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## PNG: Town Electrification Investment Program, Tranche 2

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Prepared by Papua New Guinea Power Limited for the Asian Development Bank.

#### **EXECUTIVE SUMMARY**

The Community Development Plan (CDP) for the Autonomous Region of Bougainville is developed to minimize project's adverse impacts as well as to further enhance electrification benefits on the community. The CDP is also helping to build a partnership between the PPL and the community.

The activities and other details of the CDP are centred around four main components which are:

- Developing a partnership between PPL and affected community
- Minimise adverse impacts of electrification
- Avoidance or minimize project risks
- Enhance electrification benefits.

The CDP has proposed several activities and monitoring indicators to be implemented from project commencement through to electrification of homes and service facilities. The enhancement of electrification benefit component will continue one year after the target villages have been connected to power.

The proposed budget of the CDP is \$ 45, 540, over 80 % of which consists of engagement of NGOs and transportation costs. Other items such as the social and gender consultant working in PMU and other international specialist costs are not included. It is proposed that PPL recruits an experienced NGO to assist implement activities in the CDP which has a budget of \$22,000. The HIV/AIDS prevention plan which is a part of the CDP will be implemented by the Region's Provincial AIDS Council staff.

It is proposed that the CDP is revised based on the experience gained from the implementation of the project in its first year.

#### ABBREVIATIONS

ADB AFs APs AROB CDP COE C&SCP EA FGD GAP GONZ HH	<ul> <li>Asian Development Bank</li> <li>Affected Families</li> <li>Affected Peoples</li> <li>Autonomous Region of Bougainville</li> <li>Community Development Plan</li> <li>Council of Elders <ul> <li>Community and Stakeholder Consultation Plan</li> </ul> </li> <li>Executive Agency</li> <li>Focus Group Discussion</li> <li>Gender Action Plan</li> <li>Government of New Zealand</li> <li>Household</li> </ul>
HIV / AIDS	- Human Immunodeficiency Virus/ Acquired Immune
111/1	Deficiency Syndrome
HVL IA	<ul> <li>High Voltage Line</li> <li>Implementation Agency</li> </ul>
IP	- Indigenous People
IPBC	<ul> <li>Independent Public Business Corporation of PNG</li> </ul>
IPDP	- Indigenous People's Development Plan
JFPR	- Japan Fund for Poverty Reduction
LARP	- Land Acquisition and Resettlement Plan
LG	- Local Government
LLG	- Local Level Government
LVL	- Low Voltage Line
MSK	- Minimum Supply Kit
NGO	- Non Government Organisation
PGK	- Papua New Guinea Kina
POM	- Port Moresby (nation's capital)
PMU	- Project Management Unit
PNG	- Papua New Guinea (Government)
PPL	- Papua New Guinea Power Limited
TEIP	- Town Electrification Investment Program
TML	- Transmission Main Lines
TOR	- Terms of Reference
VA	- Village Assembly
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#### I. INTRODUCTION

1. The Asian Development Bank (ADB) in its program of assistance under the Town Electrification Investment Program (TEIP) is providing a multi-tranche financing facility (MFF) to the Government of Papua New Guinea (GoPNG) for the development of hydro-power resources and the construction of power transmission network. The first tranche of the TEIP has 3 projects focussing on power generation and transmission. The projects are in West New Britain (WNB) province where a new transmission line of 142 km will be built between Bialla and Mai Junction, near the provincial capital of Kimbe to bring power from an existing hydro-station to feed the town. The project in the Northern Province (NP) focuses on building a new hydro-power station, some 50 km away from the provincial capital of Popondetta. The new transmission line will be fixed to bring power from the new generation facility to the town as well as the sub-district station of Kokoda. The focus of project in the Autonomous Region of Bougainville (AROB) is to build a new hydro-power station at Ramazon on mainland Bougainville together with building a new transmission line of about 45 km to provide power to Buka town and all villages and service centres along the transmission alignment.

2. The grant funding by the Japan Fund for Poverty Reduction (JFPR) and the Government of New Zealand (GONZ) are supporting power distribution in the target area.

3. The project in AROB involves the construction of a 3 MW run-of-the river hydropower station in Ramazon. It also involves the construction of 33 kV transmission lines 45 km from Ramazon northwards to Buka via Kokopau and 8 km south to Tinputz to provide power to households and service stations. The project will also build TL to provide power to Numkereo village and other villages around the intake area. The construction of hydro-power station and TL will lease land under customary landownership. This Community Development Plan (CDP) is put together for the project in AROB to provide the affected community with development assistance aimed at livelihoods improvement of APs as well as to minimize other project risks.

4. The Independent Papua New Guinea Business Corporation (IPBC) is the Executing Agency while the Papua New Guinea Power Limited (PPL) is the Implementing Agency.

#### II. PURPOSE

5. The purpose of CDP is to educate communities on electric power and its uses, to assist prepare themselves socially and morally to minimize potential power hazards and to provide facilities to further enhance benefits of electrification. More specifically, the CDP has 5 objectives as outlined below. It is expected that by encouraged engagement of APs, the CDP will also ensure community's support to the project and to minimize disturbance to project implementation activities.

6. The 5 objectives of the CDP in AROB are described below.

a. First, CDP is conceived as a measure to reduce resettlement impacts. The ADB's SPS (2009) recommends that adequate measures of livelihood restoration are implemented. It also states that consideration will be given for the project affected people to be provided with employment opportunities and other forms of support to minimize resettlement impacts on them. Among other support to be provided to APs are training aimed at AP's skills development as a result of which they may be able to secure gainful employment.

- b. Second, the CDP contains measures to minimize the 3 types of adverse impacts of electrification. Such impacts include first, the careful use of electrical appliances both to minimize possible electrocution hazards as well as to manage household budgets. The careless use of electrical appliances can cause electrocution especially to women and children who should be thoroughly educated on proper use of appliances. Second, the community should be educated to minimize power hazards while working beneath High Voltage Transmission Lines (HVTL). The land use beneath power lines in the project area consists of coconut mainly inter-planted with cocoa. Although there is no direct risk involved in the performance of cocoa and coconut cultivation practices that may interfere with power lines, the people should be made cautious of any potential future risks if they decide to use metal poles to harvest coconut. Third, education and awareness raising activities should be undertaken to prevent children being electrocuted while using electricity in schools. They also need to be cautious while playing beneath power lines. Educate and make communities conscious about not to interfere with HVTL in any way forms a significant part of the education proposed.
- c. Third, the construction of hydro-power station at Ramazon village as well as the power transmission towers and high voltage power lines along 23 villages in the project area necessitates the introduction of external workforce into villages. The work force is temporarily and confined to the duration of project implementation. There may be several risks caused by the presence of outside workers in villages which are mainly rural. Possible risks are the impacts on ethnic cultures and the risk of spread of HIV/IDS within the project area. The community has a rich ethnic culture where various rituals and festivities are common. The members of the alien work force should be thoroughly advised and should be extremely cautious in dealing with the local people, especially women. The work force members should be cautioned on matters that may lead to disputes with local community. The second risk associated with construction activities is that such activities may trigger HIV/AIDS that works in 2 directions. First, the contact of infected members of the external workforce with the women in the community is a direct method to transmit HIV/AIDS that should be minimized. Second, the money generated by working on civil construction activities may elevate the living standards and social dealing of local workers. The risk of HIV/AIDS transmission from the infected community workers to local women can be high. The CDP contains specific methods to minimize the risk of HIV/AIDS and to educate all members of the local community on this risk. On the other hand, the construction contracts include clauses as appropriate aimed at reducing risks that may be associated with disputes between local community and external workforce. The CDP further reinforces above activities by implementing additional measures.
- d. Fourth, the CDP is used as the vehicle to further enhance beneficial impacts of electrification. The aim here is to educate, train community and wherever possible to facilitate them using electricity for income generation activities, in addition to domestic use. While the need for using electricity for income generation is emphasized throughout the project area, the specific focus of this aspect of the project is to concentrate on 100 households selected from 5 villages as a pilot. Taking lessons from the pilot, it is expected that in future many other households are likely to be interested in using electric power for income

