade	Farmer
3	Marimuthu	45	Male	6th Grade	Farmer

Public Consultation - 16

Public Consultation 16	
Name of the Transmission Line package	Reach-II - KEC International Limited
Type of TL line (New/revised)	Revised
Village	Nachiappar Gaundar Valasu
Tehasil/Mandal	Oddanchatram
District	Dindigul
Distance from the Line (km)	150m
Date of Consultation	22.12.2020
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	There is no benefit to the village people due to the project, but it will benefit the development of our state
Do you support this Project	Most of the respondents support the project.
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	160 3 Acre
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. 50 100%
What is average hours of electricity per day for domestic consumption?	19
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	160 Households 700 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Maize, Groundnut, Cotton, Vegetables Gloriosa superba Small onion and Sorghum
Average Yielding of the major crops and how many season and what is the price per quintals	Sorghm -750 Kg/Acre Groundnut - 750Kg /Acre Cotton - 500 /Acre Gloriosa perba- 1000 kg /Acre
How do you think that the project will benefit you	It won't benefit us
What negative impacts do you think the project will have	Loan will not be sanctioned while T/L RoW passes through the land
What are your main concerns/issues about the project	Some delay in payment of compensation
Can you suggest how best to address your concerns/issues	Provide higher compensation to the affected persons
Specifically, what concerns/issues do you have on the implementation of the project	Tall trees for wood and fruit cannot grow due to the height of TL project, Loss of income from agriculture
How safe do you think or consider the Transmission?	May not fully safe
Any criteria you would like to be considered for project design, construction and operation stage?	The land should be restored after construction of tower
How long have you been living in this area?	31 Years

Public Consultation 16	
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	Not sure about the impact to women
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	

List of Participants

Name of Village		Nachiappar Gaundar Valasu			
No. of Participants		Total 5 (Male-3 and Female-2)			
S.No	Name	Age	Sex	Education	Occupation
1	Karuppannan	62	Male	5th Grade	Farmer
2	Kannagi	60	Female	5th Grade	Farmer
3	Elango	49	Male	8th Grade	Farmer
4	Shanmugapriya	37	Female	10th Grade	Farmer
5	Veerappan	45	Male	10th Grade	Farmer

Public Consultation - 17

Public Consultation 17	
Name of the Transmission Line package	Reach-II - KEC International Limited
Type of TL line (New/revised)	Revised
Village	Chinnaiyagoundan Valasu
Tehasil/Mandal	Oddanchatram
District	Oddanchatram
Distance from the Line (km)	400m
Date of Consultation	23.12.2020
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	There is no benefit to the village people due to the project, but it will benefit the development of our state
Do you support this Project	Most of the respondents support the project.
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	300 3 Acre
Are all houses electrified? Yes/No	Yes.
For how many years, the village is electrified?	50
What % of village is electrified	100%
What is average hours of electricity per day for domestic consumption?	18

Public Consultation 17	
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	300 Households 1000 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Maize, Groundnut, Cotton, Vegetables, Small onion and Sorghum
Average Yielding of the major crops and how many season and what is the price per quintals	Groundnut - 750Kg /Acre Cotton - 500 /Acre Small Onion - 2000 kg /Acre
How do you think that the project will benefit you	It won't benefit us directly
What negative impacts do you think the project will have	It would be difficult to sale the land having tower.
What are your main concerns/issues about the project	There should be direct involvement of the concerned officers for estimation of compensation.
Can you suggest how best to address your concerns/issues	Provide proper compensation to the affected persons
Specifically, what concerns/issues do you have on the implementation of the project	Market value for land will reduce
How safe do you think or consider the Transmission?	The transmission line may not be safe for us
Any criteria you would like to be considered for project design, construction and operation stage?	The lands should not be damaged due to the movement of vehicle.
How long have you been living in this area?	47 Years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	Not sure about the impact to women.
Is the consultation useful	Yes
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	

List of Participants

Name of Village		Chinnaiyagoundan Valasu			
No. of Participants		Total 3 (Male-2 and Female-1)			
S.No	Name	Age	Sex	Education	Occupation
1	Chellamuthu	52	Male	8th Grade	Labourer
2	Malar	39	Female	12th Grade	Shopkeeper
3	Ganesan	52	Male	8th Grade	Launderman

Public Consultation - 18

Public Consultation 18	
Name of the Transmission Line package	Reach-II - KEC International Limited

Public Consultation 18	
Type of TL line (New/revised)	Revised
Village	Perumal Koil Valasu
Tehasil/Mandal	Oddanchatram
District	Oddanchatram
Distance from the Line (km)	400m
Date of Consultation	24.12.2020
Type of Area (Rural/Urban)	Rural
Have you heard about the Project or Do you have any information about the project	Yes. The villagers are aware of the project
What is your opinion about this Project	It is a good project for development of industries and factories and create job opportunities
Do you support this Project	The villagers support the project
Total households in the village and how many approximately have agriculture land and what is the average landholding size?	400 4 Acre
Are all houses electrified? Yes/No For how many years, the village is electrified? What % of village is electrified	Yes. 45 100%
What is average hours of electricity per day for domestic consumption?	20
Do you face any problem regarding current electric supply as far as your home connection is concerned?	No
What is the composition of People in the Village? Number of total households: Population of the Village:	400 Households 1200 persons
What is the general economic activities in the area	Agriculture
What are the major crops and how many crops you cultivate in a year?	Maize and Small onion
Average Yielding of the major crops and how many season and what is the price per quintals	Maize – 37 bags/Acre Small Onion - 2000 kg /Acre
How do you think that the project will benefit you	It won't benefit our village directly
What negative impacts do you think the project will have	The land value will reduce due to the power line
What are your main concerns/issues about the project	Proper compensation should be given for the land value.
Can you suggest how best to address your concerns/issues	Provide higher compensation to the affected persons
Specifically, what concerns/issues do you have on the implementation of the project	Reduction of market value for land, Tall trees for wood and fruit cannot grow due to the height of TL project
How safe do you think or consider the Transmission?	The transmission line may not be safe
Any criteria you would like to be considered for project design, construction and operation stage?	The land should be restored after work is over
How long have you been living in this area?	48 Years
Are there any indigenous people/ tribal people or ethnic minority living in this area?	None
What kind of compensation will you be expecting (cash or kind) in case of crop and trees damage?	Cheque
What will be the impacts of the project on women and men?	Not sure about the impact to women.
Is the consultation useful	Yes

Public Consultation 18	
Do you think that the local people would like to get regular information regarding the Project?	Yes
Would you support and participate during the implementation of Project?	Yes
Any suggestion/opinion, etc.	

List of Participants

Name of Village		Perumal Koil Valasu			
No. of Participants		Total 6 (Male-5 and Female-1)			
S.No	Name	Age	Sex	Education	Occupation
1	Ravi	45	Male	8th Grade	Farmer
2	Komala	41	Female	10th Grade	Farmer
3	Kuppusamy	40	Male	5th Grade	Farmer
4	Sivasamy	54	Male	10th Grade	Farmer
5	Karuppursamy	55	Male	5th Grade	Farmer
6	Lakshmanan	73	Male	12th Grade	Farmer

ANNEXURE II - GENDER CONSULTATION FINDINGS

Gender Consultation - 1

Gender Consultation 1	
Name of the Transmission Line Package	Reach-II - KEC International Limited
Type of TL Line (New/Revised)	Revised
Village	Silkvarpatti
Tehsil	Nilakottai
District	Dindigul
Distance from the Line (km)	0.85
Date of Consultation	09.03.2021
Type of Area (Rural/Urban)	Rural
Where do you live and how long have you lived there?	Fifty years
What is the primary occupation?	Wage labour (Agriculture & non-agriculture), private jobs, self-employed business)
Please tell us as to how you spend your time (daily routine)?	Household activities, assisting husband in agriculture activities and in family business
Opinion on the importance of education for the people and specifically of the girls and women in your area.	Better income opportunity
Educational level of community people in your locality/area.	Secondary and higher secondary
Types of education facilities (formal and non formal education, its distance) available in the village / neighborhood and parent's perception on quality of education. Access and services to the girls.	Presence of higher secondary school for good education. The village has good access to education facilities for girls.
Reasons for non-enrolment and dropout amongst children & youth. (Male & Female)	None
Perceived importance of girl's education and reasons for sending/not sending girls to school	All the girls in the villages go to peruse education realizing the importance of education in the society
Type of engagement of children in household activities (try to know about the girls) and the extent to which they directly contribute to the earning of the household (type of occupations engaged in).	Assisting in household activities
Existing skills and traditional skills amongst the adolescent girls and women that must be revived /encouraged.	handcrafts
What are the barriers in terms of resources, availability, transport, locations of trainings if any, for pursuing vocational courses by women of your community? Also, the barriers from the family side (like lack of time, etc).	None
Is there any organization, government, private or NGO running any vocational courses for the adolescents and women in area?	Yes
Do the women of the households in the community have ownerships of the property in the community, like houses, land, etc? The reasons for having or not having ownership rights.	Yes, Inheritance from parental property
Is there is any form of inequality in the receipt of wages, payments, rewards, etc for the work that the	Yes, Based on skills and the kind of work

