

Environmental and Social Monitoring Report

Semi-annual Report

July 2018

Port Moresby Power Grid Development Project.

Prepared by PNG Power Limited for the Asian Development Bank.

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PORT MORESBY POWER GRID DEVELOPMENT PROJECT

Prepared by: PNG Power Limited for Asian Development Bank

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ABBREVIATIONS

ADB	Asian Development Bank
AP	Affected People
BRG	Badiri Resource Guards
CBD	Central Business District
CEMP	Construction Environmental Management Plan
CEPA	Conservation and Environment Protection Authority
DLPP	Department of Lands and Physical Planning
DRS	Deed of Release and Sale
EMP	Environmental Management Plan
EP	Environment Permit
EPAR	Environment (Prescribed Activities) Regulation 2002
GoPNG	Government of PNG
GRM	Grievance Redress Mechanism
IEE	Initial Environment Examination
ILG	Incorporated Land Group
IPBC	Independent Public Business Corporation
KCH	Kumul Consolidated Holdings
kV	Kilovolt
LSSO	Land & Social Safeguard Officer
MM	Minutes of Meeting
MP	Member of Parliament
NCD	National Capital District
PMU	Project Management Unit
PNG	Papua New Guinea
PPGDP	Port Moresby Power Grid Development Project
PPL	PNG Power Limited
PSB	Pestech Sdn Bhd
RP	Resettlement Plan
SP	Subproject
SPPDL	South Pacific Pharmaceutical Distributors Limited
SPS 2009	Safeguard Policy Statement 2009
TD	Tender Document
TL	Transmission Line
TLI	Transfer of Land Instruments
TT	Transmission Tower

1.0 INTRODUCTION

The Asian Development Bank (ADB) is supporting Papua New Guinea (PNG) to develop and expand its energy sector in the Port Moresby Power Grid Development Project (PPGDP) through a sovereign loan fund. The designated implementing agency is PNG Power Ltd (PPL), a fully integrated power authority responsible for the generation, transmission, distribution and retailing of electricity throughout Papua New Guinea. The project will upgrade and extend the transmission and distribution grid, improve substation capacity, as well as upgrade and rehabilitate two hydropower plants. It is aimed at reducing fossil fuel consumption, increasing access to energy supply and improving network reliability in the Port Moresby power grid.

2.0 BACKGROUND OVERVIEW

The Port Moresby Power Grid Development Project (PPGDP) is funded by ADB loan L2998/2999¹. The PPGDP agreement was signed between ADB, the Independent Public Business Corporation (IPBC)², and PPL on the 28th of May 2013. The loan and counterpart funding provided by the Government of PNG (GoPNG) is managed by PPL through its Project Management Unit (PMU). The PPL PMU has technical assistance from an international consultancy firm namely Fichnter GmbH Limited Consultant. The project intent is to achieve significant improvements in power generation, supply, efficiency, and reliability

The PPGDP is subdivided into six subprojects that entail significant investments into power, transmission, distribution, and generation. The project proposes the construction of new facilities and the rehabilitation of existing facilities serving Port Moresby. The ADB project safeguards categorization for PPGDP is Category B environmental and social component as per the Safeguards Policy Statement 2009 (SPS, 2009), because the potential adverse impacts are less likely to occur and mostly site specific, in particular Kilakila Substations whereby land acquisition is required and hydropower plants. The Transmission Line (TL) will also have a minor impact as a small area will be cleared for mounting of poles and the lines will run overhead with no impact to flora and fauna.

The project components are:

- i) Kila Kila Substation and 66kV Transmission Line;
- ii) Substation Capacitor Addition;
- iii) Upgrade of 11kV System to Open Loop Mesh;
- iv) A) Loss Reduction Program; B) Energy Access;
- v) Rouna 1 Hydropower Plant Rehabilitation & Upgrade;
- vi) Sirinumu Hydropower Plant Upgrade.

¹ ADB Loan L2998/2999: Port Moresby Power Grid Development Project.

² IPBC is now known as Kumul Consolidated Holdings (KCH).

Subprojects (i) to (iv) will take place in and around the Port Moresby area in the National Capital District (NCD).

Subprojects (v) and (vi) are respectively located about 20km and 35km north east of Port Moresby along the Laloki River valley.