generation where the PPL staff may need to continue to provide further knowledge and facilitation to the community on this matter.

e. Finally, the CDP is aimed at building and implementing a sustainable partnership program between PPL and communities that will lead to mutual benefits to both parties. The benefits from such a partnership to PPL are in such areas as prompt payment of power tariffs, avoid power disconnection, minimization of electrification hazards and to enhance ground maintenance beneath distribution lines. The partnership program will also be utilized by PPL to seek information on the on-going status of power lines, towers and other gadgets from the community. PPL may request designated community leaders to inform PPL if any damage or other concerns to the utilities promptly.

7. On the other hand, the benefits to communities are power for domestic purposes and income generation. The impact will be the improvement of living standards of the affected population as well as the progress in the country as a whole. The minimization of electrocution and power hazards within the community is beneficial to both PPL (part of its corporate social responsibility) as well as the community. The PPL will assist the community to pay the power cost in a manner convenient to them and promptly. Communities will be educated and facilitated to manage power tariffs in accordance with household income. They will be educated so that they can understand to read easy-pay meter and to load power credit into this gadget.

#### III. METHODOLOGY

8. Four methods have been utilized in the development of the CDP. They are community and stakeholder consultations, analyses of field observations, review of project activities and discussions with other consultants and PPL staff. A brief discussion on the methods is provided below.

9. There are 20 villages in the project area. This is split by 2 villages around the Ramazon power station and 18 villages along the TML (Appendix 1). The affected communities include both villagers as well as members of service facilities in the project area. There are approximately 130 service facilities<sup>1</sup> that include Council of Elders (COE), schools, churches, health facilities and community halls. In addition are a number of businesses such as kiosk, repair shops, trade stores, fuel sale, markets, etc.. Consultations were conducted with 25 community members (60 % women) and 9 government staff. The current socioeconomic issues affecting these communities were analysed. Please see appendix 4. This formed the basis to understand benefits, potential adverse impacts and other areas they need support such as education and training in order to prepare themselves for electrification. Their priorities and needs were analysed and, problems that may result from electrification were recognised.

#### IV. CONSULTATION AND PARTICIPATION

10. The active engagement of communities and other stakeholders in AROB is an ongoing activity throughout project duration. The Stakeholders Plan provided in Appendix 6 discussed further evidence and planned activities to engage them during project implementation.

<sup>&</sup>lt;sup>1</sup>The full-list to be prepared during detailed project design stage

11. Field observations were made on land use, agricultural production, processing and marketing aspects, business and social activities in the target area. The activities were analysed to examine implications on such activities resulting from power supply to them. One example is the possibility in the future to use long poles to harvest coconut that is a potential risk as harvesting operations may interfere with power lines.

12. The review of project activities provided knowledge with regard to areas for community engagement and ways by which PPL staff is able to assist communities in the process of electrification. It also provided areas where with regard to the engagement of community in implementation activities.

13. The final method is discussion and consultations with PPL staff both at the centre as well as in the AROB, discussions with other team members and ADB staff. The discussions with the lines engineer who accompanied the Social Impact Specialist during the tour in the Region provided significant value in writing this CDP. The discussions helped to understand current practices being implemented by PPL, implications of such practices on electrification, examine means by which practices could be improved to assist the community and other stakeholders and to find ways to minimize and mitigate adverse impacts. The discussions with PPL staff gave a lot of insights and solutions to minimize impacts as well as to further enhance beneficial impacts. The PPL staffs were consulted on all activities proposed in the CDP.

#### V. SOCIOECONOMIC INFORMATION

14. The project area is located in the Autonomous Region of Bougainville, which covers the mainland Bougainville and, Buka Island where the provincial headquarters is located. AROB has a population of 175,160 and 48.6 percentage of the total population is female. The province has three districts and 12 LLGs.

15. The subproject is located in the North Bougainville District in two LLGs, Tinputz and SelauSuir. According to census information from the PNG National Research Institute, the North Bougainville District has a population of 73,091 (35668 female). The North Bougainville District occupies about 3007 square kilometres, of which 1645km squared is occupied. The density of the population is 24.3 populations per km and 44.4 populations per km square of occupied land. The district has 137 elementary schools, 3 community schools, 65 primary schools, one provincial high school and three vocational schools. It has five health centres and 31 health-aid posts.

16. There are 515 households consisting of 2,197 (female: 1,068) persons with an average household size of 3.4 members. The largest household has 20 persons and the smallest, 1 person. According to the socio-economic survey, all the APs are people from the area and they come from 19 different clans. The people mostly communicate in their local language but are also able to communicate in TokPisin if they are required to. For resettlement planning purposes, TokPisin and the local language are used simultaneously to ensure social inclusion of all APs.

17. Over 44 per cent of AP household members are under the age of 18, two per cent over 65 year of age and 56 per cent between 18 and 65 years of age. 10 out of the 52 female heads of households reported that their husbands were from outside of the ARB and so abandoned them and moved back to their home provinces. The majority of the female

heads of households reported that they husbands had been killed during the 10-year civil war in Bougainville.

18. The majority of APs are subsistence farmers. All of them own cocoa and coconut holdings and earn a substantial income from the sales of copra and cocoa beans. The other people who are affected by the project (non APs) also have agricultural plots similar to APs. Both APs and others own small businesses such as trade stores, kiosks, fuel stations, repair shops, etc. Almost all of them earn incomes from selling vegetables, betel nut, yams, fruits and other agricultural products whilst those along the coast earn a living from fishing. Agricultural products are sold either in Buka town or along the roadside markets in Kokopau Island. Only the non-poor HHs possess cocoafermentery and copra kilns. Those who do not possess make use of existing facilities by paying a rent. According to the studies undertaken for the preparation of Land Acquisition and Resettlement Plan (LARP), the highest income per annum recorded was PGK50, 000 and the lowest income was PGK2000. The loss of trees for the hydropower and TML constitutes less than ten per cent of their total income.

19. All land is collectively owned by individual clans. However, households have individual rights to use collectively owned land where crops are cultivated and animals are reared.