Gender Consultation 1	
women perform? What are the underlying factors for this prevalence of inequalities?	
Is the woman who are working and earning have the ultimate decision on the use of their money?	Yes
What role do the women of the household have in the decision-making process of the household? Do you feel you have equal share along with the male counterpart in any household decisions?	They are involved in the decision making for children education and monthly household budgeting. Their ideas and suggestions are considered by the head of the family in decision making
Is there any form of inequality or the cases of male dominating the women in the decision-making process at the household level?	Occasionally yes
Is there any community-based organization (like NGO's, SHGs, etc) for the women of your community? If yes, what are the activities of those organizations and the role of the women in it?	Yes, there are SHGs who provide support for education of girls in the village.
Do the women of your community are members of any political bodies? If yes what role they play in terms of their involvement and participation?	Yes, they are involved in explaining the political party's ideology during local meetings
General health facilities available and the perceived satisfaction on quality of services & affordability.	PHCs are present in the village
Types of commonly prevalent diseases among the community? Are there any specific ailments affecting the women of your community?	None
Is there any provision of special health care services available near to your village/ neighborhood? If yes, perception on the quality of care.	They are of good quality
Do the women feel safe in going outside in the neighborhood during day time and night time? What are the problems or fears they perceived for their movements?	They feel safe going outside during day and night times
Do the women face any kind of domestic violence at their home? If yes what are the reasons?	Sometimes men come home drunk and indulge in domestic violence.
Is dowry system prevalent among your community? Do the women of your community face problems for marriage of their girls due to dowry? What is their perception on this system?	Not common in this village
General Remarks if any	

List of Participants

Name of Village		Silukkuvarpatti	
No. of Women Participants		5	
List of Women Participant			
S. No	Name	Relation to the head of the HH	Occupation
1	Shanthi	Wife	Tailor
2	Kanmani	Wife	Homemaker
3	Sudha	Wife	Personal Assistant
4	Soosaiamma	Wife	Shopkeeper

5	Vasanthi	Wife	Petty trade
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Gender Consultation - 2

Gender Consultation 2	
Name of the Transmission Line Package	Reach-II - KEC International Limited
Type of TL Line (New/Revised)	Revised
Village	Nettiyapatti
Tehsil	Dindigul
District	Dindigul
Distance from the Line (km)	0.2
Date of Consultation	09.03.2021
Type of Area (Rural/Urban)	Rural
Where do you live and how long have you lived there?	Fifty years
What is the primary occupation?	Wage labour (Agriculture & non-agriculture)
Please tell us as to how you spend your time (daily routine)?	Meeting with other women in the village at a common place, household chores
Opinion on the importance of education for the people and specifically of the girls and women in your area.	It is very important for the future of the girls of our village
Educational level of community people in your locality/area.	Higher secondary to graduate degree holders
Types of education facilities (formal and non formal education, its distance) available in the village / neighborhood and parent's perception on quality of education. Access and services to the girls.	Primary school facilities is present in the village
Reasons for non-enrolment and dropout amongst children & youth. (Male & Female)	Financial problem
Perceived importance of girl's education and reasons for sending/not sending girls to school	It is very important of the girls to get educated for empowerment
Type of engagement of children in household activities (try to know about the girls) and the extent to which they directly contribute to the earning of the household (type of occupations engaged in).	Assist in HH activity
Existing skills and traditional skills amongst the adolescent girls and women that must be revived /encouraged.	handcrafts
What are the barriers in terms of resources, availability, transport, locations of trainings if any, for pursuing vocational courses by women of your community? Also, the barriers from the family side (like lack of time, etc).	Unavailability of proper transport facility, access to training institutes
Is there any organization, government, private or NGO running any vocational courses for the adolescents and women in area?	Yes
Do the women of the households in the community have ownerships of the property in the community, like houses, land, etc? The reasons for having or not having ownership rights.	Yes. women of the village have ownership of property.
Is there is any form of inequality in the receipt of wages, payments, rewards, etc for the work that the women perform? What are the underlying factors for this prevalence of inequalities?	No inequality

Gender Consultation 2	
Is the woman who are working and earning have the ultimate decision on the use of their money?	Yes
What role do the women of the household have in the decision-making process of the household? Do you feel you have equal share along with the male counterpart in any household decisions?	They are given equal importance in decision making in the family
Is there any form of inequality or the cases of male dominating the women in the decision-making process at the household level?	None
Is there any community-based organization (like NGO's, SHGs, etc) for the women of your community? If yes, what are the activities of those organizations and the role of the women in it?	Yes, there are SHGs who provide support for education of girls in the village.
Do the women of your community are members of any political bodies? If yes what role they play in terms of their involvement and participation?	None
General health facilities available and the perceived satisfaction on quality of services & affordability.	None in the village
Types of commonly prevalent diseases among the community? Are there any specific ailments affecting the women of your community?	None
Is there any provision of special health care services available near to your village/ neighborhood? If yes, perception on the quality of care.	None
Do the women feel safe in going outside in the neighborhood during day time and night time? What are the problems or fears they perceived for their movements?	They feel safe going outside during day and night times
Do the women face any kind of domestic violence at their home? If yes what are the reasons?	Sometimes men come home drunk and indulge in domestic violence.
Is dowry system prevalent among your community? Do the women of your community face problems for marriage of their girls due to dowry? What is their perception on this system?	Not encouraged/entertained in the village.
General Remarks if any	

List of Participants

Name of Village		Nettiyapatti	
No. of Women Participants		3	
List of Women Participant			
S. No	Name	Relation to the head of the HH	Occupation
1	Nagammal	Wife	Homemaker
2	Ponnammal	Wife	Homemaker
3	Vellaiammaal	Wife	Homemaker

Gender Consultation - 3

Gender Consultation 3	
Name of the Transmission Line Package	Reach-II - KEC International Limited
Type of TL Line (New/Revised)	Revised
Village	Veerakal
Tehsil	Athoor
District	Dindigul
Distance from the Line (km)	0.4
Date of Consultation	08.03.2021
Type of Area (Rural/Urban)	Rural
Where do you live and how long have you lived there?	Thirty-Five Years
What is the primary occupation?	Animal husbandry
Please tell us as to how you spend your time (daily routine)?	Household activity, Gathering at common place
Opinion on the importance of education for the people and specifically of the girls and women in your area.	Important for the girl's life
Educational level of community people in your locality/area.	Degree holders
Types of education facilities (formal and non formal education, its distance) available in the village / neighborhood and parent's perception on quality of education. Access and services to the girls.	School is good
Reasons for non-enrolment and dropout amongst children & youth. (Male & Female)	None as all girls are encouraged to go to school
Perceived importance of girl's education and reasons for sending/not sending girls to school	It is very important for the girls to get educated for financial independence
Type of engagement of children in household activities (try to know about the girls) and the extent to which they directly contribute to the earning of the household (type of occupations engaged in).	Sometimes assist in household work
Existing skills and traditional skills amongst the adolescent girls and women that must be revived /encouraged.	Handicraft
What are the barriers in terms of resources, availability, transport, locations of trainings if any, for pursuing vocational courses by women of your community? Also, the barriers from the family side (like lack of time, etc).	Transport
Is there any organization, government, private or NGO running any vocational courses for the adolescents and women in area?	Yes
Do the women of the households in the community have ownerships of the property in the community, like houses, land, etc? The reasons for having or not having ownership rights.	None
Is there is any form of inequality in the receipt of wages, payments, rewards, etc for the work that the women perform? What are the underlying factors for this prevalence of inequalities?	No inequality is observed in the village
Is the woman who are working and earning have the ultimate decision on the use of their money?	Yes