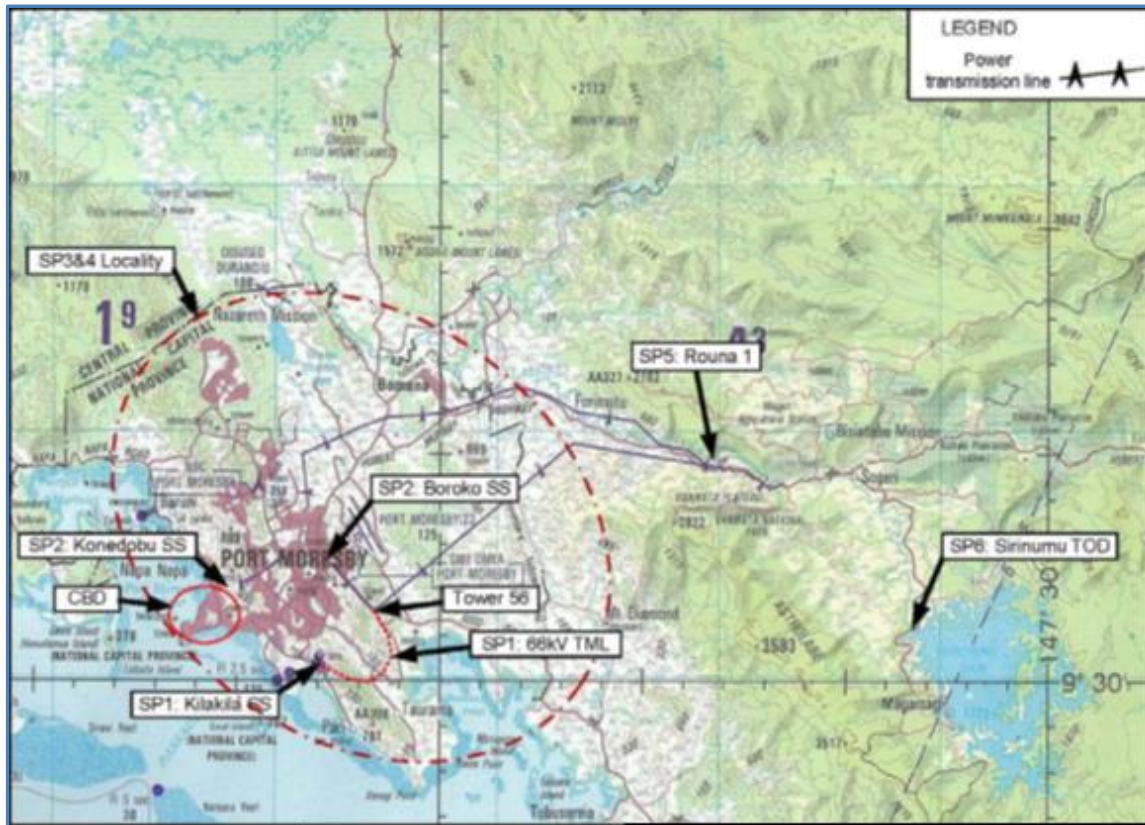


Figure 1: POM Power Grid Development Site Plan

3.0 MONITORING PURPOSE

Monitoring ensures that the PPGDP subprojects are socially and environmentally compliant to meet ADB's safeguard requirements, as well as PNG government regulations on social and environmental sustainability; to reduce, minimise, mitigate and/or avoid adverse impacts at the project level. Therefore, negating or minimising the impact of the construction on the affected persons as well as the project sites.

I. SOCIAL MONITORING

4.0 BACKGROUND

4.1 Affected People

The affected people (APs) of SP1 belong to 3 clans namely, Vaga, Iarogaha and Uhadi Iarogaha. The total numbers of families are 198 with a population of 744 individuals. All members of the first clan (Vaga) are residents of Kilakila village while the latter 2 clans (Iarogaha and Uhadi Iarogaha) are residents of another village called Korobosea. The two pieces of land are registered in 3 Incorporated Land Groups (ILGs). The proposed land for acquisition is not currently utilized by the AP's for purposes such as growing food. The APs include several who live overseas. Fuel wood is collected from around their resident villages and from other land parcels held by clan members. Studies indicate that the AP's have sufficient land available nearby for food gardens and to collect fuel wood (RP, 2012). The project has moderate impacts and is categorized under ADB categorization as B category that is not significant but requires some works to be done on acquiring land but no displacement of people.