20. About 40% of affected families (AFs) are likely to lose portion of food gardens, another 20% losing portion of cocoa and coconut plantations. These lost portions however, are estimated to be less than 10% of the total land owned. The socio-economic survey revealed that 100% of the interviewed landowners have enough land even after this portion of the land is leased to PPL. They do not expect that their food source will be adversely affected. The RP outlines the approved plans and measures to minimize and compensate for the loss of assets of the affected families.

21. Most of the land that the Penstock will be built is collectively owned by Antavet, Anasi and Anakarip clans. The land where Weir is built belongs to three clans, Gunun-Karipa, Anakeh and Anasi clans. The land on which the access road will be constructed and the land on which the TL will be constructed upon is owned collectively by Anakeh, Amra, Anakarip, Antavet and Anasi clans.

22. The only village close to the hydropower station is Numkereo. There are five primary schools in the area and each village has an elementary school. The only high school located in the area is Asitavi High School. For secondary schools, students would have to travel to the provincial centre in Buka where they are boarded.

23. There are three vocational schools in the North Bougainville District and APs have access to these schools. There is only one aid post located in the area. There are 5 health centers in the North Bougainville district. The area also has several road side markets where women often sell vegetables, coconuts, yams, processed food, etc. to the travelling public.

24. All households in project area use wood for cooking and boiling water whilst lanterns and torches (powered by battery) is the main energy source for house lighting. All firewood is collected from the forest near the village. Few HHs, the non-poor, have their private generators. There is little sharing of power and when it occurs, the users pay to the generator owner. The use of kerosene for lighting is extremely rare. The average cost of home lighting for lantern and torch users is worked out to be about PGK20 for per month while it is about PGK 70 for the generator owning HHs.

25. The AROB is one of the regions in PNG where the matriarchal system is in operation. Therefore, land is inherited through females. This suggests that a man secures ownership of

land through his wife or mother. However, men are still considered head of households and are more likely to dominate membership of village based organizations. Only very few village chiefs are women. Field studies revealed that none of the COE members in the target area is a woman. Due to the close linkages between clans, all women are able to receive support from members of their clans and therefore, would not be disadvantaged by the loss of their high value trees or land to the construction of hydro-power station and TML.

#### VI. PROJECT OUTCOME, BENEFITS AND IMPACT

26. The project is building Ramazon hydro-power station, build HVTL over a distance of 50 km and build the electricity distribution network in about 20 villages and a sub-station in Bonus. The main outcome of project activities is the electricity connection for 2,100 homes and about 130 service facilities in the target area. The project outcome will produce a series of benefits which will eventuate in the main impact of electrification namely, improved livelihoods and living standards for the affected people.

27. The analysis of project impact suggests that it is mainly beneficial. However, there are few unexpected impacts that are adverse on the target population which should be minimized.

28. One main purpose of CDP as already mentioned is to minimize the adverse impacts. Table 1 outlines project's outcomes and benefits.

Outcome	Description	Potential Risks	Benefits/Risk Mitigation Measures
Household electrification	Without project, there is no grid power to any of the 20 villages. The use of private generators is possible only by non-poor households. Even for these HHs, the electricity is generated only for few hours per week due to high generation costs. Household activities are confined mainly to day-time whereas night activities are restricted. Men and women have to return home after their outside work earlier to attend to household chores earlier as home does not have electric power. Children's study confined only to day- light hours.	Risk of electrocution and electrical fires in homes.	<ul> <li>Households can perform cooking, boiling water and other activities using electricity faster and efficiently</li> <li>Better environment for children to pursue their learning</li> <li>Households can spend more time on production and income generation activities</li> <li>Households will receive power safety training from PPL and its partners.</li> </ul>
Skills development	Project is piloting on community contracts where selected community members as a group will be responsible for construction of the	<ul> <li>Women and other vulnerable groups like youths or feminine men may not participate in this program.</li> </ul>	<ul> <li>Enhanced skills on community contracts management and construction activities</li> <li>Income from wages received</li> </ul>

#### Table 1: Project Outcome and Benefits

	distribution network under the advice and supervision of PPL staff. In addition to income, groups will receive training in construction and contracts management that will be beneficial in their community living.		<ul> <li>Income from selling locally available construction materials</li> <li>Contractors are tasked to employ 20% female and other vulnerable groups as part of the workforce. The project will reach out to women's groups to ensure more participation from women.</li> </ul>
Increased household income	Household income is mainly sourced from selling agricultural products and fish. Many do not possess construction skills.	<ul> <li>Risk of money earned from small businesses being used for alcohol that may contribute to social problems.</li> </ul>	<ul> <li>Income from community contracts execution</li> <li>Wages from construction activities and by selling building materials such as sand, rubble, poles, etc.</li> <li>Further increase in household incomes through the use of electric power for income generation</li> <li>Sexual Health trainings will be run for communities. Financial Literacy trainings are also proposed for communities.</li> </ul>
Partnership building between PPL and community	PPL currently does not operate in target area. Effective partnership building between PPL and community will be a new area of support after the project	If partnerships are not built, landowners or communities may cause work to stop or may destruct PPL properties	<ul> <li>Sustainable management and maintenance of distribution system</li> <li>Community using electricity productively and in accordance with household budgets</li> <li>Partnership will be established between PPL and landowners or surrounding communities.</li> </ul>
Enhanced efficiency of services	None of the 130 service facilities and other businesses have grid power without the project. The activities are	<ul> <li>Health facilities will be unable to store drugs and vaccines. Also they may not serve the people at</li> </ul>	<ul> <li>Improved efficiency of service facilities</li> <li>High-quality services on demand</li> </ul>

provided by health, education, skills development, community welfare	conducted under power generated by generators or using battery/solar operated units where the efficiency is low. Health centres unable to store drugs and vaccines as 24-hour power is not available		night.	•	More employment opportunities
Improved business outcomes	Businesses such as kiosk, repair shops, trade stores, cocoa and copra processing units operate without electricity or limited power supplied by private generators. Copra and cocoa processing can't make use of electricity to enhance processing standards and improve quality.	•	Risk of money earned from small businesses being used for alcohol that may contribute to social problems.	• • •	Improved efficiency of business activities i.e. fastness and quality Increased outputs Higher income More employment Sexual Health trainings will be run for communities. Financial Literacy trainings are also proposed for communities.
Increased participation of women in various levels in the project	Women will have access to and benefit from this project in the form of having access to electricity, be able to contribute to the project during consultations and to improve their quality of life.	•	If women are not encouraged to participate in this project, the project will fail to contribute to gender equality and women's economic empowerment.	•	Contribute to increasing the benefits of electrification to women. Be able to economically empower women Gender Action Plan will be implemented.

29. The benefits shown in the last column of the above table produce impacts which are in three main areas listed below;

- Improved living standards for target population;
- Poverty reduction; and
- Improved social impacts.