Gender Consultation 3	
What role do the women of the household have in the decision-making process of the household? Do you feel you have equal share along with the male counterpart in any household decisions?	They are given equal importance in decision making in the family
Is there any form of inequality or the cases of male dominating the women in the decision-making process at the household level?	None
Is there any community-based organization (like NGO's, SHGs, etc) for the women of your community? If yes, what are the activities of those organizations and the role of the women in it?	Yes, there are SHGs who provide support for girl child's education.
Do the women of your community are members of any political bodies? If yes what role they play in terms of their involvement and participation?	None
General health facilities available and the perceived satisfaction on quality of services & affordability.	Yes
Types of commonly prevalent diseases among the community? Are there any specific ailments affecting the women of your community?	None
Is there any provision of special health care services available near to your village/ neighborhood? If yes, perception on the quality of care.	None
Do the women feel safe in going outside in the neighborhood during day time and night time? What are the problems or fears they perceived for their movements?	Yes, they feel safe
Do the women face any kind of domestic violence at their home? If yes what are the reasons?	No
Is dowry system prevalent among your community? Do the women of your community face problems for marriage of their girls due to dowry? What is their perception on this system?	Not entertained in the village
General Remarks if any	

List of Participants

Name of Village		Veerakal	
No. of Women Participants		4	
List of Women Participant			
S. No	Name	Relation to the head of the HH	Occupation
1	Jayalakshmi	Wife	Worker
2	Reginamary	Wife	Shopkeeper
3	Muthuselvi	Wife	Worker
4	Thiruveni	Wife	Homemaker

Gender Consultation - 4

Gender Consultation 4	
Name of the Transmission Line Package	Reach-II - KEC International Limited
Type of TL Line (New/Revised)	Revised
Village	Kattunayakan Patti
Tehsil	Nilakottai
District	Dindigul
Distance from the Line (km)	0.3
Date of Consultation	08.03.2021
Type of Area (Rural/Urban)	Rural
Where do you live and how long have you lived there?	Thirteen Years
What is the primary occupation?	Farming
Please tell us as to how you spend your time (daily routine)?	household work
Opinion on the importance of education for the people and specifically of the girls and women in your area.	At least to know their basic right through education
Educational level of community people in your locality/area.	Mostly up to Secondary level of education
Types of education facilities (formal and non formal education, its distance) available in the village / neighborhood and parent's perception on quality of education. Access and services to the girls.	Primary school within Village. Secondary Education at the distance of 3 KM. Problem in the transport facilities
Reasons for non-enrolment and dropout amongst children & youth. (Male & Female)	Family situation
Perceived importance of girl's education and reasons for sending/not sending girls to school	Good for skill development
Type of engagement of children in household activities (try to know about the girls) and the extent to which they directly contribute to the earning of the household (type of occupations engaged in).	Sometimes assist in household work
Existing skills and traditional skills amongst the adolescent girls and women that must be revived /encouraged.	Devar aattam (Traditional dance)
What are the barriers in terms of resources, availability, transport, locations of trainings if any, for pursuing vocational courses by women of your community? Also, the barriers from the family side (like lack of time, etc).	Transportation not good
Is there any organization, government, private or NGO running any vocational courses for the adolescents and women in area?	Yes, Child voice
Do the women of the households in the community have ownerships of the property in the community, like houses, land, etc? The reasons for having or not having ownership rights.	None
Is there is any form of inequality in the receipt of wages, payments, rewards, etc for the work that the women perform? What are the underlying factors for this prevalence of inequalities?	No inequality is observed in the village
Is the woman who are working and earning have the ultimate decision on the use of their money?	Yes
What role do the women of the household have in the decision-making process of the household? Do	They are given equal importance in decision making in the family

Gender Consultation 4	
you feel you have equal share along with the male counterpart in any household decisions?	
Is there any form of inequality or the cases of male dominating the women in the decision-making process at the household level?	None
Is there any community-based organization (like NGO's, SHGs, etc) for the women of your community? If yes, what are the activities of those organizations and the role of the women in it?	Yes, Educating women
Do the women of your community are members of any political bodies? If yes what role they play in terms of their involvement and participation?	None
General health facilities available and the perceived satisfaction on quality of services & affordability.	None
Types of commonly prevalent diseases among the community? Are there any specific ailments affecting the women of your community?	None
Is there any provision of special health care services available near to your village/ neighborhood? If yes, perception on the quality of care.	Yes, Good
Do the women feel safe in going outside in the neighborhood during day time and night time? What are the problems or fears they perceived for their movements?	Yes, they feel safe
Do the women face any kind of domestic violence at their home? If yes what are the reasons?	No
Is dowry system prevalent among your community? Do the women of your community face problems for marriage of their girls due to dowry? What is their perception on this system?	Not entertained in the village
General Remarks if any	

List of Participants

Name of Village		Kattunayakampatti	
No. of Women Participants		3	
List of Women Participant			
S. No	Name	Relation to the head of the HH	Occupation
1	B.Sharmila	Wife	Homemaker
2	M. Sandhiya	Wife	Homemaker
3	Lakshmi	Daughter	Student

Gender Consultation - 5

Gender Consultation 5	
Name of the Transmission Line Package	Reach-II - KEC International Limited
Type of TL Line (New/Revised)	Revised

Gender Consultation 5	
Village	Munnilaikottai
Tehsil	Athoor
District	Dindigul
Distance from the Line (km)	0.3
Date of Consultation	08.03.2021
Type of Area (Rural/Urban)	Rural
Where do you live and how long have you lived there?	Six years
What is the primary occupation?	Farming and Agri or Non Agri wage labour
Please tell us as to how you spend your time (daily routine)?	House hold activities, child care and taking care of other livelihood activities
Opinion on the importance of education for the people and specifically of the girls and women in your area.	Women education help for self-empowerment
Educational level of community people in your locality/area.	Up to Primary / Middle school education
Types of education facilities (formal and non formal education, its distance) available in the village / neighborhood and parent's perception on quality of education. Access and services to the girls.	Primary school education in the village and Secondary education facilities available in nearby area.
Reasons for non-enrolment and dropout amongst children & youth. (Male & Female)	None
Perceived importance of girl's education and reasons for sending/not sending girls to school	Poor financial condition of Family
Type of engagement of children in household activities (try to know about the girls) and the extent to which they directly contribute to the earning of the household (type of occupations engaged in).	Assisting family members in the farming
Existing skills and traditional skills amongst the adolescent girls and women that must be revived /encouraged.	None
What are the barriers in terms of resources, availability, transport, locations of trainings if any, for pursuing vocational courses by women of your community? Also, the barriers from the family side (like lack of time, etc).	Transportation
Is there any organization, government, private or NGO running any vocational courses for the adolescents and women in area?	None
Do the women of the households in the community have ownerships of the property in the community, like houses, land, etc. The reasons for having or not having ownership rights.	Yes, they do.
Is there is any form of inequality in the receipt of wages, payments, rewards, etc for the work that the women perform? What are the underlying factors for this prevalence of inequalities?	Yes. Perception that male do more work than female
Is the woman who are working and earning have the ultimate decision on the use of their money?	Yes
What role do the women of the household have in the decision-making process of the household? Do you feel you have equal share along with the male counterpart in any household decisions?	Yes

Gender Consultation 5	
Is there any form of inequality or the cases of male dominating the women in the decision-making process at the household level?	None
Is there any community-based organization (like NGO's, SHGs, etc) for the women of your community? If yes, what are the activities of those organizations and the role of the women in it?	Yes. Women Self Help Group
Do the women of your community are members of any political bodies? If yes what role they play in terms of their involvement and participation?	None
General health facilities available and the perceived satisfaction on quality of services & affordability.	Yes
Types of commonly prevalent diseases among the community? Are there any specific ailments affecting the women of your community?	None
Is there any provision of special health care services available near to your village/ neighborhood? If yes, perception on the quality of care.	Yes, Good
Do the women feel safe in going outside in the neighborhood during day time and night time? What are the problems or fears they perceived for their movements?	Yes, they feel safe
Do the women face any kind of domestic violence at their home? If yes what are the reasons?	Yes. Men come home drunk and indulge in domestic violence.
Is dowry system prevalent among your community? Do the women of your community face problems for marriage of their girls due to dowry? What is their perception on this system?	Rarely
General Remarks if any	

