India: Chennai-Kanyakumari Industrial Corridor Power Sector Investment Project

Project Name	Chennai-Kanyakumari Industrial Corridor Power Sector Investment Project
Project Number	51308-001
Country	India
Project Status	Proposed
Project Type / Modality of Assistance	Loan
Source of Funding / Amount	**Loan: Chennai-Kanyakumari Industrial Corridor Power Sector Investment Project** Ordinary capital resources — US$ 500.00 million **TA: Chennai-Kanyakumari Industrial Corridor Power Sector Investment Project** Technical Assistance Special Fund — US$ 500,000.00
Strategic Agendas	Inclusive economic growth
Drivers of Change	Governance and capacity development Knowledge solutions Partnerships Private sector development
Sector / Subsector	**Energy** - Electricity transmission and distribution
Gender Equity and Mainstreaming	No gender elements
Description	The Chennai -Kanyakumari Industrial Corridor: Power Sector Investment Project will address the core problem of meeting the expected industrial power demand to ensure reliable power supply by augmenting the power transmission capacity between the southern part of the state (Madurai - Thoothukudi), the northern region (Chennai), and the western region (Coimbatore) at 765 kilovolt (kV) level. The proposed investment is expected to provide a transmission corridor to evacuate power from the renewable and thermal power plants to be located in Madurai -Thoothukudi area and supply industrial hubs in the Chennai- Madurai area and in Coimbatore. The proposed project will have two outputs consisting of: (i) Output 1: This will establish a 765 kV power transmission link between the energy generation hub in Madurai Thoothukudi area and load centers in the western and northern parts of the state. This output consists of (a) Virudhunagar (765/400/230 kV, 2x1,500 megavolt amperes [MVA] and 2x500 MVA) substation; (b) 320 km of 765 kV transmission lines from Virudhunagar to Coimbatore; and (c) 356 km of 400 kV transmission lines to link Virudhunagar substation to several 400/230 kV pooling substations for wind and solar power plants; and (ii) Output 2: This will establish a pooling substation to receive electricity generated from power plants in the Thoothukudi district. This consists of (a) Ottapidaram (400/230/110 kV, 2x315 MVA and 2x200 MVA) substation; (b) 200 km of 400 kV transmission lines to connect Ottapidaram substation with several thermal and renewable power plants; and (c) 90 km of 230 kV and 110 kV transmission lines to connect Ottapidaram substation with nearby load centers.
Project Rationale and Linkage to Country/Regional Strategy	The Madurai Thoothukudi area of CKIC has excellent wind and solar resources, of which about 4,000 MW is proposed for development in the next 5 years. In addition, 4,000 MW of thermal capacity additions will also be located in this region. Due to inadequate transmission network capacity, there has been curtailment of wind and solar energy and this will continue to act as a barrier to the further development of renewable energy in the region. These constraints may also cause the reliability of power supply to industrial nodes in Chennai Trichy area of CKIC and in Coimbatore to deteriorate, hindering further expansion of industrial development of the state. Required strengthening of the transmission network includes a critical need to improve the transmission connectivity at extra high voltage 765 kilovolt (kV) level between the proposed energy hub in Madurai Thoothukudi area in the southeast region of Tamil Nadu and demand centers in Chennai Madurai in the northern area of CKIC and Coimbatore. In addition, the proposed renewable energy hubs need to be connected to the 765 kV network through pooling substations at 400 kV level. Industrial parks in Madurai Thoothukudi area also require connectivity at 230 kV level to meet the expected increase in electricity demand.
Impact	Economic growth and industrial development in Tamil Nadu enhanced.
Outcome	Power supply to industrial centers in CKIC increased to meet the expected growth in demand.

Outputs	Electricity transmission link between the electricity generation hub in southern Tamil Nadu and load centers in western and northern parts of the state established. Pooling substation to receive electricity generated from power plants in Thoothukudi district established.
Geographical Location	Tamil Nadu

Safeguard Categories	
Environment	B
Involuntary Resettlement	B
Indigenous Peoples	C

Summary of Environmental and Social Aspects
Environmental Aspects
Involuntary Resettlement
Indigenous Peoples
Stakeholder Communication, Participation, and Consultation
During Project Design
During Project Implementation

Business Opportunities	
Consulting Services	A transaction technical assistance of $500,000 to be financed through TASF Others is proposed to (i) enhance TANTRANSCO's financial management capacity; (ii) address remaining legacy issues from incomplete unbundling of TANTRANSCO (transmission company) from distribution and generation operations of erstwhile Tamil Nadu Electricity Board (TNEB); and (iii) enhance gender inclusivity of the project.
Procurement	Advanced procurement action will be used for procurement of EPC contractors for supply and installation of substations and transmission lines. It is likely that contracts up to 30% of the proposed loan amount may be awarded as advanced contracts. The recommended project procurement classification is category A given (i) the presence of high value contracts in excess of $100 million; (ii) TANTRANSCO''s lack of experience in implementing ADB-financed projects.

Responsible ADB Officer	Perera, Pradeep
Responsible ADB Department	South Asia Department
Responsible ADB Division	Energy Division, SARD
Executing Agencies	*Department of Energy* *Government of Uttar Pradesh* *Saclivalaya, Lucknow 226 001* *India* *Tamil Nadu Electricity Board* *7th Floor, N.P.K.R.R. Maaligai* *Electricity Avenue, 800 ANNNA SALAI,* *Chennai - 600 002 INDIA*

Timetable	
Concept Clearance	12 Jul 2018
Fact Finding	22 Oct 2018 to 26 Oct 2018
MRM	28 Nov 2018
Approval	-
Last Review Mission	-
Last PDS Update	12 Jul 2018

Project Page	https://www.adb.org/projects/51308-001/main
Request for Information	http://www.adb.org/forms/request-information-form?subject=51308-001

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