30. On the other hand, there are few adverse impacts of the project which are in 2 main areas namely, hazards associated with electric power at both household and community level, loss of land due to it being leased by PPL for this projectand other risks such as HIV/AIDS associated with project activities. Still another issue may be difficulties encountered by local people with regard to the payment of electricity bills. The adverse impacts are socially undesirable which should be minimized. There are 2 implications of adverse impacts; one is that PPL's expected revenue may not be generated if consumers are not using power due to high cost, inability to pay power tariffs and other issues. The second implication is that there may be more accidents at the community level which has a significant social cost.

31. The CDP addresses all adverse impacts and provides a meaningful strategy to either minimize or mitigate adverse impacts outlined in Table 1. The impacts and mitigation measures associated to the loss of land due to lease arrangements are reflected in the LARP. In the meantime, it also has the focus on beneficial impacts where the purpose is to further enhance such impacts.

32. Accordingly, the CDP is designed to include4components to address above issues which are presented in the proceeding section.

#### VII. CDP'S COMPONENTS

33. As mentioned above, the CDP is developed both to complement the RP, as well as to enhance electrification benefits on the community which includes households and other service centres in the project area. The CDP either minimize or mitigate impacts that may be associated with project activities. In other words, the purpose of CDP is to further improve electrification benefits and to minimize all adverse impacts during project implementation and beyond.

34. PPL has not yet discussed the CDP with members of the community due to the significant delay of the project. This is done so as not to raise unnecessary expectations with the impacted communities. As soon as PPL has a confirmed date of construction, awareness and consultation on the CDP will commence.

35. In order to address above issues, the CDP has4 components each focussing on a specific aspect of outcomes as presented in Table 2.

36. The 4 strategic areas of the CDP are:

- a. Minimise adverse impacts of electrification through activities such as general awareness and education for community including school children on power hazards and specifically to be conscious while working beneath HVTL power lines. The community around power house need to be educated on the potential hazards from fast running equipment and stream currents. Necessary to educate and train communities on the use of electric power and management of power use in accordance with HH budgets.
- b. Further increase of electrification benefits and income opportunities. Activities include assisting communities to use power for income generation and businesses to further increase income. These may include operation of sawmills, use of freezers, tyre repairs shops and food bars.

- c. Sustained partnership building between communities and PPL. This aspect focuses on community performing ground maintenance work beneath distribution lines and poles (not under HVTL), information to PPL on damage/destruction to power lines, reduction of all types of power hazards and prompt bills payment.
- d. minimize project risks such as HIV/STDs, disputes management and to prepare community to work with an external work force in their villages.

37. It is planned to implement several activities grouped under the strategic areas of the CDP. Each impact area will have activities to manage; activities proposed in respect of each component and where; how many participants; how activities will be implemented and monitored; who will be responsible include institutions; any grievances to be managed through the existing grievance redress system. Please see Appendix 5 for more details.

38. The primary responsibility for implementation of CDP is the Project Manager – TEIP in PPL. The PPL will mobilize several partner agencies (NGO, LLG, HIV centre and community organisations) to assist it and to facilitate the execution of CDP.

39. Table 2 outlines the activities, responsibility, monitoring and time plan for the execution of CDP.

	, , ,	Table 2: Community Development Plan Components, Activities and Details				
Activities	Target	Responsibility	Time Plan			
A. Partnership building						
<ul> <li>A.1 Prepare list of community organisations in target area (formal/informal)</li> <li>A.2 List of community leaders</li> <li>A.3 Awareness raising and education in groups</li> <li>A.4 Dialogues and workshops</li> <li>A.5 Leadership training</li> <li>A.6 Community meetings</li> <li>A.7 Establish and support community leader network</li> </ul>	<ul> <li>All. Formal (LLG, ward committees) and informal (sports societies, cultural groups)</li> <li>All 3 meetings in each COE per year</li> <li>2 workshops every year</li> <li>One training workshop per year</li> <li>Minimum of 3 meetings every year</li> <li>per village and when required</li> <li>Method to be determined after</li> <li>discussion with leaders</li> </ul>	NGO under advise of PPL and supervision of PMU (staff + consultant)	Quarter 1 (2017) to quarter 4 (2020)			
B. Minimise adverse impac	ts of electrification					
B.1 Community meetings to raise awareness on Electricity Safety B.3 Awareness building among school children B.4 Educate community contract groups (Hold information sessions among community groups engaged in non-skilled work) B.5 Poster competition B.6 Lectures for women committee	One community meeting in each of 23villages, followed by a mini-road show One lecture per school, total 30 schools (to be up-dated) Each community contract group to be educated prior to work commencing Relevant items to discuss with each women committee, coordinate with GAP inputs (one committee per ward) Set up and carryout electrification demonstration activity in each	PPL assisted by NGO, of which scope of work is in Appendix 2	2019- 2020			

#### Table 2: Community Development Plan Components, Activities and Details

Activities	Target	Responsibility	Time Plan	
	service centre including poster			
	competition (details to be developed)			
C. Project risks minimization				
C.1 Implement HIV/AIDS	Targets as per the HIV plan of	AROB's centre	Q2 2018	
minimization program	Region's HLV Centre	staff. See		
C.2 Village meetings to		details in		
educate community on	20 villages (one per village)	Appendix 3		
potential conflicts with work				
force				
C.3 Alert community leader network on potential conflicts	One leader network per word			
between work force and	One leader network per ward			
community				
C.4 Coordinate with the	As needed			
project's conflicts redress				
mechanism to manage				
conflicts				
C.5 PPL staff to ensure				
contract agreements include				
clauses re: women				
employment, equal work				
opportunities for men/women,				
no child labor, equal wages for				
men/women				
D. Enhancement of electrific				
D.1 Select pilot villages and	5 communities and 75 HHs for	NGO in	Quarter 4 (2017)	
HHs	electricity use for income generation	collaboration		
D.2 Awareness raising on	pilot	with		
power use for income		designated		
generation	Each village meeting to mention	PPL staff.		
D.3 Educate selected HHs on	about income generation from power	Scope of work		
electricity use for income	use	is in Appendix		
generation in pilot villages		2		

Activities	Target	Responsibility	Time Plan	
D.4 Identify long-list of				
opportunities, prioritize and				
work with selected HHs				
D.5 Analyse needs and				
constraints in using electricity				
for income				
D.6 Work with LLGs, relevant	2 LL Co and all COEp in target area			
agencies and other stakeholders to assist and	3 LLGs and all COEs in target area			
facilitate HHs in income				
generation				
D.7 Highlight electricity use in	Minimum 20 such meetings and a			
business activity in community	follow-up meeting			
meetings				
Ŭ				

40. It is proposed that the CDP is up-dated annually based on the new information and knowledge generated through its implementation in the preceding year. For this to happen, it is suggested that CDP is monitored and that a good documentation is developed on the implementation of CDP. The results should be discussed in project review meetings and reported in progress reports.

#### VIII. MONITORING AND EVALUATION FRAMEWORK

41. PPL will monitor all activities associated with Community Development Plan with assistance from the NGO. The scope of monitoring includes: (i) developing a partnership between PPL and the affected communities; (ii) minimizing adverse impacts of electrification; (iii) avoiding or minimizing project risks and, (iv) enhancing electrification benefits, as required. A monitoring and evaluation program utilizing the following indicators has been finalized.

