



POWER SECTOR EXPANSION PROJECT



ADB LOAN N^o 2368
ADB GRANT N^o 0087
JBIC LOAN N^o 8232
AusAID GRANT N^o 0101



Quarterly Progress Report No. 18 3rd Quarter 2012 (July – Sept. 2012)



PROJECT MANAGEMENT UNIT

&



EGIS BCEOM INTERNATIONAL

Table of Acronyms

ADB	Asian Development Bank
ADR	Arthur D Riley
APM	Acting Project Manager
ATS	Automatic Transfer Switch
AusAID	Australian Agency for International Development
CDC	Cabinet Development Committee
CEO	Chief Executive Officer
CSO	Community Service Obligation
DSR	Debt-service Ratio
EA	Executing Agency
EARF	Environmental Assessment and Review Framework
EI	Egis International
EPC	Electric Power Corporation
ESU	Environment and Social Unit
GoS	Government of Samoa
IA	Implementing Agency
ICB	International Competitive Bidding
IEE	Initial Environmental Examination
IRR	Internal Rate of Return
JBIC	Japan Bank for International Cooperation
JICA	Japan International Cooperation Agency
km	kilometre
kV	kilo Volt
kVA	kilo Volt-Ampere
kW	kilo Watt
LARF	Land Acquisition and Resettlement Framework
LARSF	Land Acquisition and Resettlement Screening Form
MAN	MAN Diesel Australia Ltd
MCIL	Ministry of Commerce, Industry and Labour
MNRE	Ministry of Natural Resource and Environment
MOF	Ministry of Finance
MOU	Memorandum of Understanding
MV	Medium Voltage
MWCSD	Ministry of Women Community and Social Development
NCB	National Competitive Bidding

NPV	Net Present Value
PEAR	Preliminary Environmental Assessment Report
PM	Project Manager
PMC	Project Management Committee
PMU	Project Management Unit
PPMS	Project Performance Monitoring System
PSEP	Power Sector Expansion Project
PSC	Project Steering Committee
PUMA	Planning & Urban Management Agency
REA	Rapid Environmental Assessment
SLC	Samoa Land Corporation
SMEC	Snowy Mountain Engineering Consultant
STEC	Samoa Trust Estate Corporation
SWA	Samoa Water Authority
TA	Technical Assistance
TER	Tender Evaluation Report
USD	American Currency

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1. EXECUTIVE SUMMARY

This is the Quarterly Progress Report No. 18 and it covers the project activities and progress for the 3rd Quarter 2012 from July 1 to September 30, 2012.

Here is a summary of the progress of each subproject at end of 3rd Quarter, 2012:

1.1 Core Subprojects

Hospital Feeder Upgrade Stage 1 – Contractor was Bluebird Ah LAL JV

- Project is complete.

Prepayment Meters (PM) – Contractor is A D Riley NZ Ltd

- Total number of Prepayment meters installed by ADR up to end of September 2012 is 20,042; 958 left to be completed of ADR's contract. Total number of PM in ADR's contract is 21,000. Contract includes lowering of meters. Total of 3,988 meters have been lowered to end of September.
- There are 31,909 active meters at end of September 2012; 23,294 are Prepayment Meters and 8,615 induction or post paid meters.
- 73% of total active meters are on Prepayment; this leaves 2% to achieve project goal of having 75% of total number of active meters on Prepayment Meters.
- EPC continued to reconcile and clean-up customers' databases in the Daffron and Suprima programs to determine total number of active customers. Post payment customers are still recorded in Daffron, while Suprima program has all prepayment customers.

Consultancy Services

- Implementation Consultant, Egis International, is continuing to complete Feasibility Studies of 5 hydro schemes and tender documents of 3 of the 5 schemes.
- EPC hired 3 Individual Consultants (IC) to add to PMU to improve technical capacity of PMU team. The 3rd IC, which is the Transmission and Distribution engineer is replaced by a locally hired TD Engineer.
- PMU submitted to ADB requirements and additional budget for hire of additional consultants needed from time to time on short and long term assignments. This includes extension of contracts of the 2 IC, shorted term commissioning engineers, Project Manager position, and consultant to conduct Cost of Service and Tariff Study.

1.2 Candidate Subprojects

Upolu Generation

1.2.1 Tanugamanono Plant Noise and Emission Controls

- No activity this Quarter.

Refurbishment of Alaoa Hydro Plant

- Project is complete.
- Final change order for civil contractor has been approved and addendum to contract is prepared for signing.

Fiaga Power Plant Lot A – Contractor is Blue Bird Ah LAL in association with Woods Pacific Ltd and Mitsubishi Heavy Industry (BBA/Woods/MHI)

- This project includes; powerhouse, 4 new diesel generators, complete with single stack exhaust system, fuel, oil, cooling, waste oil and charged air systems, external water and fire fighting system, water storage tanks and booster pumps, wastewater system, mechanical and electrical workshop, earthgrid system, fence, and outdoor security lighting.
- Completion date is scheduled for February 2013 with commissioning scheduling to commence mid January 2013.
- State of completion to date - 90% of powerhouse, 80% of installation of the 4 generators and associated equipment, 60% of the civil work, 60% of external water system and have not started construction of earth system of the power plant
- 4 Change orders have been approved and processed bringing total additional cost to 4.73% of original contract amount. There are still about 7 other change orders received that are under review. This includes; earthgrid upgrade, lining of exhaust stack, stormwater drainage, structural steel and foundation of building, extra installation cost, retaining wall of unstable bank south of powerhouse, and others.

Fiaga Power Plant Electrical Lot B – Contractor is Northpower NZ Ltd (NPL)

- Installation and pre-commission tests of all electrical switchgear is complete.
- Only work left is terminating and connecting cables from generators to electrical switchgear after cables are installed by Bluebird and commissioning of plant when generators are installed.
- Contractor submitted a claim for extra cost incurred: (i) due to delay in accessing powerhouse to install equipment under their contract which resulted in additional storage and insurance cost for electrical equipment which were received early, (ii) miscommunications between NPL and BBA which resulted in NPL not accessing power plant during Easter Holidays. Extra cost is associated with expenses for Schneider factory engineer here to install switchgear. Claim was disapproved for reasons presented to NPL.
- Northpower had indicated filing for extra cost associated with extension of insurance coverage for their contract as a result of postponement of commissioning of the generators to February next year. EPC has not received this claim for extra cost.