4.2 Relocation

All six (6) sub projects within the PPGDP do not require relocation of households except for SP1 Kilakila Sub Station and 66kV Transmission line which requires the use of customary land. A total of 0.064 hectares was acquired for the Sub Station and approximately 14.86 hectares for the Transmission Line route. The Transmission Line Route was re-diverted from its original route to avoid existing squatters and was resurveyed and registered on 14/06/2017.

4.3 Compensation

Compensation payments were made in part payments for the land acquisition of SP1 which also includes the Transmission Line easement. Final payment was made after the signing of the Deed of Release and Sale (DRS) and Transfer of Land Instruments (TLI). The transfer was facilitated by PPL and executed by DLPP Officers.

4.4 Grievance Redress Mechanism

A Grievance Redress Mechanism (GRM) was setup as stated in accordance to the Resettlement Plan and coordinated and implemented accordingly by the PPL Lands and Social Safeguard Officer (LSSO) and the Vaga ILG. The Grievance Redress Mechanism (GRM) for both social and environmental grievances is shown in figure 4 below. The first point of contact is the PMU and designated site contractor. In the case of land issues, it is usually passed on to the landowners

(community leaders) as a first point of contact, before the PMU/LSSO. The grievances received during this reporting period have been addressed.

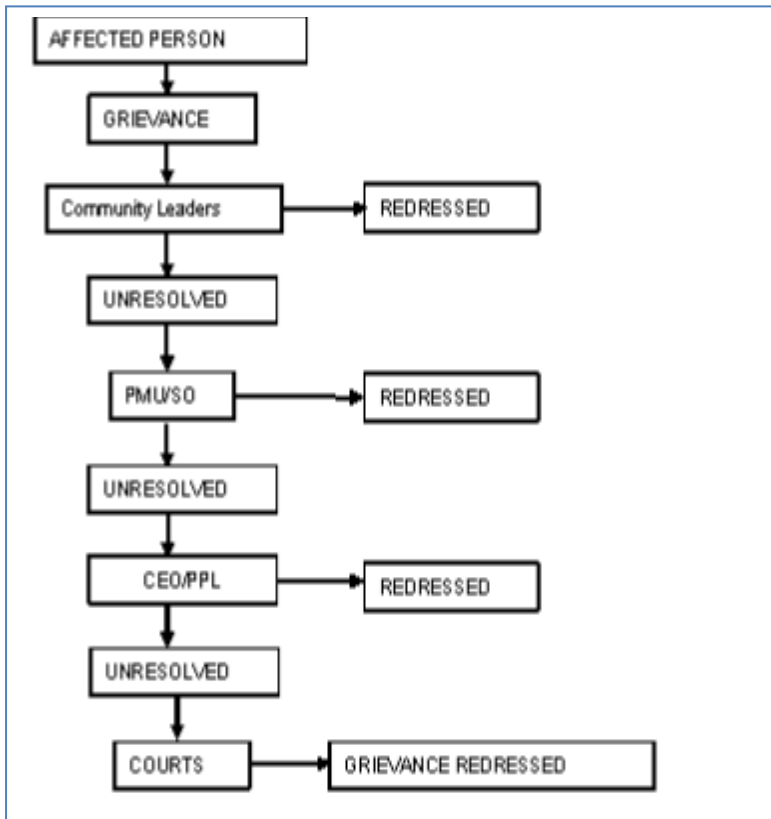


Figure 2: GRM Flow Chart

5.0 METHODOLOGY

The social monitoring report is written with data gathered from different sources with primary data gathered through observation, discussions through consultations/meetings with the AP and from sources within PPL. The construction at Kilakila for SP1 began in the second quarter of 2017. During this reporting period there has been a few matters regarding land that have arisen and will be further explained below.