Outcomes	Measurable Outputs/KPI
Developing a Partnership between PPL and affected communities	<ul> <li>Numbers of communities that work with PPL</li> <li>Numbers of communities visited</li> <li>Trainings conducted for communities</li> <li>Numbers of individuals trained</li> </ul>
Minimizing adverse impacts of electrifications	<ul> <li>Numbers of safety trainings conducted</li> <li>Numbers of participants</li> <li>Numbers of electricity related incidents in the area</li> </ul>
Avoiding/Minimizing Project Risks	<ul> <li>Numbers of conflicts recorded and resolved</li> </ul>
Enhancing Electrification Benefits	<ul> <li>Numbers of small business trainings conducted.</li> <li>Numbers of participants of trainings</li> <li>Number of small businesses developed and running as a result of these trainings</li> </ul>

#### Table 1: The Final Monitoring and Evaluation Indicators

42. PPL will prepare and submit semi-annual monitoring reports to ADB as part of project performance monitoring.

#### IX. BUDGET

43. The budget for CDP consists of transport (air and ground) cost, HIV plan, facilitation NGO cost, school program cost and miscellaneous items. The CDP budget does not include the cost of implementation of gender action plan and community and stakeholder consultation cost (C&SCC), although the latter two are closely related with the CDP. Neither,

it does include the salaries of PMU's social and gender consultant nor the cost of international specialist. The latter are supported under other budgets. The estimated budget of the CDP is \$ 41, 540. The details are provided in the Table 3.

ltem	Description	Unit/ Rate (\$)	Cost (\$)
NGO	Experienced NGO to facilitate implementation activities. Same NGO is assigned to facilitate GAP and C&SC	Lump-sum contract	22,000.00
HIV/AIDS plan	Buka PAC is responsible for implementation	Lump-sum, for 2 years	5,000.00
Air travel	Monitoring, supervisory visits by PPL staff and PMU's consultant	700 per return travel, 12 visits in project life	2,400.00
Ground transport	4-WD vehicle to move within project area	\$200 per day for 12 days to visit communities and other service stations. Budgeted for 2 years	7,500.00
School competition	Poster competition for school children. Aim is to create awareness on electrification.	Details to be worked out during detailed design	2,000.00
Stationery			2,000.00
Refreshments	For workshops and meetings	\$ 2 per participant x 100, for 2.5 years	500.00
Sub-total			41,400.00
Miscellaneous		10% of sub-total	4,140.00
Grand total			45,540.00

# Table 3: Budget of Community Development Plan in Autonomous Region ofBougainville

44. It is suggested that the CDP is adequately funded and the plan is implemented throughout the project duration. The lessons learned would be of substantially beneficial to PPL in managing similar programs elsewhere.

### Appendix 1: List of Local Government Areas and Villages in AROB's Project Area

District	LLG	COE	Village / Sub-village
North Bougainville	Tinputz	1	Tinputz, Teop, Taonita, Rawa, Deos, Vogue, Tearouki, Tabut, Tsunrawan, Banio, Tupukaru, Rawa, Ramazon
	SelauSuir	1	Sorom, Hantoa, Siara, Rapoma, Suir inland, Manob, Ramunrata, Sorom, Gohi,Telowa, Tsuwo, Munlus, Hantoa, Torte, Sanakova, Ton, Umum, Tsunpets
	Buka	1	Tsitalato, Hagogohe, Halia,Haku,Tonsu, Buka Urban

Appendix 2: Scope of Work for the Non-government Organisation

#### I. INTRODUCTION

1. The Town Electrification Investment Program in Papua New Guinea is supported by funding from the Asian Development Bank and other donors. The TEIP has identified 3 projects for funding in its tranche 1. The project in Autonomous Region of Bougainville involves the construction of a hydro-power station, building of high voltage transmission lines of about 50 km and the distribution network in about 20 villages. The project will provide electric power to 2,100 homes and about 130 service facilities. All activities in AROB is implemented in districts of Selau-Suir and Tinputz.

2. The project requires the lease of customary land that will impact on about 200 households. The Land Acquisition and Resettlement Plan has been approved for implementation to manage resettlement impacts. Although electrification brings about so many benefits to the community, there are some unexpected adverse impacts of electrification such as hazards from power use both within homes and outside, the latter mainly resulting from the over-hung HVTL.

#### II. PURPOSE

3. It is the policy of ADB to minimize resettlement and other adverse impacts from project implementation. Accordingly, a Community Development Plan was prepared in close consultation with the affected community and the government staff. The implementation of CDP is expected to minimize adverse impacts and further improve expected benefits. The net result would be enhanced living standards and reduced poverty in the target area.

4. The CDP has proposed awareness, educational, training and other types of facilitation both to up-grade knowledge and develop skills of the affected community. The PPL is the primary agency that will be responsible for implementation of CDP. In doing so, PPL requires assistance and facilitation especially in communicating and working with rural communities spread out in about 20 villages of the target area. It is proposed that a NGO is recruited to assist PPL in the implementation of activities proposed in the CDP.

#### III. TASKS

5. The NGO is expected to plan, implement, monitor and report several tasks under the 4 components of the CDP. The Table below presents the 4 components and relevant activities to be implemented by the NGO. All activities are to be carried out in close consultation and collaboration with the designated PPL staff and other consultants assigned to the project.

Purpose	<u> </u>	Activities	Remarks
Partnership building between PP	Land	community	
The aim of this component is to build an effective partnership between the client and community. Both PPL and community will benefit from the partnership building component. The implementation of community contracts is an integral part of this component which will be undertaken as a pilot in selected villages	vi lis P pr al al • A	lentify all affected illages and prepare HH st repare plan to explain roject objectives and artnership principles to II HHs in project area ssist conduct wareness, educational nd training activities	This component will begin in Q1 2017
Minimise adverse impacts			
Adverse impacts of electrification include power hazards in using electrical appliances and human interference with HH electric network and in outdoor activities beneath power lines. Children can be exposed to electrification hazards while at school and playing beneath power lines. Acquisition of land for project will have adverse impacts on HHs whose land is acquired. It is necessary to help affected HHs with regard to project assistance and in delivering such assistance	4 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0	Prepare notes for presentation at community meetings Assist organise, conduct and report on meetings, discussions and workshops Plan and conduct meetings and workshops for community organisations, ward committees and PPL Heath and Safety Department Develop and implement other strategies to minimize risks	The activities under this component will be implemented just after completion of building distribution network and power connection
Minimise project risks Project risks are triggering HIV/AIDS and other STDs resulting from external workforce in target area, conflicts between workforce members and community and risks of community not being able to pay the power tariffs. It is necessary both to educate, including children in schools and train community as well as to work with affected people to explain how risks can be minimized	r r • \ i • [	Explain to community members of project risks and assist in minimizing such items Work with PPL staff to implement the schools program Monitoring and reporting	Activities will begin with the commencement of this component and carried out through out project life
Enhance electrification benefits Project aims to enhance power use not only for domestic purposes but also using it for productive purposes such as	th vi	EIP – PPL will assist ne NGO to identify illages, HHs and wareness building	The activities will begin after HHs are connected to power and will continue 1 year after

income generation. For this purpose, project is implementing a pilot in 5 villages where the aim is to promote power use for income generation.	<ul> <li>about pilot</li> <li>Assist implement activities</li> <li>Monitor in accordance with plan for the pilot</li> </ul>	power connection
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6. The activities are to be implemented during the life of the project which is expected to be from the first quarter of 2017 through to the last quarter in 2020.