Fuel Tanks – Contractor is Fuelquip NZ Ltd/GMA Construction Ltd JV

- Concrete bund for tanks is complete except for a couple of corrective work to be done. All 6 tanks have been delivered and placed on their mountings. JV started construction of off-loading bay.
- Design of pipework is completed and fabrication started.
- A subcontractor is engaged by contractor to construct remaining civil work.
- Revised completion date with extra work is January 2012.

Fiaga Access Road/Pipe/Fence – Contractor is Silva Transport Ltd

- Contract is complete and completion certificate issued.

Relocation of Generators 5A, 7A, and 9A from Tanugamanono to Fiaga Power Plant

- Relocation of 3 generators will not start until Fiaga power plant is fully operational in 2nd Quarter of 2013.
- Major work that are completed for installation of the 3 generators that were constructed and installed under BBA and Northpower Fiaga contracts are: engine foundations, supply and installation of three 6.6/11kv transformers, and 11kv circuit breakers in main high voltage switchgear
- Preparation of tender for relocation of 3 generators started.
- New Board of Director reversed decision by last Board to only relocate 3 generators to relocate all 4 generators to Fiaga.
- Keeping one in Tanugamanono will provide backup power for hospital and other critical government facilities connected to Hospital underground feeder from Tanugamanono.
- Relocating 4th generator can be done, but it will cost quite a bit because power plant was designed and built to take only 7 generators; 4 new ones and 3 relocated from Tanugamanono power station.

Hospital Feeder Stage 2 – by Bluebird Ah LAL JV

- Under underground cables were successfully tested to 22kv when cable was energized after connecting to Tanugamanono 22kv switchgear.. .
- EPC started to change out the eighteen (18) 6.6kv transformers connected to this feeder with same sizes 22kv transformers. One of hospital substation transformers is energized from the Vaitele Feeder until Automatic Transfer Switch is fully commissioned and connection to underground Hospital Feeder is made.
- Improvements included in this subproject are:
 - a) Upgrade voltage Hospital Feeder from 6.6kV to 22kV;
 - b) replace eighteen (18) 6.6kV transformers with 22kV transformers;
 - c) replace the main 500 kVA transformer which supply the National Hospital
 - d) Install two padmount Automatic Transfer Switches (ATS) at the National Hospital's two electricity supply points. ATSS enable two distribution feeders to be connected to the hospital substations so

that if the primary feeder is off, the ATS will automatic switch to 2nd feeder;

- e) Replace the 22kV overhead lines of Hospital Feeder with 22kV underground cables from Tanugamanono power station to Savalalo;
- f) Construct a dedicated underground transmission line to connect the Samasoni hydro plant direct to Tanugamanono power station; and
- g) Connect dedicated transmission line for Alaoa and Fale ole Fee hydro plants direct to 22kv switchgear in Tanugamanono power station instead of feeding through East Coast distribution feeder.

33kV Transmission Line – Construction by EPC

- This 33kV transmission line connects the new Fiaga power plant to the new Fuluasou Substation and continues to Tanugamanono power station. This line becomes the 33kV backbone transmission line that links power stations to substation. There are two 33kV circuits connecting Fiaga Power Plant to Fuluasou Substation; one underground and one overhead. Reason is to improve reliability of transmission line during major cyclone or eathquake. Line continued underground from Fuluasou Substation to Tanugamanono power station.
- Construction of 33kv overhead line started. Construction is done by EPC and supervised by Distribution Engineer. Pre-stressed concrete poles are used for the 33kv transmission line. About 40% of poles are installed and framed.
- The second 33kv transmission line from Fiaga to Fuluasou is built underground.
- Excavation of trench to lay underground 33kv cable and fiber optic cables from Fiaga power station to Fuluasou substation will be contracted out but EPC installing the cables. Total length of trench is 15 kilometers.
- Bid for construction closed on 17 of September. Construction is split into 2 lots. Evaluation report has been submitted to ADB for approval.
- Most of materials for the 33kv lines and other feeders have arrived. 22 and 33kv cables are scheduled to arrive in October.
- Consultations with affected people and survey of powerline route are finished. Crop damage compensations are being processed.
- There are still issues between EPC, Land Transport Authority and Samoa Land Corporation related to the route of the new transmission powerline, existing road and true legal reserve of the road. This is attributed to fact that 30% of existing road does not follow legal reserve of road. New poles following the true legal reserve are too close to existing paved road. In other cases powerline is too close to houses of some people living along side of the road. These issues are being sorted out on a case by case.

22kV Underground Cables from Fuluasou Substation to Apia – by EPC

- Rest of materials supplied as part of 33kv TL contract. Contract has been awarded to 2 suppliers.

- All conduits and vaults for this underground feeder have been built and installed under another earlier contract .
- Work has not started to install cables and associated equipment. All high voltage power poles along Vaitele Street from Lepea to Malifa will be removed after underground cables, transformers, low voltage network are installed. This will enable LTA to complete installation of street lights on Vaitele Street.
- Section of this underground cable from Fuluasou to Lepea bridge was supposed to be direct buried. However, 200 meters of this section from Tulaele/Vaitele Roads intersection to Lepea bridge will have cables installed in conduits. This is because construction of extension of 4 lanes from Lepea to Vailoa has started and they are laying conduits for power cable in this section of the new road.

Fuluasou Substation – by Northpower NZ Ltd

- Work completed to end of September - 80% of civil work, 80% of the building, and 80% of installation of transformers and switchgear.
- EPC reduced scope and cost of this Contract. Replacing the Lalomauga hydro plant 22/33 kV substation for 33kV tie and interconnecting 33 kV switchgear is taken out of contract. These changes are included in Change Order 1.
- Change Order No 1 is approved and addendum of contract prepared.
- A second change order is being prepared for changes in civil work. Again, this change order will result in reduction of contract amount.
- Completed factory testing of transformers in Schneider's (supplier) factory Indonesia. EPC sent 3 engineers to witness tests. Transformers were received and installed.
- This project will be completed and facility handed-over to EPC in November. Left to be done is final commissioning when Fiaga power plant is completed in February next year.