6.0 PROJECT STATUS

Table 1: Sub project 1 Status Update: Kilakila Sub Station and 66kV Transmission Line

Activity	Date	Status
Lease Title of Land	09/07/18	Pending
Civil Works on Construction Site		Active (On going)
Soil testing at TT sites	09/07/18	80% complete (see Appendix A for daily Civil Inspection Reports)

7.0 MONITORING RESULTS AND ACTIONS REQUIRED

7.1 Update on SP1 AP

Within the reporting period there have been two major issues concerning land boundaries. Both are in regard to the substation's neighbouring properties. These properties, both on the adjacent left and right of the site have now been leased or bought off from the legitimate landowners and are being held by third parties.

The first matter arose with the adjacent property on the left of the substation. The property owner was advised by PMU that there was intent to remove his chain mesh fence along the shared boundary and a new sturdier fence to be erected. He responds in writing that in order for the PPL and contractor to remove one side of his fence he would like the existing fence to be taken down and reuse to fence the other side of his property as part of the deal. He insists the cost will be met by PMU through its contractor (PSB) on labour and resources (see Appendix B for the response letter). PPL PMU decided not to remove the fence. There is space available with the existing site to build the permanent substation fence without having to remove the neighbours fence. The matter is now closed.



Figure 3. Map showing sites that has land issues

The second matter that is currently being addressed by the PMU during this reporting period is a land dispute of the location of the landing tower into the substation, TT16. The adjacent property on the right, Portion 3286c is owned by a company called Badiri Resources Guards (BRG) of which the Chairman for VAGA ILG is a stakeholder. BRG has subleased this land to South Pacific Pharmaceutical Distributors Limited (SPPDL) and they are the ones who have currently developed this land. Both BRG and SPPDL are now disputing the location of TT16 as they say it is located within their boundary, and they do not want a TT in their yard.

A meeting was held on 09/05/18 to discuss this issue with all parties present (see Appendix C for MoM). During this meeting PPL advised the attendees that prior to Portion 3286c being developed, PPL had liaised with VAGA ILG and paid for the land where TT16 would be located. VAGA ILG received payments for this land and a signed Deed of Release has been received by PPL from the DLPP for TT16 together with all land associated with the PPL Kilakila project. BRG and SPPDL both understood the situation but were still not in agreement of the TT16 location. They have since written a letter to PPL (see Appendix D) in regard to this issue, and the matter has now been elevated to the PPL management, legal, and lands team to respond.

7.2 SP1 Land Title

DLPP wrote to PPL on the 19/07/2017 to assure PPL that a Leasehold Title will be given once the National Land Board Meets. In the meantime, the Assurance Letter was given to the Contractor to

commence with civil works on the substation site and to assure them that the land is owned by PPL and free from any customary issues/obligations.

A follow-up with DLPP on the 11/07/18 discovered that unfortunately a Land file has still not been created for this portion, even though the Land Board had met. DLPP officers were advised of this inexcusable oversight and said they would work on creating this as soon as possible and would notify the PMU once done.

7.3 SP1 Transmission Tower Accessibility During Soil Testing

A joint site inspection was carried out during the first week of July 2018 for the soil testing of the TT foundations. The parties included were members of the PMU, PSB and Cardno. Table 4 below shows the accessibility for each tower during the testing period.

Table 2: Access to Transmission Tower Sites for Soil Testing

TT	Accessibility	Remarks	TT	Accessibility	Remarks
TT 56	YES	NO encumbrances	TT 08	YES	Currently face issue with developer. To be resolved before access.
TT 00	YES	NO encumbrances	TT 09	YES	No Encumbrances
TT 01	YES	Area Fenced (Developer to be Notified by VAGA ILG)	TT 10	YES	Accessible (Developer to be notified by VAGA ILG)
TT 02	PARTIAL	Construct a Linking Access via main 4 lane road highway to TT2 location. Distance less than 100m uphill.	TT 11	PARTIAL	Accessible through TT10 to link TT11 location. Distance about 200m.