#### IV. RESOURCES

7. The NGO is expected to provide full-time staff to work with the project team in villages. The staff will have skills in community development especially in planning and conducting awareness and training programs in rural areas. The NGO will provide transport and other support for its own staff working in the project. A work plan is expected from the successful NGO within the first month after mobilization.

Appendix 3: HIV/ AIDS Plan

Bougainville AIDS Council Secretariat P.O Box 322, Buka, Autonomous Region of Bougainville Telephone: (+675) 9739191 Facsimile: (+675) 9739191 Email: rayhimata@nacs.org.pg

#### RAMAZON AWARENESS

#### HIV AWARENESS

- 1. CORE ACTIVITIES
- General HIV awareness
  - Awareness through HIV songs

Note:

(Bougainville AIDS Council Secretariat will engage formerly HIV Casualties band who will sing only HIV songs as part of HIV awareness to Children between the age group of 7-15 years old. It is imperative that HIV messages are rightfully disseminated to kids below 15 years of age to avoid misinterpretation of messages.)

- PLHIV testimony
- Live Band entertainment
- Multimedia presentations
- Distribution of IEC materials
  - Distribution of condoms to villagers
  - Distribution of pamphlets and posters
- Banners
- Pre-test counselling
- Post-test Counselling
- HIV testing
- 2. <u>SITES</u>
- Namkerio Village
- Paramis Village
- Tekoknih Village/Primary School
- Wakumbin Village
- Ram Village

#### Team will spend each day at each site

#### 3. Daily Master Program

Time	Activity	Person responsible
9-10am	Arrival and setup at the village	
9am- 9:30am	Welcome	Village Chief
9:30am- 3pm	Awareness, presentations, Counselling and Testing, poems, Distribution of IEC materials	
3pm	Travel back to Kokopau	

## 4. <u>LIST OF PEOPLE PARTICIPATING</u> 1. 4X COUNSELLORS

#### 2. 1 X HIV POSITIVE PERSON

- **3.3 X PEER EDUCATORS**
- 4 8 X BAND MEMBERS

#### 5. <u>BUDGET SUMMARY</u>

Item/ Description	Unit cost	Total Cost
2. 2 x Banners	K700	K1400
3. Allowance for 5 x HIV workers x 5 days	K80 x 7 heads x 5 days	K2800
4. Instruments and Band Hire x 5 days	K2000 x 5 days	K10,000
5. Hire of 1 x vehicles x 5 days	K600 x 2 x 5 days	K6000
6. Administrative costs (printing of posters, pamphlets, purchasing materials, transport costs for 2 x counsellors from Arawa, and Accommodation in Kokopau, freight for buffers, kits from Pometc.)	K3700	K3700
8.Venue Hire	K400 x 5 venues (haus cooks for counselling and testingsand HIV awareness program	K2000

8.Venue Hire	K400 x 5 venues (haus cooks for counselling and testings and HIV awareness program	K2000
9.Refreshments for awareness team and Village elders	K400 x 5	K2000
10.Genset hire	K100 x 5 days	K500
Diesel	(200litres) for two vehicles for 5 days	K700
11.Petrol	K80 (20 litres) x 5 days	K900
Total costs		K30,000

Total requested budget is K30, 000

- 1) <u>TARGET</u>
- Over 600 people receive pre-test counselling
- Over 4000 people tested on HIV
- Over 1000 people receive basic awareness
- Over 10,000 condoms distributed

#### Appendix 4: Ramazon Community Consultations

The first consultation was with the staff of PPL and AGB. The main issues discussed and the proposed actions are in the following Table.

Торіс	Current Status	Proposed Activities
Awareness of power use	PPL staff has a program to	The education and
	educate new power	awareness program should
	customers on the safe use of	be strengthened. Educational
	power. The program	and training materials should
	focusses on new	be developed / further
	communities connected to	strengthen to be used in
	power and schools where	training; skilled trainers are
	customers are encouraged to	needed
	use power for household	
	activities. Women are	
	encouraged to use power for	
	cooking to save time on HH	
	matters	Device eveters are abavilable
Encourage power use for business activities	Power is used mainly for household activities. It is	Power customers should be
business activities	necessary to encourage	educated and where possible facilities to be provided to
	customers especially women	use power for income
	to use power for productive	generation activities.
	purposes including income	Educational materials,
	generation activities. This is	facilitating organisation and a
	inadequately supported at	team to work with
	present	communities are required
Power use in processing	Bouganville province is	It is necessary to introduce
	famous for cocoa and	new technology and
	coconut production. Cocoa	machinery to the cocoa and
	and coconut are processed	coconut farmer. This has to
	in traditional kilns where	be done in collaboration with
	quality is poor. People's	government institute and
	incomes can be enhanced by	business firms
	introduction of improved	
	machinery that can be	
	operated by electricity	

The second discussion was conducted with the officials of the Council of Elders. The main issues discussed are presented below.

Issue	Current Status	Proposed Action
Low income of cocoa farmers	All cocoa is processed in traditional kilns where the processing quality can't be improved. Farmers receive a low income for their hard work. The standards of cultivation is unsatisfactory where the application of improved agronomic techniques is low	Growers are to be provided with improved kils through loan scheme. Grower knowledge and cultivation practices should be improved through education and training
Coconut cultivators use traditional practices and	Almost all coconut growers use traditional kilns for	An education program in collaboration with the Cocoa

processing standards are poor	processing where the product quality is low. Grower is to be educated on improved cultivation practices are	and Coconut Institute and private firms has a high value
Power hazards	People are mainly illiterate where the use of power can be a risk. School children can be exposed to greater hazards by power unless children are educated on safe power use	A program of education aimed at improving safe power skills among women and school children is very important
Is it possible to engage community members in ground clearance work and small scale construction works?	This is not applicable as it is currently not in use	This is possible, though currently not used extensively. However, it is important to test this model and learn lessons before rolling over. In other sectors such as roads maintenance, community has been engaged under contracts. This needs more planning and pilot work