Low Voltage System Improvements (Upolu)

- No activity on this subproject this quarter other than receiving rest of materials..

22kV Overhead line Reconductoring – Contractor is GMA Construction Ltd

- Construction continued. Work is 80% complete.
- There were land disputes on construction of new 33kv powerline along main east coast road due to crop damages. PMU surveyed crop damages and processed approval of compensation for affected families. There are 26 affected families involved. Total cost of compensation is \$91,550 Samoan Tala.
- Contractor filed a SAT\$1,126,076.84 claim loss of revenue due to stoppage of work due to lack of materials. Acting Project Manager disapproved this claim twice. Matter has now gone through Adjudication Process. EPC and Contractor finally agreed on Adjudicator. He is Latu Kupa, a Council Member of the Institution of Professional Engineers of Samoa (IPES).

Refurbishment of Salelologa Power Station and construction of new power station in Vaiaata.

- ADB approved resistivity study of site of new power plant in Vaiaata. Northpower company was selected to do study. Field work of study is completed.
- PMU decided to implement Salelologa Substation separately from Vaiaata Power Plant due to deteriorating conditions of electrical switchgear in Salelologa power plant and long implementation time of the Vaiaata power plant. PMU started to prepare bid for substation. Substation will be housed inside old power plant building. ADB approved bid document for substation. Bid is issued on October 1, 2012.

Puapua to Asau 22kV (Savaii) overhead line upgrade – Contractor is Tenix NZ Ltd

- Outstanding to be done is reconductoring of remaining 102 spans of HV powerline. Materials are received. Work will be done by EPC.
- Now planning to have Savaii crew do it. We will combine construction of this with rebuilding of Low Voltage Network, which is one of outstanding subprojects.

Stream Flow Gaging & Test Equipment

- Project is 100% complete.
- Stream gauging station in Tiavea is shutdown and equipment removed. Adequate data has been collected.

Refurbishment of Generators 7A and 9A in Tanugamanono Power Station – Contractor is MAN Diesel Australia Ltd

- Contract is complete with recent commissioning of generator 7A. A new crankshaft was installed in 7A as well as major overhaul. Unit 7A replaced Unit 5A in original contract to overhaul generators 9A and 7A.
- PMU and Attorney General Office are finalizing addendum to this contract for the many changes.
- Contract was originally to refurbish Units 9A and 5A. Unit 7A later replaced 5A due to sudden failure of 7A crankshaft. Additional parts were also purchased.

SCADA – Schneider Electric Ltd

- Contract is awarded to Schneider Electric Ltd. Contract agreement is signed.
- Design work starts.
- Schneider engineers visited on April 10 - 13 to start data collection and finalize contract agreement.
- Signing of contract is delayed due to a few legal and technical issues. PMU / Office of Attorney General continued to work on contract.

Vending System for Prepayment Meters

- EPC and National Bank of Samoa launched a new system this year for customers to buy top up tokens by a texting system to NBS and payment of token is

deducted direct from customer account in NBS. Cost of each transaction is 1 Tala, and is paid by customer. Money collected is automatically deposited in EPC account with NBS. Already 1000 new customers have signed up with NBS for this new service.

- A new prepayment meter from another supplier is being tested if can work in existing vending system. If it works, this will give EPC an option of another supplier.

Taelefaga, Lalomauga, and Samasoni Hydro Plants and Tanugamanono Power Station 22kv Switchgear Refurbishment

- Contract is 100% complete. Plants are back in operation.

Hydro Development

- Hydro development of schemes in Savaii and Upolu are combined under this subproject.
- Implementation Consultant (Egis International) continued with preparation of Feasibility Studies of 5 hydro schemes; which are: Falese'ela, Fuluasou, Tiapapata, and Tafitoala on Upolu and Faleata-Palauli on Savaii. They are also preparing design built tenders of 3 schemes (Fuluasou, Faleseela, and Tiapapata).
- Summary of capital costs and annual electricity generated from each of the 3 selected schemes. There isn't enough funding in the present budget to build all 3 schemes. Additional funding is needed.

Hydro Schemes	Installed Capacity MW	Annual Generation kWh million	Capital Costs US\$million.
Fuluasou	1.15	4.061	\$13.057
Tiapapata	0.6	3.478	\$6.177
Falese'ela	0.5	1.776	\$4.910
Total	2.25	11.315	\$24.144

Vaipu Pump Scheme

- Decision from ADB and EPC to start implementation of this project is still pending.
- ADB funded study under a Technical Assistance TA: 7121 SAM – **Afulilo Environmental Enhancement Project** Phase 1 Report by SMEC is complete. Report has been reviewed and discussed by various Government agencies. EPC is presently planning to conduct consultation with 6 villages of Fagaloa District to present findings of the Study.
- Unpleasant smell of hydrogen sulphide odour generated at Afulilo Dam continues to be of major concern to the people of the village of Taelefaga where the discharge water from the hydro plant flow through. Kids affected by the smell ended up in hospital from vomiting and headache.

- EPC has decided to implement recommendations of Study Report to mitigate the smell. A new subproject outline to implement these recommendations will be submitted to EPC Board for approval. It is also brought to ADB for their review and approval.
- Plan is to: 1st install concrete pipes in the ocean to pipe the water from hydro plant to discharge in deep part of bay. 2nd is install pumps or air compressor to improve the circulating of deep water in dam up on surface to expose to oxygen.
- A USD\$300,000 is left over from the TA used for SMEC study. ADB is requested to reprogram this money towards the budget for implementation of remedy to the odour problem.

Taelefaga Hydro Plant Governor System Replacement

- Revised Evaluation Report was submitted to ADB for final consideration.
- ADB and Government granted approval to award contract to Northpower NZ Ltd for total price of US\$914,967.75 or SAT\$2,091,354.86.
- Contract replaces existing control system of two hydro generators in the Taelefaga hydro station.