List of Participants

Name of Village		Munnalakottai	
No. of Women Participants		3	
List of Women Participant			
S. No	Name	Relation to the head of the HH	Occupation
1	Jayalakshmi	Wife	Business
2	R. Amutha	Wife	Homemaker
3	N Deepika	Daughter	Student

Gender Consultation - 6

Gender Consultation 6	
Name of the Transmission Line Package	Reach-II - KEC International Limited
Type of TL Line (New/Revised)	Revised

Gender Consultation 6	
Village	Muthunaickenpatti
Tehsil	Oddanchatram
District	Dindigul
Distance from the Line (km)	0.25
Date of Consultation	10.03.2021
Type of Area (Rural/Urban)	Rural
Where do you live and how long have you lived there?	Five years
What is the primary occupation?	Farming, Wage labour
Please tell us as to how you spend your time (daily routine)?	House hold activities, assisting in cultivation and other business carried out by family members
Opinion on the importance of education for the people and specifically of the girls and women in your area.	Must for women empowerment
Educational level of community people in your locality/area.	Middle school to Secondary level of Education
Types of education facilities (formal and non formal education, its distance) available in the village / neighborhood and parent's perception on quality of education. Access and services to the girls.	Primary, Secondary, Higher secondary available in the village.
Reasons for non-enrolment and dropout amongst children & youth. (Male & Female)	Girl child engaged in assisting family members in HH activities
Perceived importance of girl's education and reasons for sending/not sending girls to school	Education is important
Type of engagement of children in household activities (try to know about the girls) and the extent to which they directly contribute to the earning of the household (type of occupations engaged in).	Assisting in House hold activities.
Existing skills and traditional skills amongst the adolescent girls and women that must be revived /encouraged.	Yes
What are the barriers in terms of resources, availability, transport, locations of trainings if any, for pursuing vocational courses by women of your community? Also, the barriers from the family side (like lack of time, etc).	Some persons won't encourage women education after certain level.
Is there any organization, government, private or NGO running any vocational courses for the adolescents and women in area?	None
Do the women of the households in the community have ownerships of the property in the community, like houses, land, etc? The reasons for having or not having ownership rights.	None
Is there is any form of inequality in the receipt of wages, payments, rewards, etc for the work that the women perform? What are the underlying factors for this prevalence of inequalities?	Yes
Is the woman who are working and earning have the ultimate decision on the use of their money?	Not completely.
What role do the women of the household have in the decision-making process of the household? Do you feel you have equal share along with the male counterpart in any household decisions?	Yes, but not equal share along with male counterpart

Gender Consultation 6	
Is there any form of inequality or the cases of male dominating the women in the decision-making process at the household level?	Yes
Is there any community-based organization (like NGO's, SHGs, etc) for the women of your community? If yes, what are the activities of those organizations and the role of the women in it?	Yes. Assisting in women self-employment scheme
Do the women of your community are members of any political bodies? If yes what role they play in terms of their involvement and participation?	Yes. Ward Members
General health facilities available and the perceived satisfaction on quality of services & affordability.	Yes
Types of commonly prevalent diseases among the community? Are there any specific ailments affecting the women of your community?	None
Is there any provision of special health care services available near to your village/ neighborhood? If yes, perception on the quality of care.	Yes, Good
Do the women feel safe in going outside in the neighborhood during day time and night time? What are the problems or fears they perceived for their movements?	Yes.
Do the women face any kind of domestic violence at their home? If yes what are the reasons?	Yes. Due to habitual drinking some male creates domestic violence
Is dowry system prevalent among your community? Do the women of your community face problems for marriage of their girls due to dowry? What is their perception on this system?	Occasionally
General Remarks if any	

List of Participants

Name of Village		Muthunayagampatti	
No. of Women Participants		3	
List of Women Participant			
S. No	Name	Relation to the head of the HH	Occupation
1	Nagajothi	Wife	Teacher
2	Thilaka	Wife	Worker
3	Dhanalakshmi	Daughter	Student

Gender Consultation - 7

Gender Consultation 7	
Name of the Transmission Line Package	Reach-II - KEC International Limited
Type of TL Line (New/Revised)	Revised
Village	Perumal Koil Valasu
Tehsil	Oddanchatram

District	Dindigul
Distance from the Line (km)	0.35
Date of Consultation	12.03.2021
Type of Area (Rural/Urban)	Rural
Where do you live and how long have you lived there?	22 Years
What is the primary occupation?	Farming
Please tell us as to how you spend your time (daily routine)?	Studying
Opinion on the importance of education for the people and specifically of the girls and women in your area.	Education is a key tool for self-empowerment & also for development of the locality
Educational level of community people in your locality/area.	Secondary education
Types of education facilities (formal and non formal education, its distance) available in the village / neighborhood and parent's perception on quality of education. Access and services to the girls.	Primary School. Average education quality
Reasons for non-enrolment and dropout amongst children & youth. (Male & Female)	Lack of awareness about importance of education (especially for girl child)
Perceived importance of girl's education and reasons for sending/not sending girls to school	Lack of importance to education
Type of engagement of children in household activities (try to know about the girls) and the extent to which they directly contribute to the earning of the household (type of occupations engaged in).	Assist in other house hold activities
Existing skills and traditional skills amongst the adolescent girls and women that must be revived /encouraged.	None
What are the barriers in terms of resources, availability, transport, locations of trainings if any, for pursuing vocational courses by women of your community? Also, the barriers from the family side (like lack of time, etc).	Mainly lack of awareness
Is there any organization, government, private or NGO running any vocational courses for the adolescents and women in area?	None
Do the women of the households in the community have ownerships of the property in the community, like houses, land, etc? The reasons for having or not having ownership rights.	Yes
Is there is any form of inequality in the receipt of wages, payments, rewards, etc for the work that the women perform? What are the underlying factors for this prevalence of inequalities?	Yes. Perception that the male does more hard work than female.
Is the woman who are working and earning have the ultimate decision on the use of their money?	Yes
What role do the women of the household have in the decision-making process of the household? Do you feel you have equal share along with the male counterpart in any household decisions?	Yes
Is there any form of inequality or the cases of male dominating the women in the decision-making process at the household level?	None

Is there any community-based organization (like NGO's, SHGs, etc) for the women of your community? If yes, what are the activities of those organizations and the role of the women in it?	None
Do the women of your community are members of any political bodies? If yes what role they play in terms of their involvement and participation?	Yes. Ward member
General health facilities available and the perceived satisfaction on quality of services & affordability.	None
Types of commonly prevalent diseases among the community? Are there any specific ailments affecting the women of your community?	None
Is there any provision of special health care services available near to your village/ neighborhood? If yes, perception on the quality of care.	None
Do the women feel safe in going outside in the neighborhood during day time and night time? What are the problems or fears they perceived for their movements?	Yes
Do the women face any kind of domestic violence at their home? If yes what are the reasons?	None
Is dowry system prevalent among your community? Do the women of your community face problems for marriage of their girls due to dowry? What is their perception on this system?	Yes
General Remarks if any	

List of Participants

Name of Village		Perumal Koil Valasu	
No. of Women Participants		3	
List of Women Participant			
S. No	Name	Relation to the head of the HH	Occupation
1	Komala	Wife	Worker
2	Rohini	Daughter	Student
3	Jothiman	Wife	Homemaker

Gender Consultation - 8

Gender Consultation 8	
Name of the Transmission Line Package	Reach-II - KEC International Limited
Type of TL Line (New/Revised)	Revised
Village	Lakshmipuram
Tehsil	Nilakottai
District	Dindigul
Distance from the Line (km)	0.4
Date of Consultation	08.03.2021
Type of Area (Rural/Urban)	Rural