TT 03	YES	Access needs levelling to access TT3	TT 12	NO	NO Access, however access can be linked via TT 13 about 300m (VAGA ILG Land owners to be Notified).
TT 04	PARTIAL	Construct a Linking Access via TT3 or can be from the main highway (optional).	TT 13	PARTIAL	Access needs levelling and to construct a linking Access to TT13 location. Distance less then 50m uphill.
TT 05	PARTIAL	Access needs levelling to near TT05 and then construct less then 50m road to reach exact location.	TT 14	YES	Access needs levelling to access TT14
TT 06	PARTIAL	Construct a Linking Access via TT5.	TT 15	PARTIAL	Partial Access (Access along Pari Road, next to Kilakila Cemetery, VAGA to be notified)
TT 07	YES	Accessible from Taurama Road	TT 16	YES	Area Fenced (Developer to be Notified by VAGA ILG)

6.4.1 T56, T0, T1, T3, T7, T8, T9, T10, T14, and T16 are fully accessible via road.

6.4.2 T1 & T16 have the area fenced and VAGA ILG have already informed developers who are aware of the construction.

6.4.3 T2, T4, T5, T6, T11, T12, T13, T15 will need permission from VAGA ILG to do linking access which will pass through VAGA Land.

6.4.4 T8, currently faced issue with developer of this site. The VAGA ILG were informed and is dealing with the developer who infringe into PPL's TL right of way and construction site for T8.

II. ENVIRONMENTAL MONITORING

8.0 METHODOLOGY

The methodology that is used to assess environmental risk activities are as follows:

- Review of CEMP identifying hazard and response in line with work activity on site.
- Project site visit
- Checklist inspection (per the EMP/CEMP guidelines)
- Clearance or revised response according to checklist result
- Data collated
- Site visit report and inspection report.

9.0 PROJECT STATUS

Table 3: PPGDP Subproject Status Update

	PPGDP Subproject	Date	Status
1	Kilakila Substation and 66kV Transmission Line	25/06/18	Final CEMP passed on to ADB
		07/05/18	Site office complete and occupied by both PPL and PSB
		06/18	Bulk earthworks 80% complete
		06/18	Design approvals 12% complete
		06/18	Transmission Line site investigation and levels completed
		26/03/18	Annual EP fee paid to CEPA
2	Substation Capacitor Addition	Has moved to the Loss Reduction Team within PPL.	
3	Upgrade of 11kV System to Open Loop Mesh	06/18	CBD Switching Station land yet to be confirmed
		25/06/18	ADB responded to PMU that Commercial TDs must be submitted with the Technical TDs. The 2 nd draft of the Technical TDs delivered to ADB.
4	A) Loss Reduction Program;	Has moved to the Loss Reduction Team within PPL	
	B) Energy Access	06/18	The board approved 3 contractors and they are now awaiting their mobilisation payment. Work to commence in 4 th quarter.
5 & 6	Rouna 1 Hydropower Plant Rehabilitation and Upgrade; & Sirinumu Hydropower Plant Upgrade	06/18	Rebid in progress
		06/18	Awaiting CEPA conditional letter of approval to proceed works.

10.0 ENVIRONMENTAL MONITORING COMPONENT

All subprojects under the PPGDP have had an IEE undertaken during the pre-feasibility stage with the conclusions from these studies remaining unchanged. With the CEPA permit process additional assessments were done to each subproject to classify the level of activity under the PNG Environment Act 2000 and Environment (Prescribed Activities) Regulation 2002. The outline of activity level for each is given in Table 4 below:

Table 4: PPGDP Regulatory Compliance

PPGDP Subproject		CEPA		ADB	
		Classification under EPAR	Environmental Assessment	Category under SPS	Environmental Assessment
1	Kila Kila Substation and 66kV Transmission Line	Level 2	EMP	Category B	IEE & EMP
3	Upgrade of 11kV System to Open Loop Mesh				
	B) Energy Access				
5 & 6	Rouna 1 Hydropower Plant Rehabilitation and Upgrade; & Sirinumu Hydropower Plant Upgrade				

10.1 SP1 Environmental Update

The annual permit fee for the project was paid to CEPA on the 26/03/18. The final draft of the CEMP was received by the PMU Environmentalist from PSB on the 22nd of June 2018. This was the draft that incorporated the ADB Environment Specialist's comments, which was received in March 2018. The final CEMP was then delivered to ADB on the 29th of June 2018. A summary of the CEMP document transmittal is presented in Table 7 below.

Table 5: Summary of SP1 CEMP Document Transmittal

CEMP	RECEIVED
1 st Draft	30/10/17
2 nd Draft	15/12/17
3 rd Draft	18/01/18
Final	22/06/18

During the reporting period there was one major issue that was a concern at the project site, and that was dust management. Unfortunately, PSB did not adhere to the CEMP to provide adequate dust suppression while earthworks were going on and this led to complaints by the locals. These complaints however were never directly received by PPL and were always through third parties.