Training

- This is subproject of its own, with a budget of US\$0.235million.
- EPC Board approved outline of this subproject; budget is US\$0.235 million.
- PMU is preparing Training Plan
- Plan will include setting up a computer based Asset Management Program (AMP) to plan, schedule and manage maintenance of all facilities. PMU reviewed an existing maintenance schedule that was used by EPC if suitable for AMP.
- PMU prepared bid for installation of Asset Management Program, bid has not been issued until evaluation of an existing program is done.
- It also include of EPC linemen, mechanics, SCADA technicians and engineers, and operators and power system controllers.

PMU Staffing

- Project Manager's position is still vacant. Generation Engineer Consultant continued as acting project manager. EPC advised position locally and internationally. Interview has been done.
- All positions are now filled except for PM.
- PMU to submit proposal for additional consultancy services needed to see PSEP to completion.
- EPC hired Distribution Engineer for PMU. 30 EPC linemen are also assigned work under PMU for construction of power distribution subprojects. This include: 33kv underground transmission line from Fiaga power station to Fuluasou substation, 33kv overhead transmission line from Fiaga power station to Fuluasou substation, 33kv underground transmission line from Fuluasou substation to Tanugamanono power station, 22kv overhead distribution line from Fiaga power station to

Fuluasou substation, 22kv underground feeder from Fuluasou substation to Apia, connecting Samasoni hydro 22kv transmission line to Tanugamanono power plant, connecting Alaoa/Fale ole Fee hydro transmission line to Tanugamanono power station and other powerline work.

- ADB concurred to conduct EPC cost of service and tariff study and funded under PSEP loan.
- ADB also concurred to hire short term experts for commissioning of Fiaga power plant, SCADA and Fuluasou Substation.

Investment Plan Revision

- Revised Investment Plan is submitted to ADB for approval. Same plan has been approved by Project Steering Committee, and Project Management Committee.
- Project original Plan had 19 subprojects. 11 new subprojects were added under the same budget. No subproject was dropped.

Financial Report at end October, 2012

Financial Report to end of end of October 2012		
No.	Details	Amounts in USD
1	Total Project Budget	USD\$119.272 million
2	Total Amount Obligated/Committed	USD\$76 million
3	Total Claimed (Withdrawal Application)	US\$66 million
4	Total Amount Already Disbursed (Loan+Grant)	US\$63.08 million
5	Total Amount Paid Out from:	
	ADB Loan	US\$18.4 million
	ADB Grant	US\$ 8.7 million
	JICA Loan	US\$28.5 million
	AusAid	US\$ 7.04 million
	EPC	US\$ 5.0 million
	(US\$4.5m include interest payment during construction of SAT\$2.8million, Principal repayment has not started until 2013 or 5 yrs from start of project in May 2008)	

6	Original Funding Sources:	
	ADB Loan	US\$26.61 million
	ADB Grant	US\$15.39 million
	JICA Loan	US\$38.00 million
	AusAid Grant	US\$8.00 million
	EPC	US\$12.00 million

Notes:

1. ADB informed Govt. and EPC during their Mission in May of an increase of US\$19.272 million of JICA's contribution to Project. This increases project budget to US\$119.272 million.
2. EPC will provide a list of subprojects to use this fund on.
3. ADB Mission preferred to keep hydro development subprojects in PSEP under a different development package to seek funding from other sources.

EPC Funded Projects

These subprojects which are also managed and implemented by PMU are funded under EPC's local budget:

Generator No. 5A major overhaul – TBA (pay to EPC)

- Overhaul was bided out. Evaluation report was approved by EPC Project Management Committee and Board.
- ADB and Government approved award of contract to MAN Diesel Ltd for price of AUD\$274,114.23 or SAT\$682,046.98..

Overhauls of diesel generators in Salelologa in Savaii

- EPC did not go ahead with major overhaul. EPC is consideration other options to improve generation in Salelologa before completion of new power station in Vaiaata.

RENEWABLE ENERGY

Solar Samoa Ltd

- SSL lost original financier of project. They are now negotiating with a second PV system manufacturer and engineering consultant with financing packing.
- SSL and new partners brought up some issues related to signed PPA that they request to be changed.

BIOGen3

- There has been a long delay due to approval of Environmental Impact Assessment (EIA).
- Company had plans to import power millet to raise here for feed stock for gas manufacturing. MNRE/PUMA did not approve. Company proposed giant grass instead. Approval is being processed as part of EIA.
- As a starter, Company plans to import glycerine grade liquid fuel to run the generators first awaiting production of gas. Company is seeking land on Apia Wharf to build storage tanks for the imported glycerine. This has not been approved.
- Company said they secured a 10 acre block in Nu'u for the plant. We have not received confirmation.

JICA 400kw Solar Project

- This project is funded by a US\$3.6M grant from Japanese Government to all Forum Countries.
- Main condition is that the (i) main contractor MUST be a Japanese incorporated company; (ii) all major components of the PV systems must be Japanese made and brand; and (iii) Major components are: solar panels, inverters, and power transformers and switchgear.
- Project involves installation of 400kw or more of total capacity solar systems to generate electricity and feed into EPC's grid.
- Contract is awarded to Sunwise company.
- There is a protest from one of Japanese bidders on contract award. Protest is referred to Project Management Unit set up by Forum to handle this project.
- Project is on hold now while protest is being addressed.

Renewable Energy Systems Interconnection to EPC system

- Draft Rules/ Regulations for interconnection agreement has been submitted to Power Regulator and Attorney General for their review and comments. Received Regulator comments.
- Same with interconnection agreement also submitted to Regulator and AG.

Biodiesel

- NECC approved to ask developer to provide a formal proposal on setting up bio diesel plants in Samoa.

Expressional of Interest (EOI)

- National Energy Coordinating Committee (NECC) of Government approved to issue two EOIs for solar system and biodiesel. Proposals for PV system is closed. 14 companies responded. Biodiesel EOI is extended to end of December.

Withdrawal Applications

Table 1 below provides a summary of Withdrawals Application and Disbursements at end of 2nd Quarter 2012:

FAALEPO TO PROVIDE Q2 WA report

2. INTRODUCTION

This is the Quarterly Progress Report No. 17 and it covers the project activities and progress for the period from beginning of April to end of June 2012 (2nd Quarter 2012 Progress Report).