Gender Consultation 8	
Where do you live and how long have you lived there?	Thirteen years
What is the primary occupation?	Agriculture activities along with household activities
Opinion on the importance of education for the people and specifically of the girls and women in your area.	Essential for women empowerment and self-dependent
Educational level of community people in your locality/area.	Primary to Middle school Education
Types of education facilities (formal and non formal education, its distance) available in the village / neighborhood and parent's perception on quality of education. Access and services to the girls.	Primary School. Average education quality
Reasons for non-enrolment and dropout amongst children & youth. (Male & Female)	Assisting parents in day-to-day activities
Perceived importance of girl's education and reasons for sending/not sending girls to school	Lack of importance to education
Type of engagement of children in household activities (try to know about the girls) and the extent to which they directly contribute to the earning of the household (type of occupations engaged in).	Assisting in HH activities
Existing skills and traditional skills amongst the adolescent girls and women that must be revived /encouraged.	Yes
What are the barriers in terms of resources, availability, transport, locations of trainings if any, for pursuing vocational courses by women of your community? Also, the barriers from the family side (like lack of time, etc).	Transportation
Is there any organization, government, private or NGO running any vocational courses for the adolescents and women in area?	None
Do the women of the households in the community have ownerships of the property in the community, like houses, land, etc? The reasons for having or not having ownership rights.	None
Is there is any form of inequality in the receipt of wages, payments, rewards, etc for the work that the women perform? What are the underlying factors for this prevalence of inequalities?	Yes. Based on the Skill of male and female workers
Is the woman who are working and earning have the ultimate decision on the use of their money?	Yes
What role do the women of the household have in the decision-making process of the household? Do you feel you have equal share along with the male counterpart in any household decisions?	Yes
Is there any form of inequality or the cases of male dominating the women in the decision-making process at the household level?	Sometimes
Is there any community-based organization (like NGO's, SHGs, etc) for the women of your community? If yes, what are the activities of those organizations and the role of the women in it?	Yes. Work on self-employment scheme

Gender Consultation 8	
Do the women of your community are members of any political bodies? If yes what role they play in terms of their involvement and participation?	No
General health facilities available and the perceived satisfaction on quality of services & affordability.	Good
Types of commonly prevalent diseases among the community? Are there any specific ailments affecting the women of your community?	None
Is there any provision of special health care services available near to your village/ neighborhood? If yes, perception on the quality of care.	Yes, Good Care
Do the women feel safe in going outside in the neighborhood during day time and night time? What are the problems or fears they perceived for their movements?	During night time it is not safe
Do the women face any kind of domestic violence at their home? If yes what are the reasons?	Due to drinking habit some male creates domestic violence
Is dowry system prevalent among your community? Do the women of your community face problems for marriage of their girls due to dowry? What is their perception on this system?	No
General Remarks if any	

List of Participants

Name of Village			Lakshmipuram
No. of Women Participants			4
List of Women Participant			
S. No	Name	Relation to the head of the HH	Occupation
1	Azhagulakshmi	Wife	Homemaker
2	Mounika	Wife	Agriculture
3	Malarvizhi	Wife	Homemaker
4	Vijaya	Wife	Homemaker

Gender Consultation - 9

Gender Consultation 9	
Name of the Transmission Line Package	Reach-II - KEC International Limited
Type of TL Line (New/Revised)	Revised
Village	Pillaiyarnatham
Tehsil	Nilakottai
District	Dindigul
Distance from the Line (km)	0.4
Date of Consultation	08.03.2021
Type of Area (Rural/Urban)	Rural
Where do you live and how long have you lived there?	Thirty-five Years

Gender Consultation 9	
What is the primary occupation?	Farming and daily wage labours
Please tell us as to how you spend your time (daily routine)?	House hold activities, assisting in farming, animal husbandry practices along with family members
Opinion on the importance of education for the people and specifically of the girls and women in your area.	Most essential for women empowerment
Educational level of community people in your locality/area.	Primary and Middle school level
Types of education facilities (formal and non formal education, its distance) available in the village / neighborhood and parent's perception on quality of education. Access and services to the girls.	Good facilities
Reasons for non-enrolment and dropout amongst children & youth. (Male & Female)	It is not observed in this area in recent years
Perceived importance of girl's education and reasons for sending/not sending girls to school	Importance to education
Type of engagement of children in household activities (try to know about the girls) and the extent to which they directly contribute to the earning of the household (type of occupations engaged in).	Assisting in HH activities
Existing skills and traditional skills amongst the adolescent girls and women that must be revived /encouraged.	Yes
What are the barriers in terms of resources, availability, transport, locations of trainings if any, for pursuing vocational courses by women of your community? Also, the barriers from the family side (like lack of time, etc).	Women pursuing most of the facilities due to the easy transportation and family support
Is there any organization, government, private or NGO running any vocational courses for the adolescents and women in area?	Yes
Do the women of the households in the community have ownerships of the property in the community, like houses, land, etc? The reasons for having or not having ownership rights.	Yes
Is there is any form of inequality in the receipt of wages, payments, rewards, etc for the work that the women perform? What are the underlying factors for this prevalence of inequalities?	Yes.
Is the woman who are working and earning have the ultimate decision on the use of their money?	Yes
What role do the women of the household have in the decision-making process of the household? Do you feel you have equal share along with the male counterpart in any household decisions?	Sometimes provide ideas and suggestions in household decisions.
Is there any form of inequality or the cases of male dominating the women in the decision-making process at the household level?	Sometimes
Is there any community-based organization (like NGO's, SHGs, etc) for the women of your community? If yes, what are the activities of those organizations and the role of the women in it?	Yes. guide women on self-employment schemes.

Gender Consultation 9	
Do the women of your community are members of any political bodies? If yes what role they play in terms of their involvement and participation?	No
General health facilities available and the perceived satisfaction on quality of services & affordability.	Good
Types of commonly prevalent diseases among the community? Are there any specific ailments affecting the women of your community?	None
Is there any provision of special health care services available near to your village/ neighborhood? If yes, perception on the quality of care.	Yes, good
Do the women feel safe in going outside in the neighborhood during day time and night time? What are the problems or fears they perceived for their movements?	Night time is not that safe.
Do the women face any kind of domestic violence at their home? If yes what are the reasons?	Due to drinking habit some male creates domestic violence.
Is dowry system prevalent among your community? Do the women of your community face problems for marriage of their girls due to dowry? What is their perception on this system?	Yes, but not often
General Remarks if any	

List of Participants

Name of Village		Pillaiyar Natham	
No. of Women Participants		6	
List of Women Participant			
S. No	Name	Relation to the head of the HH	Occupation
1	Chinthiya	Daughter	Tutor in private college
2	Keerthana	Daughter	Tution teacher
3	Shobana	Cousin	Pvt nurse
4	Sushma	Cousin	Office assistant
5	Chellama	Daughter in law	Wage labourer
6	Rajathi	Wife	Wage labourer

Social Assessment Study for proposed erection of 110 KV DC line on DC tower from LILO of Eppodumvendran feeder to the Ottapidaram Sub-Station in Tamil Nadu

April 2021

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EXECUTIVE SUMMARY

This social assessment report is for the sub-project of 110 KV SC line on DC tower with PANTHER conductor from LILO of Eppodumvendran feeder to the proposed Ottapidaram 400/230-110 KV Substation. It is a sub-project under the construction of various transmission line assets in the State of Tamil Nadu to improve power supply to industrial demand centres in Chennai-Kanyakumari Industrial Corridor. This sub-project falls in Thoothukkudi district. The length of the sub-project area stretches 3.31km.

Social assessment of the community living in the sub-project area has been carried out using both primary data sources. Primary survey involves sample household survey in the sub-project area on key indicators. In addition, informal public consultations were carried out in three village locations to understand the views and opinions of the community regarding the sub-project and any implementation concerns for further improvement.

Secondary data have been compiled from census of India reports and government department websites to describe the district profile on relevant indicators. The assessment also describes the tower details, major crossing details, type of land to be affected due to tower construction.

The findings of the public consultations show that most of the villagers are unaware of the project. According to the community's views in the sub-project region, their key concern is the crop loss/productivity loss and depreciation of land value due to the project. Some of the people felt that there may be impacts of electromagnetic field (EMF) radiation from the line. Most of them suggested that there should be careful implementation in order to prevent damage to the crops of affected people.

During the consultation it was explained to people that in addition to providing compensation for the loss of standing crops and trees, the project provides 100 percent of the land value compensation under the tower and compensation of 20 percent of the land value under the RoW. As such there is no land acquisition involved in the sub-project and the project provides compensation for land restriction under the tower foundation. TANTRANSKO through the contractor will ensure that loss of crops on farmland can be minimal by undertaking the construction in the non-cropping season.