Outcome of community consultations in Ramos, Soromo and Munanga villages

Issue Raised	Response of PPL Team
Whether community members are given opportunity to work on construction	This is quite possible. Other projects have achieved this satisfactorily. We will propose that people in the nearby community is given opportunity to participate in construction work
What assistance can be provided whereby people can use power for business activities	It is important that power is used both for household and business activities. We need to work with other government and private agencies in educating and encouraging people to use power for business activities. This will be useful to women in particular. We can explore other strategies that will be useful and build them into the project design
Resettlement of some families is required. Whether they can be provided with some assistance to improve their living	People to be relocated will receive various forms of assistance under the ADB policy. Project will develop livelihoods restoration and income generating activities that would be of benefit to the affected community. We will work more on this and discuss further details with the community in future
Every farm household has cocoa and coconut. However, they receive low income for the produce. Can the project help us to increase our income?	Cocoa and coconut plantation practices require improvements. Improved practices can lead to a high production. It is also necessary to introduce improved processing methods and machinery. Discussions with private firms reveal that they can work with the community to improve their production and processing skills.
Who will work on construction? If people from outside can there be risks on the community? What can	Project team, contractor and the community have to work together to minimize risks in disease spreading, provide employment for local people, improve

be done to minimise risks such as spread of diseases and cultural conflicts?	community skills and to ensure other types of benefits to the community. Project team will take this issue and work on it aimed at further improving project benefits to the community as well as minimizing risks
Can poor people be given a subsidy on electric power use?	This is not possible. It is a user pay system and every household is able to use power as long as it is affordable to the HH budget
Marketing of cocoa and coconut is often a problem. Can this project help us on this aspect?	This is not within the domain of PPL. However, it would be possible that other organisations including the private sector are encouraged to arrange a better marketing strategy. Let us discuss this with other potential partners and work more on this proposal

List of people consulted on 25<sup>th</sup> and 26<sup>th</sup> Feb 2016, Ramazon project

- 1. Cornelius Omi, PPL centre manager
- 2. Chrisanto, project officer
- 3. DephraimEminoni, ABG special project officer
- 4. James Omi, Chairman, Council of Elders
- 5. David Talvi, COE **Community members**
- 6. Alfonso
- Ray Himata
   Presista Lucas
- 9. Margret (widow)
- 10. Julie
- 11. Jasintha
- 12. Brenda
- 13. Regina (widow)
- 14. Glendina
- 15. Carolene
- 16. Helen
- 17. MurialMotso
- 18. BradlyGisa

## Public consultation photos







#### Appendix 5: GRIEVANCE REDRESS MECHANISM

1. PPL has established a grievance redress mechanism to receive and address Project related concerns and to resolve land related disputes that may arise during Project implementation. PPL has informed APs about the process involved in the grievance redress mechanism (Figure 4). With regard to land disputes, the Land Disputes Settlement Act 2000 allows this dispute to be legally contested in a court of law. PPL also anticipates that most grievances related to compensation will be resolved through traditional mediation processes.

2. The Project in collaboration with the ARB Provincial Lands Officer, who may be assisted by District Land Officers and elected LLG representatives, has instituted a process to resolve disputes and grievances based on the accepted procedures of mediation. As required traditional clan leaders and other appointed leaders will facilitate processes to ensure a satisfactory resolution of issues at the local level. The latter are more important for non-indigenous APs.

3. In general it is anticipated that customary mediation will yield satisfactory results although every attempt will be made to ensure that women APs and non-indigenous APs, irrespective of traditional constraints, will be included and not excluded from the mediation processes outlined here. However, it also needs to be noted that this process varies from clan to clan and PPL will ensure that irrespective of these differences women APs concerns will be fully addressed.

4. APs can also lodge a complaint with the PMU in Port Moresby. Despite the distance from Port Moresby the Project Safeguards Staff and Project Supervision Consultants will assist APs in registering their complaints with the PMU. This will include assisting aggrieved APs to prepare their specific grievance and the PMU Project Manager will consider the complaint and within 15 working days convey a decision to the APs. The Safeguards Staff as well as local government officials will assist the Project Manager in reviewing and addressing the complaint. The Safeguards Team will also facilitate communication between the APs and PMU in this process. If the APs are not satisfied with the PMU's decision, they may then take the grievance to the PNG judicial system.

5. If the grievance is to be taken to the PNG judicial system as per the Land Disputes Settlement Act 2000 the following three steps will be adhered to:

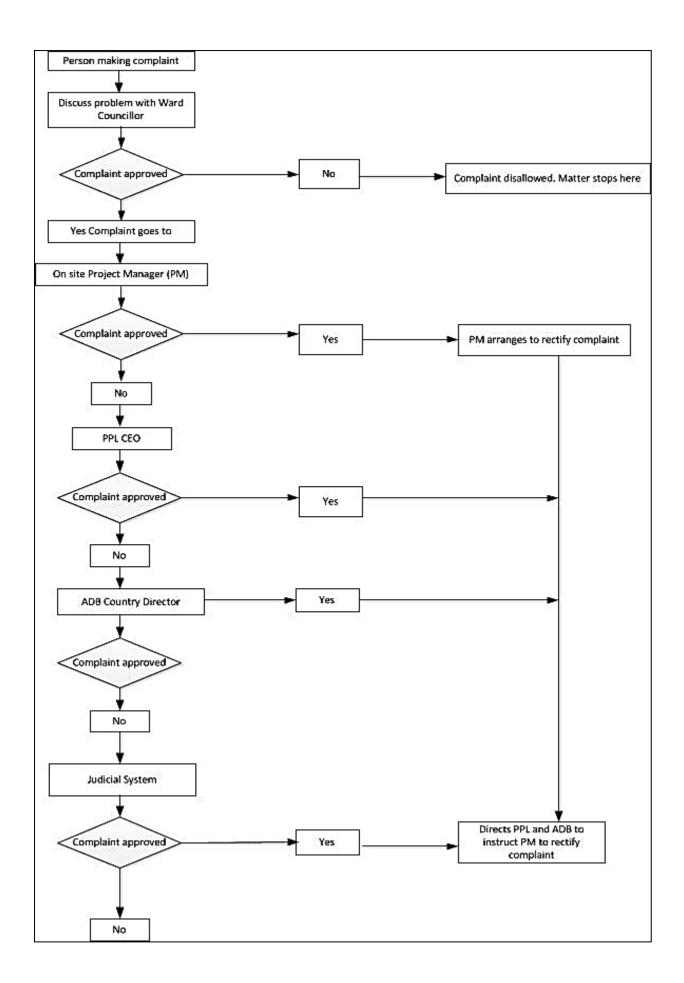
• Local Land Court: the case is heard before the Local Court Magistrate for determination. If the litigants are not successful, they may appeal to a higher court.

• District Land Court: the case is heard before a District land Court Magistrate. If the litigants are not successful, they may appear to a higher court.

• Provincial Land Court: the case is heard before the Provincial Land Court whose decision is final.

6. It needs to be noted that if recourse to the PNG judicial system is necessary because of the failure of all other means of grievance redress and the courts at any stage find in favor of the litigants all costs associated with this form of dispute resolution will need to be paid by the Project. Therefore this process should only be used as a very last resort.

7. In the event of grievances that cannot be resolved through legal redress, PPL and DLO will hold the compensation amounts in escrow. Compensation will be paid in full upon final resolution of the case via other forums in accordance with the entitlements of the affected persons.



#### Appendix 6: Stakeholder Strategy and Plan

This section presents brief however implementable Stakeholder Engagement Strategy for TEIP Tranche 2 and Stakeholder Engagement Plan for Ramazon Hydro Power Project. Both instruments presented here are a framework for the TEIP team, the will need to be reviewed once the Program gets to the go ahead and updated to reflect the realities at the time. These documents like stakeholders are not static and therefore should be live documents, in other words they should be reviewed on a regular basis.