For dust suppression PSB was advised numerous times to provide a water cart on standby for the substation site, access roads, and soil stockpile area, however their delay in responding to this request eventuated in a negative response by the residing community. There was a roadblock at the access road to the stockpile site because of dust emanating from soil sieving activities. This was a build-up of frustrations from the lack of response to excessive dust emanating from the construction activities in general (see Appendix E for Safety/incident report). The PMU then enforced a stop work order to PSB to immediately address this concern before work could proceed (see Appendix F for Stop Work report).

10.2 SP3 Environmental Update

The EP for SP3 will specifically be for the construction of the CBD Switching Station located in down town Port Moresby. The land for SP3 has not been secured as yet. Once the land has been acquired the permit process will commence. The PMU is working closely with the PPL management to secure a piece of land for the CBD Switching Station. Progressive updates will be provided in the next reporting period.

10.3 SP4B Environmental Update

The energy access project SP4B will not require an EP according to its EPAR activity classification; however, a CEMP will be drafted for use during construction which is scheduled to begin in the fourth quarter of 2018.

10.4 SP5 & 6 Environmental Update

The EP for the Rouna Cascade, which is an amalgamation of Rouna 1-4 and Sirinumu Power Stations is yet to be rendered by CEPA, as PPL has to undergo an environmental audit of its operations. CEPA has however conceded that this would be a large exercise and would not be carried out in the near future. So, for this subproject it will give a 'conditional permit' letter to begin project works. Currently, the PMU Environmentalist is following up with CEPA for this permit document.

11.0 CONCLUSION & RECOMMENDATION

11.1 Social

- ✓ SP1 Kilakila Substation and Transmission Line construction has come under two major land issues during this reporting period.
 1. Fencing disagreement with the substation site's adjacent (left) property owner a Mr Michael Kandiu. He did not want the PMU to remove his fence without rebuilding it on the other side of his property. The PMU decided not to take up his offer as that will be at the project's cost and will leave his fence intact. The substation fence will be built alongside it.
 2. The adjacent property owners on the right, Badiri Resource Guards and their tenant South Pacific Pharmaceutical Distributors Limited have disputed the location of TT16 as it says it is located within their property. They have lodged their complaint with PPL and are now awaiting a response.
- ✓ Developers of areas that are fenced along the TL route have been notified of the construction that will take place, especially near the proposed TT sites. During soil testing for the TT foundations this was further reiterated.

11.2 Environment

- ✓ The CEMP for SP1 is now finalised after ADB comments and the annual permit fee was paid on the 26/03/18.
- ✓ The status of the SP3 EP has remained unchanged. The SP3 EP application has not been prepared due to the unavailability of land. Once a project site has been secured a site assessment will be conducted leading on to the application of the EP.
- ✓ The status of the SP5/6 EP has remained unchanged. The SP5/6 EP has been granted under a conditional permit. CEPA is yet to render this letter.

12.0 ACTION PLAN

Table 6: Follow-up Action Plan

No.	Items (issues)	Actions to be Undertaken	By Whom	When (Completion date)
Social				
1.0	SP1 TT16 location dispute	Follow-up	Philip Omaro	Third Quarter 2018
2.0	SP1 TT route encumbrances	Follow-up	Philip Omaro	Third Quarter 2018
3.0	SP3 CBD Switching Station Land	Liaise with PPL lands	Philip Omaro	Third Quarter 2018
4.0	T8 land issue	Follow-up with VAGA ILG and Developer.	Philip Omaro	Pending
Environment				
4.0	SP1 monitoring and compliance	Ongoing	Leilah Naris	Fourth Quarter 2019
6.0	SP4B CEMP	Write-up	Leilah Naris	Third Quarter 2018
7.0	SP5 & 6 EP	Follow-up	Leilah Naris	Third Quarter 2018

13.0 APPENDICES

The following appendices can be made available upon request.

Appendix A Daily Civil Inspection Report 003-007

Appendix B Response letter from Mr Kandiu

Appendix C Minutes of Meeting for PPL, BRG & SPPDL

Appendix D BRG Letter to PPL

Appendix E Safety/Incident Report

Appendix F Stop Work Report