1. DESCRIPTION OF THE PROJECT

The proposed project work includes the erection of 110 KV SC line on DC tower with PANTHER conductor from LILO of Eppodumvendran feeder to the proposed Ottapidaram 400/230-110 KV Substation. Tamil Nadu Transmission Corporation Limited (TANTRANSCO) is the executing agency (EA) and the implementing agency (IA).

The project's impact is aligned to enhance the industrial development and renewable energy generation in Tamil Nadu. The project's outcome is to improve power supply to industrial demand centres in Chennai-Kanyakumari Industrial Corridor. The proposed project will improve operational efficiency and quality of power, reliability of the system and at the same time will reduce losses due to interconnection with TANGEDCO network and hence virtual up-gradation to higher voltage level and better voltage profile. Evacuation of power to both the local areas and regions outside the state will boost overall economic development of the state due to extra revenues generated by power sold outside the state because of availability of additional power evacuation infrastructure.

The project does not require any private land acquisition for construction of transmission lines under the proposed ADB financing components. The impacts are categorized in to two types, impacts due to tower base and impacts due to line along the RoW. The impacts are foreseen in terms of restriction of land use for tower footings but not necessarily complete loss of land under the towers. The land under towers can be used for crop cultivation. Temporary impacts are foreseen in terms of loss of crops along the RoW during the construction of transmission lines and will not lead to any land use restriction. The route map for this sub-project is shown in Figure 1-1. The proposed alignment route is finalized by considering the following aspects:

1. No. of Angle points shall be kept in minimum
2. Route should have minimum number of power line crossings (Aerial obstacles).
3. Route should have free from settlements
4. Route should have free from special cost zones
5. Route should be away from restricted area, such as Civil and Military airfield, air craft landing approaches
6. Route should avoid forest, stone quarry, villages, buildings etc.



Figure 1-1: Proposed 110 KV SC line from LILO of Eppodumvendran feeder to the proposed Ottapidaram 400/230-110 KV Substation

The salient features of the proposed transmission line along with the study area profile are listed in Table 1-1. The actual route length of the proposed line is 3.314km with a 22m wide Right of Way (RoW). This sub-project traverses one district, i.e., Thoothukkudi. The tower base and the RoW pass through three villages. The village details are presented in Table 1-2.

Table 1-1: Details of proposed Transmission Line

S. No.	Details	Description
1	Total length of the line	3.314km
2	Total number of proposed towers	Total towers – 16nos. Angle tower – 13nos. Normal towers – 3nos.
3	Major river crossing	Nil
4	Road crossings (including major & minor roads)	3nos. (between Angle Points: 1 & 2; 3 & 4 (cart track); 9 & 10)
5	Railway crossings	Nil
6	High tension (HT) line crossings	8nos. (11kV line crossing – 3nos., 33kv line crossing – 4nos., 110kV line crossing – 01nos.)
7	Districts covered by proposed transmission line	1 (Thoothukkudi)
8	Number of revenue villages in the study area	3

**Source: Field Data*

Table 1-2: List of villages covering the line area (RoW & 1km buffer area)

S. No.	Name of the villages	Taluk	District
1	Kakkarampatti	Ottapidaram	Thoothukkudi
2	Keezhameenatchipuram		
3	Lakshmipuram		

Among the total towers (angle point and normal towers), all of the towers (100%) are coming under private croplands (Table 1-3). Private crop lands are being cultivated for different food crops such as maize, black gram and pearl millet.

Table 1-3: Tower Details on Land

S. No.	Name of the Transmission Line	Length (km)	Total number of angle point towers and normal towers	Tower to be place on Government land*	Tower to be place on private waste land*	Tower to be placed on private crop land*
1	110 KV SC line on DC tower from LILO of Eppodumvendran feeder to the proposed Ottapidaram 400/230-110 KV Sub-Station	3.314	16	0 (0%)	0 (0%)	16 (100%)

*Source: Field Data.

The total number of trees to be felled or cut is observed as 34, where fruit trees are comparatively less (38%) than the non-fruit trees (62%), (Table 1-4). Fruit trees primarily include palmyrah while neem, and *Prosopis juliflora* are the major non-fruit trees. Details of the trees to be affected in the sub-project are present in Annexure 1.

Table 1-4: Number of trees to be affected

S.No.	Name of the Transmission Line	Number of fruit trees	Number of non-fruit trees	Total trees affected
1	110 KV SC line on DC tower from LILO of Eppodumvendran feeder to the proposed Ottapidaram 400/230-110 KV Sub-Station	13 (38%)	21 (62%)	34 (100%)

2. STUDY METHODOLOGY

The broad methodology adopted to undertake the social assessment is as follows:

- Collection of primary data through a sample household survey on key indicators
- Carrying out informal public consultations along the transmission lines
- Inventory surveys along transmission lines to assess the temporary impacts on loss of crops and loss of trees etc.

In the sub-project, social assessment was conducted using both primary and secondary sources. Prior to the assessment, a buffer zone of 1 km on either side of the route alignment in the sub-project area was drawn up using GIS tools and villages falling within the buffer zone were considered for the assessment. Sample household survey were held in three villages that comes along 1 km of both side of the line corridor (Table 2.1).

During the month of March 2021, sample household surveys were carried out in the sub-project area across three villages which covered 16 sample households. In addition to the household survey, public consultations were conducted in the villages.

Table 2-1: Villages considered for the assessment in the sub-project area

Name of the districts	No. of taluks covered	Name of the taluks	No. of villages (rural areas)
1	1	Ottapidaram	3
Total	1		3

3. SOCIO-ECONOMIC PROFILE

3.1. General

The respondents in the household survey are mainly males (15 HHs) than the females (1HHs). Average age of the respondents is 52 years (range: 29-76 years) in which average age of male respondents are 53 years (range: 29-76 years) and the age of one female respondent is 30 years.

3.2. District Profile

The secondary data sources include the most recent documents from the State Planning Commission and Directorate of Census Operations, Tamil Nadu, Agricultural Census during 2015-2016 period and Statistical Hand Book 2019 of Department of Economics and Statistics, Government of Tamil Nadu. The project covers only one southern districts of Tamil Nadu viz., Thoothukkudi.

In terms of population, the coastal district of Thoothukkudi is ranked 20th position. The population density in the district of Thoothukkudi is 369 people/km². Compared to the state population density (555 people/km²), the district has lower population density. The sex ratio of Thoothukkudi district (1023) is higher than that of the State sex ratio (i.e., 996). In the district, approximately half the total population lives in urban areas (50.10%).

In Thoothukkudi district, agriculture is the primary occupation. About 70% of the people in the Thoothukkudi district depend on agriculture. The main crops in the Thoothukkudi district are paddy, sorghum, pearl millet, maize, finger millet, green gram, black gram, chilli, sugarcane, onion, gingelly and groundnut. The plantation crops like palmyrah and coconut are also cultivated in this district. Table 3.1: presents data on selected indicators for the Thoothukkudi district and for the Tamil Nadu State.

Table 3-1: Profile of project affected district (Thoothukkudi) and Tamil Nadu¹⁶

Indicator/ Parameter	Thoothukkudi District	Tamil Nadu State
Total population	1,750,176	72,147,030
% of rural population	49.90	51.60
% of urban population	50.10	48.4

¹⁶Source: Census of India, 2011; State Planning Commission, Tamil Nadu (for the year 2017); Agricultural Census 2015-16; World Bank Group, 2017 (<http://documents1.worldbank.org/curated/en/380971504177733539/pdf/119267-BRI-1157572-Tamil-Nadu-Poverty.pdf>); Statistical Hand Book 2019, Department of Economics and Statistics, Government of Tamil Nadu (<https://www.tn.gov.in/deptst/stat.htm>).