This Report provides progress report of each subproject highlighting work completed to date, problems encountered and planned solutions. It also provides financial situation of Project, of total funds obligated, claims received, withdrawal application processed and submitted to ADB and amount of money paid to contractors. It also gives status of spending

3. PROJECT IMPLEMENTATION

3.1 Project Management Unit Staff Movement

PMU has a total of 22 staff; 20 EPC local staff and 2 ADB recruited Individual Consultant engineers (Civil and Generation Engineers). Total staff includes: 1 Project Manager (vacant since July 2011), 3 Engineers, 4 Graduate Engineers, 1 Mechanical Supervisor, 1 Project Accountant, 1 Attorney, 1 Social and Land Resettlement Staff, 1 Environmentalist, 1 Public Relation Staff, 1 Secretary, a driver, 1 linemen assistant, 1 Store-person and 4 store assisting staff, and 2 Renewable Energy staff. RE section is now incorporated as part of PMU. A JICA engineer was with PMU for 3 months assisting with SCADA project. .

EPC hired a local Distribution Electrical Engineer to replace the International TD engineer who resigned after 4 months of work here. 30 EPC linemen were also assigned to work with PMU for construction 33kv transmission line from Fiaga power station to Fuluasou Substation and to Tanugamanono power station. They also completed other power distribution subprojects under Power Sector Expansion Project.

The Project Manager position is still vacant. Newly hired Generation Engineer has been acting Project Engineer since beginning of this year. It is critically important the appointment should be made as soon as possible.

PMU 21 staff:

- Individual Consultant (Generation Engineer) /Acting Project Manager
- Generation Electrical Engineer
- TD Electrical Engineer
- Telecommunication Engineer
- System Planner Graduate Engineer
- SCADA/Graduate Engineer
- Individual Consultant (Civil Engineer)
- Electrical Graduate Engineer
- Civil Graduate Engineer
- 1 Environmentalist
- 1 Land Resettlement Specialist,
- 1 Legal Advisor
- 1 Public Relation Coordinator
- 1 Project Accountant
- 1 Secretary

- 1 Administrative Assistant / Store Keeper
- 3 Store assistants
- 1 Lineman
- 1 Driver

30 linemen were assigned to work PMU on construction of powerlines subprojects. Pre Inspection section of 3 people were also transferred to PMU. They all report to Transmission and Distribution Engineer. Budget for these 33 positions are still covered by EPC.

Construction continued with ten (10) subprojects in this quarter. The status of construction of each subproject at end of 3rd Quarter 2012:

1. Upgrading of the Hospital Feeder to 22kv and undergrounding medium voltage cable from Tanugamanono power plant to Apia – 80% complete.
2. Reconductoring of all 22kv overhead line feeders in Upolu – 90% complete.
3. Civil work of refurbishment of Alaoa hydro plant – 90% complete; work that can be done.
4. Fiaga power plant fuel and oil storage tanks and off loading facility – 60% complete
5. Construction of Samasoni hydro plant dedicated transmission line to Tanugamanono power station is in progress – 80% complete.
6. Fiaga New Power Plant and Generators Lot A – construction of power house is 90% completed, installation of generators 60% complete, civil work (road, drainage, fence, etc) 60% complete, water tanks, collection, and water distribution system 60% complete.
7. Fiaga Power Plant MV Electrical Switchgear Lot B – switchgear installation and pre-commissioning testing is 95% complete.
8. Construction of 33kv overhead and underground transmission lines from Fiaga power plant to Fuluasou. Construction of overhead line started, 30% is complete. Underground 33kv line has not started.
9. 22kv underground cable from Fuluasou to Apia wharf – 100% of installation of electrical conduits is complete. This was done as part of the 4 lane road corridor project with Ott Transport as main contractor. Resume of construct has not started.
10. Prepayment meters – 95.73% of meters under A D Riley's contract have been installed. Defective meters with blank screens continued to rise. Defective meters with blank screens is biggest concern on this project. Worse, is customers with blank screen meters continue to receive electricity without paying top up. Contractor has been working on a solution for blank screen meters.

3.2 PMU Actual Personnel Movement during 3rd Quarter and Plan for 4th Quarter

3 rd QUARTER 2012 ACTUAL				4 th QUARTER 2012 PLAN		COMMENTS
NAME	DESIGNATION	START	FINISH	START	FINISH	
Fonoti Perelini	Acting Project Manager & Individual Consultant	1 Jul. 2012	30 Sept 2012	1 Oct 2012	31 Dec 2012	Will be available for whole 4 th quarter

	Generation Engineer					
Tupai Mau Simanu	Generation Electrical Engineer	1 Jul 2012	30 Sept 2012	1 Oct 2012	31 Dec 2012	Will be available for whole 4 th quarter
Nuulopa Pereira	Graduate Engineer - Power System Planner	1 Jul 2012	30 Sept 2012	1 Oct 2012	31 Dec 2012	Will be available for whole 4 th quarter
Faalepo Solofa	Project Accountant	1 Jul 2012	30 Sept 2012	1 Oct 2012	31 Dec 2012	Will be available for whole 4 th quarter
Mathew Lemisio	Legal Environment Advisor	1 Jul 2012	30 Sept 2012	1 Oct 2012	31 Dec 2012	Will be available for whole 4 th quarter
Seukeva Asi Tuuau	Land Acquisition DFC Specialist	1 Jul 2012	30 Sept 2012	1 Oct 2012	31 Dec 2012	Will be available for whole 4 th quarter
Moetuasivi Asiono	PRCS	1 Jul 2012	30 Sept 2012	1 Oct 2012	31 Dec 2012	Will be available for whole 4 th quarter
Raema S. Adam	Graduate Engineer – SCADA	1 Jul 2012	30 Sept 2012	1 Oct 2012	31 Dec 2012	Will be available for whole 4 th quarter
Roberto Pamingtuan	Individual Consultant Civil Engineer	1 Jul 2012	30 Sept 2012	1 Oct 2012	31 Dec 2012	Will be available for whole 4 th quarter
Posi Moe	Linesman	1 Jul 2012	30 Sept 2012	1 Oct 2012	31 Dec 2012	Will be available for whole 4 th quarter
Elisapeta Collins	Secretary	1 Jul 2012	30 Sept 2012	1 Oct 2012	31 Dec 2012	Will be available for whole 4 th quarter
Alfred Matatia	Graduate Civil Engineer	1 Jul 2012	30 Sept 2012	1 Oct 2012	31 Dec 2012	Will be available for whole 4 th quarter
Venisini Iese	Storeman	1 Jul 2012	30 Sept 2012	1 Oct 2012	31 Dec 2012	Transferred to Corporate
Talatau Collins	Storeman assistant	1 Jul 2012	30 Sept 2012	1 Oct 2012	31 Dec 2012	Will be available for whole 4 th quarter
Iosefa Leota	Storeman assistant	1 Jul 2012	30 Sept 2012	1 Oct 2012	31 Dec 2012	Will be available for whole 4 th quarter
Puleia Tuiloma	Storeman assistant	1 Jul 2012	30 Sept 2012	1 Oct 2012	31 Dec 2012	Will be available for whole 4 th quarter