#### Stakeholder Engagement Strategy

Managing the relationships with all stakeholders, including the Governments of PNG, the provincial governments, local communities, business operators, Project team members, agencies, community/civil society organisations is critical to attain the successful outcomes of the TEIP. To manage the relationships the following Stakeholder Engagement Strategy has been developed. Effectively managing stakeholders is a key component of successful project management and should never be ignored. Proper stakeholder management can be used to gain support for a project and anticipate resistance, conflict, or competing objectives among the project's stakeholders.

#### Principles

Key stakeholder engagement principles aligned with the IAP2's Public Participation Spectrum (refer - <u>http://www.iap2.org.au/documents/item/84</u>) in Table below assist to identify the level of participation required from stakeholders.

Inform	To provide the community and households with balanced and objective information to help them understand energy opportunities, management and effective use.
Consult	To obtain consumer feedback for decision makers through ongoing engagement and the complaints and grievance mechanism.
Involve	To work directly with communities to ensure that their concerns and expectations are realistic and met where possible. Also include aspirations into decision making.
Collaborate	Partner with the community in decision making.
Empower	To place decision making into the hands of the stakeholders where appropriate.

#### Stakeholder mapping and influence

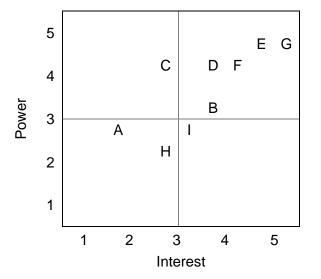
It is imperative that all stakeholders are identified regardless of how major or minor they are. If stakeholders are omitted there is the likelihood that they may become evident at some point during the Program's implementation and introduce delays or other obstacles to the TEIP's success.

All stakeholders have an influence over the project which in turn can have an impact in the TEIP. The table bellows maps the stakeholders and their concerns while analyses the level of impact they may have based on their power, influence, and involvement in the project.

Sta	akeholder	Concerns	Power (1-5)	Interest (1-5)
	PNG Government	TEIP is completed on time, budget and delivers improved electricity supply, all these without impacting negatively local communities.	3	2
В.	Provincial Governments	TEIP is completed on time and delivers improved electricity supply, all these without impacting negatively local communities.	3	4
C.	PPL (external to TEIP' team)	TEIP is completed on time, budget and delivers improved electricity supply to expected Project specifications.	4	3
	Contractors and Sub-contractors	Local communities and authorities are supportive of the project preventing hold ups and facilitating delivery of works on time and budget. Local non-skilled and semi-skilled labour is available.	4	4
E.	Local sub- contractors	TEIP provides as many as possible sub- contracting opportunities not just to landowners/former landowners but open to all potential local sub-contractors before bringing outsiders.	4	5
F.	Local communities	TEIP is completed on time and delivers improved access to electricity services. Contractors and sub-contractors are respectful of locals, local customs Impacts are contained to those previously communicated to them.	4	4
G.	Landowners and Former landowners	TEIP provides as many as possible sub- contracting opportunities. Compensation / rent payments are timely. Impacts are contained to those previously communicated to them.	4	5
H.	Local business operators	TEIP use their services before considering buying externally. Local and non-local workers use their services. Workers as much as possible are sources locally to keep their earnings within the local communities	2	3
Ι.	Local authorities	TEIP is completed on time and delivers improved electricity supply, all these without impacting negatively local communities.	3	3

### Table 1: Stakeholder mapping and influence

Below is the power and interest chart for the TEIP stakeholders. Each letter represents a stakeholder in accordance with the key in Figure 1 above.



Based on the TEIP stakeholders' power and interest analysis chart presented in Figure 1, stakeholders A (PNG Government) and H (Local business operators) will require minimal management effort as they reside in the lower left quadrant of the matrix. Stakeholder C (PPL), in the upper left quadrant, must be kept satisfied by ensuring concerns and questions are addressed adequately. Stakeholder I (Local authorities), in the lower right quadrant, must be kept informed through frequent communication on project status and progress. Stakeholders B (Provincial Governments), D (Contractors and Sub-contractors), E (Local sub-contractors), F(Local communities) and G (Landowners and Former landowners) in the upper right quadrant, are key players and must be involved in all levels of project planning and change management.

Table 2:	Stakeholder	strategy
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Stakeholder		Concerns (as per Table 1)	Quadrant	Strategy
Α.	PNG Government	TEIP is completed on time, budget and delivers improved electricity supply, all these without impacting negatively local communities.	Minimal effort	Communicate Program and sub-project specifications as required. Communicate outcomes at key milestones.
В.	Provincial Governments	TEIP is completed on time and delivers improved electricity supply, all these without impacting negatively local communities.	Key player	Invite representative to be member of sub-project steering committee and obtain feedback on project execution. Frequent communication and addressing concerns are imperative. Communicate outcomes at regular intervals.
C.	PPL (external to TEIP' team)	TEIP is completed on time, budget and delivers improved electricity supply to expected Project specifications.	Keep satisfied	Communicate resource requirements early and ensure resources are released back to PPL when they're no longer required. Communicate outcomes at

Stakeholder	Concerns (as per Table 1)	Quadrant	Strategy
			key milestones and at regular intervals.
D. Contractors and Sub- contractors	Local communities and authorities are supportive of the project preventing hold ups and facilitating delivery of works on time and budget. Local non-skilled and semi- skilled labour is available.	Key player	Invite representative/s to be member of sub-project steering committee and obtain feedback on project execution. Frequent communication and addressing concerns are imperative.
E. Local sub- contractors	TEIP provides as many as possible sub-contracting opportunities not just to landowners/former landowners but open to all potential local sub-contractors before bringing outsiders.	Key player	Invite representative/s to be member of sub-project steering committee and obtain feedback on project execution. Frequent communication and addressing concerns are imperative.
F. Local communities	TEIP is completed on time and delivers improved access to electricity services. Contractors and sub- contractors are respectful of locals, local customs Impacts are contained to those previously communicated to them.	Key player	Invite representative to be member of sub-project steering committee and obtain feedback on project execution. Frequent communication and addressing concerns are imperative. Communicate outcomes at regular intervals.
<b>G.</b> Landowners and Former landowners	TEIP provides as many as possible sub-contracting opportunities. Compensation / rent payments are timely. Impacts are contained to those previously communicated to them.	Key player	Invite representative to attend sub-project steering committee and obtain feedback on project execution. Frequent communication and addressing concerns are imperative. Communicate outcomes at regular intervals.
H. Local business operators	TEIP use their services before considering buying externally. Local and non-local workers use their services. Workers as much as possible are sources locally to keep their earnings within the local communities	Minimal effort	Communicate Program and sub-project specifications as required. Communicate outcomes at key milestones. Communicate outcomes at regular intervals.
I. Local authorities	TEIP is completed on time and delivers improved electricity supply, all these without impacting negatively local communities.	Keep informed	Communicate Program and sub-project specifications as required. Communicate outcomes at regular intervals.