Indicator/ Parameter	Thoothukkudi District	Tamil Nadu State
% of SC population	19.88	20.01
% of ST population	0.28	1.10
Sex ratio	1023	996
Literacy rate (%)	86.16	80.09
Male literacy rate (%)	91.14	86.77
Female literacy rate (%)	81.33	73.44
Life expectancy at birth (Male)	68.60	71.80
Life expectancy at birth (Female)	71.80	75.20
Infant Mortality Rate (2013-14)	12.50	22.00
Maternal Mortality Rate	105.80	66.00
% of Households covered with drinking water supply	54.14	34.90
% of Households with toilet facilities (2014)	56.67	48.29 ¹⁷
Per capita income during 2011- 12 at constant prices (In INR)	74,933	63,996
% of BPL households (2013-14)	18.33	12.00
Worker participation rate (%)	42.70	45.60
Worker participation rate (%) (Male)	58.23	59.30
Worker participation rate (%) (Female)	27.61	31.80
Total workers (Main and marginal)	748,095	32,884,681
% of cultivator	6.49	5.89
% of agriculture labourers	26.82	13.32
% workers in household industry	3.06	1.89
% of other workers	63.64	24.48
Net cultivated area (in hectares)	226,991	5,795,115
Average size of agriculture land holdings (In hectares)	1.32	0.75
Total forest area (in hectares)	14,567	2,156,574 ¹⁸

¹⁷The data is for the year 2011

¹⁸The data is for the year 2017-2018

Indicator/ Parameter	Thoothukkudi District	Tamil Nadu State
Electricity generation from thermal (in million unit)	5547.59	22868.44
Electricity generation from wind mill (in million unit)	329.41	12671.02
Number of working factories (Registered)	1036	30002
Number of small-scale industries	1346	Data not available
Number of medium & large industries	16	Data not available

3.3. Findings of Household Survey

3.3.1. Demography

The results of the sample household survey (16 sample households) indicate that the average size of the household is 3.69. A high percentage of households (69%) stay in nuclear families. All the surveyed households recorded residing in rural settlements. Details of demographic characteristics are given in Table 3-2.

Table 3-2: Demographic Feature

S. No.	Particulars	Sub-project area
1	Total Household	16
3	Average Household Size	3.69
4	% of households reside in rural area	100%

*Source: Field data

The results of the survey indicate that the majority (56%) of households belong to the Other Backward Class (OBC) with respect to social class. About one third of households (31.25%) belong to the group of scheduled caste (SC). There are no households belonging to scheduled tribes (ST) in the sub-project area. Details of social group distribution among households are given in Table 3-3.

Table 3-3: Households by Social Group

S. No.	Particulars	No. of households	%
1	General	2	12.50
2	Scheduled Caste (SC)	5	31.25
3	Other Backward Class (OBC)	9	56.25
4	Scheduled Tribe (ST)	0	0

Total	16	100
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*Source: Field data

3.3.2. Literacy and education

The female literacy rate (75.9%) among the households surveyed in the sub-project region is relatively lower than the male literacy rate (80.0%). Details of literacy status are given in Table 3-4.

Table 3-4: Literacy Status

S. No.	Particulars	Sub project area	Tamil Nadu (Census 2011)
1	Overall literacy rate (%)	78.0	80.1
2	Male literacy rate (%)	80.0	86.8
3	Female literacy rate (%)	75.9	73.4

*Source: Field data

3.3.3. Vulnerability

The household survey in the sub-project area captured vulnerabilities of household on selective parameters. The project defines vulnerable households as households headed by women, scheduled tribe/indigenous people household, households with physically challenged persons, and below the poverty line (BPL) households. Among the households surveyed, there are only two forms of vulnerability that are shown in the Table 3-5. BPL households account for about 43.7% of households. One household have physically challenged persons.

Table 3-5: Vulnerability feature of households

S. No.	Particulars	No. of households	%
1	Households having physically challenged persons	1	6.25
2	Below Poverty Line households	7	43.75
Total number of households		16	

Source: Field data.

3.3.4. Access to basic amenities

Piped water sources are the primary source of drinking water for a very large proportion of households (75%). The supply of piped water is linked to the public stands located within the village. Details of main source of drinking water are given in Table 3-6.

Table 3-6: Main Source of Drinking Water

S. No.	Main Source of Drinking Water	No. of households	%
1	Tap in the house	3	18.75
2	Common tap	12	75.00

S. No.	Main Source of Drinking Water	No. of households	%
3	Hand pump/ bore well	1	6.25
Total		16	100.0

**Source: Field data*

Toilet access is critical for enhancing people's sanitation and health outcomes. The finding indicates that most (75%) of the households have pour flush toilet facilities. Details of sanitation facilities are given in Table 3-7.

Table 3-5: Type of Sanitation Facilities

S. No.	Type of Toilet	No. of households	%
1	Pour flush	12	75.0
2	Community toilet	2	12.5
3	No Toilet	2	12.5
Total Households		16	100

**Source: Field data*

In the sub-project area, most of the households surveyed indicated that they have access to basic facilities such as primary schools, public transport (bus), and Anganwadi/Play school. Details of basic amenities availability reported by households are given in Table 3-8.

Table 3-6: Availability of basic amenities

S. No.	Particulars	No. of households	%
1	Public transport (Bus)	14	87.50
2	Ambulance facilities	6	37.50
4	Anganwadi/Play school	14	87.50
5	Primary school in/near the village	14	87.50
6	Secondary school in/near the village	10	62.50
7	Sub-centre/ primary health centre in/near the village	8	50.00
8	Hospital	4	25.00
9	Village knowledge centre/Common service centre	9	56.25
10	Community hall	10	62.50
Total households		16	100.0

**Source: Field data*

3.3.5. Major Economic Activities

The average land holding size is 0.77 hectare in the project area. Farming is the most important economic activity for households, with 43.75% of the households surveyed engaging in it. Other

important economic activities are wage labour in non-agriculture (31.25%), service in private sector (31.25%), agricultural labourer (25%) and self-employed activities (25.0%). In activities such as non-agricultural wage labour, private sector service and other self-employed activities, male members are more involved. Other self-employed activities involve driving, milk distributing and tailoring.

3.3.6. Cropping pattern

Pearl millet, with 37.5% households cultivating it, is the main crop cultivated or produced in the sub-project area. Black gram (18.8%), maize (18.8%) and cotton (12.5%) are other crops grown.

3.3.7. Possession of durable goods

The commonly possessed durable items among the surveyed households in the sub-project area are television (100.0%), mobile (100.0%), gas connection (93.3%), and motor cycle/scooter (86.7%). Luxury items such as computer/laptop (40.0%), washing machine (20.0%) and air conditioning (20.0%) are available in a few households.

3.3.8. Benefits from schemes

Information about the coverage of development schemes and financial inclusion was collected in the household survey. The result indicates that development schemes have benefited about 93.75% of households. During consultation, qualitative information shows that most women members have served under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme.

3.3.9. Women's voice in decision making

With regard to women's say in decision-making, most of the households surveyed (81.25%) in the sub-project region indicated that women are actively involved in decision-making on various aspects of family issues, such as children's health and education, financial matters, the purchase of assets and the family's daily activities. They played an equal part in taking ownership of the purchased properties and assets as well. Details of the women's role in decision making are given in Table 3.23.

Table 3-9: Women's say in decision making

S. No.	Issues	Number of Households	%
1	Financial matters	13	81.25
2	Education of child	13	81.25
3	Health care of child	13	81.25
4	Purchase of assets	13	81.25
5	Day to day activities	13	81.25
6	On social functions and marriages	13	81.25
Total households		16	

**Source: Field data*

3.3.10. Status onelectricity

All households surveyed (100%) are electrified in the sub-project area. The primary source of electrification is the government grid. Household electrification was carried out a long time ago. Households have been electrified for the last 23 years, as per the results of the study. The availability of electricity is not a concern, since it is observed that the average time available for electricity is 23.2 hours per day. Details of electricity availability are given in Table 3-10.

Table 3-10: Average Usage Pattern of Electricity

S. No.	Particulars	Numbers
1	Average Years of Electrification	23
2	Average Hours of availability of electricity per day	23.2

**Source: Field data*

Households primarily use electricity for lighting purposes.

3.3.11. Other alternate fuelconsumption

In addition to using gas cylinders primarily for cooking, one-fourth (25%) of households use other non-electric energy sources i.e., kerosene/diesel. Details of non-electric sources for cooking are given in Table 3-11.

Table 3-11: Non-Electric Energy Sources

S. No.	Source of Usage	No. of households	%
1	Kerosene/diesel	4	25.0

**Source: Field data*

3.4. Impact on Indigenous Peoples or Schedule Tribe

Under Article 342 of the Constitution, the Government of India considers, for the purpose of identifying indigenous groups [Scheduled Tribes (ST)], the following characteristics:

- (i) Tribes' primitive traits;
- (ii) Distinctive culture;
- (iii) Shyness with the public at large;
- (iv) Geographical isolation; and
- (v) Social and economic backwardness before notifying them as a Scheduled Tribe.