3.3 Implementation Consultants Personnel Movement

The Implementing Consultant (Egis International) remaining task under their contract is completion of feasibility studies of 5 hydro schemes and tender documents of 3 schemes. Only 3 experts are involved in this remaining task. Completing this task is late.

There was little progress during this quarter in completing FS and tenders. Project Manager is putting pressure on IC to complete the FS and tenders.

Table below provides number of days worked in each month and combined for 2nd Quarter 2012 for each of IC personnel and remaining man months.

	Team Members	Contract person-mnths Q4 2011	Person-mnth worked in Q2 2012	Remaining man- months
	Hydro Expert	0.526	0	0.481
	Civil Engineer	0.89	0	0.604
	Environmentalism	(0.37)	0	0
	Social and Land Resettlement	(0.1)	0.37	0

3.5 - Egis International Personnel Movement during this Quarter and Plan for next Quarter

3 rd QUARTER 2012 ACTUAL				PLAN for 3 rd QUARTER 2012		
NAME	DESIGNATION	START	FINISH	START	FINISH	COMMENTS
	Hydro Expert & Coordinator	1 July 2012	30 Sept 012	1 Oct 2012	31 Dec 2012	Dominique resigned. Egis assigned another engineer to take over managing of project to completion of remaining tasks.
Peri Perelini	National Civil Engineer	1 July 2012	30 Sept 012	1 Oct 2012	31 Dec 2012	Continued working to complete tenders of 3 schemes.
Sam Sesega	National Environmentalist	1 July 2012	30 Sept 012	1 Oct 2012	31 Dec 2012	Continued working to complete feasibility studies of 5 hydro schemes.
Sam Sesega	National Resettlement Specialist	1 July 2012	30 Sept 012	1 Oct 2012	31 Dec 2012	Continued working to complete feasibility studies of 5 hydro schemes.

3.6 Implementation Progress

All implementation activities or tasks are reflected in measuring implementation progress against the subprojects implementation schedules and referred to as “project progress”. All pre-implementation activities or tasks are considered in calculating subproject implementation progress. These activities or tasks include preparation of the Subproject Outline, Feasibility Study, Rapid Environmental Assessment, Initial Environmental Examination, Screening for Land Acquisition and Resettlement, Tender documents, Evaluation of tenders and preparation of awards and contracts. Each task in the implementation schedule is weighted according to its overall contribution (using time as a reference) to progress of subproject implementation. These weights are used to calculate the percentage of subproject progress along the entire time span of the project. This is to provide a holistic view of the pace on implementation. Due to the magnitude of the Power Sector Expansion Project and the number of its subprojects, it is not practical to list all the tasks or activities. Therefore only milestones are listed for the purpose of simplicity of subprojects progress but more details can be obtained from the Project Schedule Gantt Chart of each respective subproject. Refer to Appendix 2 for Project Monitoring.

A. Core Subprojects:

1. Hospital Feeder Upgrading Project Stage 1

Project is complete.

2. Single and Three-Phase Prepayment Metering (PPM)

A total of 426 prepayment meters were installed during 3rd Quarter; all are conversions from induction to prepayment meters. This brought the total number of meters installed under this contract at end of the 3rd Quarter 2012 is 20,042 or 95.44% of 21,000 meters to be converted under this Contract in AD Riley Contract.

Total number of active meters at end of 3rd Quarter is 31,909; made up of 23,294 prepayment meters and 8,615 induction meters. This brings total percentage of customers with prepayment meters to 73% or 2% short of target of 75%. Remaining meters to be installed by A D Riley will bring total percentage to 75%. All new installations are installed with prepayment meters.

Besides converting to PPMs, contractor also lowered the meters; 36 meters were lowered to 1.6 meters this 3rd Quarter bringing the total number of meters lowered to 4,012.

Most CRITICAL issue with this Contract of installing Prepayment meters is:

- Blank screen defective meters is still unresolved. A D Riley have been replacing defective meters under warranty. But main concern is that customers with blank screen meters continues to receive power with topping up their meter with more credit resulting in loss of revenue. ADR have not found a solution on this defect. EPC has written strong letters to ADR related to issue. EPC will eventually claim from ADR its loss of revenue due to blank screen meters.

A D Riley had two technicians here in May to carry out repairs to 786 contract meters and 278 meters installed by EPC. These meters had blank screens. An electronic component was

replaced in all these defective meters. However, the repair didn't eliminate defect which caused blank screens.

At end of this 3rd Quarter 2012, a total of 20,042 meters have installed by ADR under their contract, leaving 958 meters remained to be installed to complete their contract.

Table below shows meters installed during the 2nd and 3rd Quarters 2012:

No.	Subcontractors	Total installed since start	Meters installed in Apr. 2012	Meters installed in May. 2012	Meters installed in Jun. 2012	Meters installed in Jul. 2012	Meters installed in Aug. 2012	Meters installed in Sept. 2012
1	All Electrical	5,201	0	0	0	0	0	0
2	McLean Electrical	9,704	51	106	69	207	155	64
3	Telecom. Tronics Ltd.	5,243	0	0	0	0	0	0
Total meters installed each month		20,148	51	106	69	207	155	64

Breakdown below are meter lowered during 2nd Quarter of 2012 and 3rd Quarter of 2012:

Categories	Cable length	Q2 – 2012 Quantity	Q3 – 2012 Quantity
1	0-5 meters	68	109
2	5-10 meters	14	22
3	➤ 10 meters	6	5
4	no cable needed	0	0
	Lowered during maintenance	0	0
	Total meters lowered	88	136

Included in meter count above are meters that were lowered during maintenance.