The sub-project area does not come under any notified area as mentioned in the constitution of India and the sample survey recorded that there are no scheduled tribe households in the study area.

4. CONSULTATION

4.1. Objective of Public Consultations

Following are the main objectives of the consultations:

- Make people aware about the project and its potential impacts with proposed mitigation measures.
- Understand the opinions of the people affected, with respect to the loss of land, assets and compensation.
- Establish detailed cooperation for the successful execution of the project between all stakeholders
- To enhance awareness about the implementation schedule, compensation methods, grievances redress mechanism etc. and obtaining opinions on continued participation.

4.2. Methods of Consultations

In the sub-project area, informal public consultations were done to acquire the views/opinions of the people about the project. Methods used for public consultations with concerned stakeholders are described in Table 4-1.

Table 4-1: Method of Consultations

Stakeholders	Purpose	Method
Local People/ Villagers/ Affected Persons	<ul style="list-style-type: none"> • For sharing information about the project • Seeking their views on the alignment and any concerns for further improvement • Seeking their views on compensation and payment for various losses • Discuss about the general Eligibility and Entitlement and Compensation. • Discuss about Grievance Redress Mechanism • Seeking their participation during the project implementation 	<ul style="list-style-type: none"> • Public consultation at various location/ along the transmission line route

4.3. Public Consultations in the sub-project area

Public consultations were held along the transmission line route in the month of March 2021. A total

of 16 people attended the three public consultations (all are males). Table 4-2 presents the summary of the consultations. Annexure 2 contains findings on each public consultation, including list of participants.

Table 4-2: Summary findings of public consultations

Issues Discussed	People's Views and Perception
General perception about the project	<ul style="list-style-type: none"> ▪ Majority people are unaware about the project ▪ Majority believed that the project would not provide any direct benefit to the villagers. ▪ Some felt project will help improve the state's power supply.
Support of local people for the proposed project	<ul style="list-style-type: none"> ▪ Majority expressed support towards the project. ▪ Some villagers expressed conditional support ▪ Some in Lakshmiapuram village are not in favour of the project as it would affect their crop and land.
Critical issue and concern by the local people for the project	<ul style="list-style-type: none"> ▪ Loss of crops and their production, ▪ Depreciation of land value ▪ Land value depreciation
Criteria to be considered during project design, operation stage and construction	<ul style="list-style-type: none"> ▪ Some of them have no understanding of project implementation ▪ Some of them suggested careful implementation in order to prevent damage to their crops
Compensation expected in case of loss of crops	<ul style="list-style-type: none"> ▪ Most of the people during the consultation expressed that there should be cash compensation at the best market rate.
Perceived loss	<ul style="list-style-type: none"> ▪ Loss of valuable land ▪ Reduced crop production ▪ Land value depreciation
Safety issues	<ul style="list-style-type: none"> ▪ Some expressed no concerns about safety. ▪ Some felt that there are impacts of electromagnetic field (EMF) radiation from the line.

Annexure 1: Details on Findings of Public Consultations

Consultation 01

Village	Kakkarampatti
Tehsil/Mandal	Ottapidaram
District	Tuticorin
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	Yes
What is your opinion about this project?	The project is beneficial for power supply.
Do you support this project?	Yes
How do you think the project will affect you?	Land owners will get affected.
Do you face any problem regarding current electricity supply?	No
Do you think that the project is necessary?	Yes
What are your main concerns/issues about the project?	No idea about it.
Can you suggest how to best address your concerns/issues?	No such suggestion.
Specifically, what concerns/issues do you have on the implementation of the project?	Loss of land due to the project
What positive impacts and/or benefits do you think the project will have?	It improves power transmission across the State.
What negative impacts do you think the project will have?	Land loss due to the project
How safe do you think or consider the electric transmission line?	No safety
Any criteria you would like to be considered for project design, construction and operation stage?	The route of the line should avoid the agricultural land.
How long have you been living in this area?	For four generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No

What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Compensation in cash based on the best selling price.
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	No
Would you support and participate during the implementation of project?	Yes
Any suggestion/opinion, etc.	Nil

List of participants = Total 5 (Male-5 and Female-0)

S.No.	Name	Age	Sex	Education	Occupation
1	Rajamani	63	Male	2 nd	Labourer
2	Devapichai	67	Male	5 th	Retired
3	Paulraj. S	72	Male	10 th	Retired
4	Amul Raj	31	Male	M.B.A.	Medical Representative
5	Thillaiyan	76	Male	Illiterate	Unemployed

Consultation 02

Village	Keezhameenatchipuram
Tehsil/Mandal	Ottapidaram
District	Tuticorin
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No
What is your opinion about this project?	The project has impact on agricultural land
Do you support this project?	Conditional support
How do you think the project will affect you?	It has impact on valuable crop land
Do you face any problem regarding current electricity supply?	No issues

Do you think that the project is necessary?	It is not necessary
What are your main concerns/issues about the project?	Impact of Electromagnetic Field (EMF) radiations from the transmission line
Can you suggest how to best address your concerns/issues?	Nil
Specifically, what concerns/issues do you have on the implementation of the project?	Radiation from the transmission line
What positive impacts and/or benefits do you think the project will have?	The project has no direct positive benefit to the local community.
What negative impacts do you think the project will have?	Land value depreciation and impact on croplands.
How safe do you think or consider the electric transmission line?	No safety
Any criteria you would like to be considered for project design, construction and operation stage?	No
How long have you been living in this area?	For four generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	No
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	It is difficult to suggest the form of compensation now.
Is the consultation useful?	Yes
Do you think that the local people would like to get regular information regarding the project?	No
Would you support and participate during the implementation of project?	No support
Any suggestion/opinion, etc.	Adequate compensation for loss of land.

List of participants = Total 6 (Male-6 and Female-0)

S.No.	Name	Age	Sex	Education	Occupation
1	Santhanaperumal	51	Male	10 th	Milk Supplier
2	Mariappan	40	Male	Illiterate	Milk Supplier
3	Mahendran	29	Male	10 th	Driver
4	Subbiah	47	Male	Illiterate	Labourer
5	Samuthirakani	55	Male	10 th	Farmer
6	Moorthi	32	Male	10 th	Tea shopkeeper

Consultation 03

Village	Lakshmpuram
Tehsil/Mandal	Ottapidaram
District	Tuticorin
Tribal or Non-Tribal area	Non-tribal area
Type of Area	Rural
Have you heard about the project or Do you have any information about the project?	No awareness about the project
What is your opinion about this project?	It will prevent us from cultivating crops.
Do you support this project?	No support
How do you think the project will affect you?	It will have an effect in terms of land loss, crop loss, and productivity.
Do you face any problem regarding current electricity supply?	No issues
Do you think that the project is necessary?	It is not necessary
What are your main concerns/issues about the project?	Land value depreciation and the difficulty in selling the land are issues.
Can you suggest how to best address your concerns/issues?	It is essential to provide contact information for the project.
Specifically, what concerns/issues do you have on the implementation of the project?	There should be prior information about the project.

What positive impacts and/or benefits do you think the project will have?	No positive impacts envisaged.
What negative impacts do you think the project will have?	Issues regarding land loss and land value depreciation
How safe do you think or consider the electric transmission line?	No safety
Any criteria you would like to be considered for project design, construction and operation stage?	No
How long have you been living in this area?	For four generations
Are there any indigenous people/ tribal people or ethnic minority living in this area?	Nil
What kind of compensation will you be expecting in case of land acquisition or loss of crops?	Adequate cash compensation at market rate.
Is the consultation useful?	Yes. It is useful.
Do you think that the local people would like to get regular information regarding the project?	No
Would you support and participate during the implementation of project?	Conditional support
Any suggestion/opinion, etc.	Nil

List of participants = Total 5 (Male-5 and Female-0)

S. No.	Name	Age	Sex	Education	Occupation
1	Chellamuthu	70	Male	Illiterate	Labourer
2	Poolchami	67	Male	5 th	Labourer
3	Ganesan	52	Male	5 th	Farmer
4	Karuppasamy	54	Male	Illiterate	Labourer
5	Sanmugam	61	Male	2 nd	Farmer