Only 4,012 meters have been lowered so far by ADR. This is 20% of total number of meters converted to prepayment plus new ones (or 20,148 at end of 3rd Quarter 2012) installed by A D Riley under its present contract. So there are still about 81% of the meters to be lowered. Beside ADR's subcontractor lowering meters as they convert them, EPC is lowering meters already converted on request by consumers. All new meters are installed at 1.6 meters.

B. Candidate Subprojects:

1. Upolu

a. Generation

(i). Tanugamanono Power Station Noise & Emission Control

No activity.

(ii). Refurbishment of Alaoa Hydro Power Station

Completed.

(iii). Fiaga Diesel Power Station

Powerhouse and Generators (Lot A)

Plant is scheduled to be completed in February 2013. Completion status; building 90%, installation 80%, water and wastewater system 80%, road and drainage 50% and earth system 20%.

Fiaga power station electrical switchgear (Lot B)

Northpower NZ Ltd completed 95% of construction and installation of all electrical switchgear, and transformers and testing. Final installation will be done when Bluebird Ah LAL JV completed electrical installation of generators. This includes power cables from generators to 11kv switchgear. One change order was approved for upgrade of DC system and supply and installation of SCADA interface equipment.

Fiaga Access Road, Water Pipeline and Fence

Project is complete. Certificate of completion has been issued.

Fiaga Pumped Water Source

Tender is prepared to pump water from Samoa Water Authority's water system to Fiaga power plant. Bid is with ADB for approval. SWA system is 4 km away from the power plant and an elevation climb of about 250 meters. Because of the high elevation of the power plant at 520 meters, it requires 4 booster pumps to pump water to the power plant. Sites of 4 pumps are selected and consultations with Samoa Land Corporation who owns the land and lessees is underway. Bid is scheduled to be issued in October.

(iv) Refurbishment of 9A and 7A Generators at Tanugamanono Power Plant

Project is complete and both generators are back in operation. .

(v) Taelefaga, Samasoni, and Lalomauga hydro plant and Tanugamanono power station new 22kv switchgear

Project is complete.

b. Transmission

(i). Upgrade of Alaoa 6.6kV Transmission Line to 22kV

Project is complete.

(ii). 33 kV Underground Cable from Fiaga Power Station to Fuluasou Substation

Materials for this project started to arrive. There are two suppliers; INTRACOR and South Austral. The 33kv transmission line has 2 circuits; underground and overhead. This will

improve reliability of this critical line against cyclones and earthquakes. Construction of overhead line by EPC crew started. Bid to excavate trench, install fiber optic cable conduits and backfill was issued in August and closed in September. Bids are evaluated.

(iii). Hospital Feeder Upgrading Stage 2

This project is under construction; 80% of work is completed. Remaining work is energizing of cable and replacement of 18 x 6.6kv transformers with 22kv ones. Same subproject included; Samasoni hydro underground transmission line and connection to Tanugamanono power station of Alaoa/Fale O le Fee transmission line. Conduits and underground feed to main hospital 2nd substation.

(iv) 22kV Fuluasou Substation

This project is under construction. Construction by subcontractor, Fletcher Construction continued and is progressing well. Building and civil work (road, drainage, transformer bunds, etc) is 60% complete. Switchgear arrived and is being stored until moved into building. Shipping delayed some of materials for construction.

Change Order No 1 was approved. This reduced contract amount.

(v). Upolu Low Voltage Network Improvements

Construction has not commenced. 50% of materials have been received. Remaining 50% is included with rebid materials. Construction will be done by EPC.

(vi). Fuluasou Substation to Apia Wharf Area 22kV Underground Cable

Installation of cable and equipment has not started. Cables and materials are arriving. Conduits and vaults for this project from Lepea bridge to Apia is already laid as part of the main Vaitele road. There is a 1.7km section from Fuluasou substation to Lepea bridge that has not been done. Excavation of this 1.7km is included as part of another contract which included the 33kv underground cable.

(vii). 22kV Overhead Conductor Upgrading Program

This project is under construction. Contractor, GMA Construction Ltd, continued with construction. About 60% of work is completed and invoiced. This contractor submit a claim of about SAT\$1.1M for loss of revenue from September 2011 to February 2012 due to shortage of materials according to them. Acting Project Manager disapproved this claim twice. Dispute is now transferred to Adjudication Process. This is contractor who hired 17 linemen from EPC. Linemen returned to EPC in July 2011. This greatly affected its work production because they did not have qualified linemen and engineer to perform.

2. Savaii

a. Generation

(i) Hydropower Scheme

Savaii hydropower scheme is included under 'Hydro Developments'. One Savaii hydro scheme is included. This is scheme in Faleata, Vailoa, Palauli. Sili Scheme is on hold.

Only activity this quarter is completion of Feasibility Study by Egis International, Implementation Consultant.

b. Distribution

(i). Puapua-Asau 22kV Distribution Line Reconductoring

Project is complete. No work on this subproject this Quarter.

There are still some sections of distribution system (102 spans of 22kv lines) with conductors that needs replacing with larger ones. Poles and other items will be replaced at same time. Materials are included in rebid materials. EPC will do the work.

(ii). Power Factor (PF)

Completed.

(iii). Low Voltage Network Improvement Program in Savaii

Materials are ordered and received. Work has not started.

3. Measurement Equipment:

(i). Steam Flow Gauging Equipment

Completed.

(ii). HV Testing Equipment

Completed.

SCADA

Assessment and preparation of conceptual designs of network continued. EPC approved to upgrade cable to a 24 core single mode one.

NEW SUBPROJECTS

Listed as follows are approved new subprojects:

(i). Public Dissemination

On going.

(ii). Vending System Expansion

System is in operation.

Only activity is testing of a prepayment meters from Joy Electric Ltd supplier if they work on current vending system. Also getting ITRON manufactured meters to undergo same tests. If successful, this will give EPC other suppliers to buy meters from.

(iii). Power System Planning Software

On-going updating of system as changes are completed.

(iv). Refurbishment of Salelologa Power Station

New power plant is built in Vaiaata, not Salelologa. Only substation and mini control center is located in Salelologa depot. ADB approved FS and Resettlement Plan. Due to deteriorating conditions of existing electrical switchgear in Salelologa and long delay in completing Vaiaata Power Plant, it was decided to separate bid for Salelologa new substation from Vaiaata Power Plant bid. Tender for Salelologa Substation was prepared and submitted to ADB for final review before issuing bid. Construction of substation will be done separately from Vaiaata power plant. This will improve electrical switchgear of existing power plant in Salelologa.

Resistivity study is carried out in Vaiaata site. Similar geotechnical study will be carried out..

(v). Refurbishment of Taelefaga and other power plants 22kV Switchgears

Project is complete.

(vi). Refurbishment of Tanugamanono Diesel Generators

Involves Unit 9A and 7A. Refurbishments are completed. Contract is closed out.

(vii). Vaipu Pumping Scheme

No decision on this yet if to go ahead.

\$300,000 is left over from ADB Technical Assistant used for SMEC study on Afulilo. Request is with ADB to reallocate this fund for implementing of solution to odour problem from water from Afulilo Dam that discharges from Taelefaga hydro plant. There is a separate mitigation subproject to solve smell problem. Tender is prepared.

4. RISKS AND ISSUES

A. PMU Organization Structure

No further action is needed. PMU continued with present organization structure.

B. Staff Recruitment

Project Manager's position is vacant since middle of 2011; position and is being advertised locally and internationally. A local TD engineer is hired. .

C. Prepayment Meters

Major issue is blank screen defective meters that is continuing to increase. Contractor is yet to find a solution eventhough they are replacing defective meters as part of guarantee. But worse problem is customers with blank screen meters continuing to receive power without topping up their meter.

D. Vending and Card System

There are no issues. Tests of prepayment meters from other suppliers if working on vending system is on-going. Two new suppliers provide test samples.

E. Fiaga Power Plant Access Road, Pipeline and Fence

Only outstanding item was approval of final Change Order No 2, which was finally approved by ADB and Government. Contract Agreement addendum is in process. Project is complete and is being closed out.

F. Land transfer to EPC

Official transfer of 97 acres in Fiaga and 100 acres in Vaiaata for new power plants is still outstanding. A third piece of land (5,059 square meters) in Tuana'imato for the Fuluasou substation was approved by Minister of Environment to be used by EPC. Samoa Land Corporation also approved lease of four 20m x 20m lots on access road to Fiaga power plant to install booster water pumps.

G. Claims against EPC

There are two contractual claims against EPC. One is from GMA Construction Ltd with 22kv overhead line reconductoring. Claim is for lost of revenue when work slowed down due to shortage of materials. Total claims is SAT\$1,126,076. Acting Project Manager disapproved claim twice. Case is now referred to Adjudication. Our counter arguments are: GMA did not have qualified linemen since 17 EPC linemen returned to EPC; contract is for work completed; amount claimed is excessive; contractor delayed work from beginning as they were finding some qualified linemen and engineer.

Second claim is from Northpower NZ Ltd for extra cost associated with their contract of Fiaga Power Plant Lot B. Extra cost is for additional storage charges due to delay in completion of switchgear room in Lot A contract for construction of powerhouse. Second part of this claim is extra cost for non accessing power plant during public holiday during Easter Weekend.

Again, Acting Project Manager disapproved claims on grounds they supposed to coordinate work with power house contractor.

5. EPC PERFORMANCE MONITORING

Design Summary	Performance Targets/Indicators	Current Status
Impact Access to sustainable and reliable electricity services at affordable prices	Consumer satisfaction ratings of EPC's services Complaints to EPC's consumer service division	Initial Consumer Confidence Survey (CCS) is scheduled for 2011 EPC reactivated service order tracking system in Daffron System to track all customers requests..
Outcome Improved quality, reliability, and cost-effectiveness of power supply	System Average Interruption Duration Index (SAIDI) Baseline established and verified on 4th Quarter of 2008 and reduced by 20% by 2015 System Average Interruption Frequency Index (SAIFI) Baseline established and verified on 4th quarter 2008 and reduced by 20% by 2015	<u>Baseline SAIDI established on 3rd Quarter 2008:</u> Annual SAIDI for Upolu: 1515 min Annual SAIDI for Savaii: 2622 min Quarterly SAIDI for Upolu: 379 min Quarterly SAIDI for Savaii: 656 min <u>3rd Quarter 2012 SAIDI:</u> Total Annual SAIDI for Upolu: 872 Annual Unplanned SAIDI Upolu:480 Annual Planned SAIDI Upolu: 392 Total Annual SAIDI for Savaii: 3432 Annual Unplanned SAIDI Savaii: 3032 Annual Planned SAIDI Savaii: 400 Total Quarterly SAIDI for Upolu: 218 Quarterly Unplanned SAIDI Upolu: 120 Quarterly Planned SAIDI Upolu: 98 Total Quarterly SAIDI for Savaii: 858 Quarterly Unplanned SAIDI Savaii: 758 Quarterly Planned SAIDI Savaii: 100 <u>Baseline SAIFI established on 3rd Quarter 2008</u> Annual SAIFI for Upolu: 26 Annual SAIFI for Savaii: 44 Quarterly SAIFI for Upolu: 6.5 Quarterly SAIFI for Savaii: 11 <u>SAIFI on 3rd Quarter 2012</u>

Design Summary	Performance Targets/Indicators	Current Status
	Cost of generation established and published by 1st Quarter of FY 2009	<p>Annual SAIFI for Upolu: 22 Annual SAIFI for Savaii: 41.04 Quarterly SAIFI for Upolu: 5.5 Quarterly SAIFI for Savaii: 10.26</p> <p>Refer to Appendix 8 for SAIDI monitoring Refer to Appendix 9 for SAIFI monitoring</p> <p>Cost of Generation established and reported to EPC Board as part of FY 2008 Budget process</p>
Outputs		
1. EPC's investment plan meets demand requirements	Power system capacity for energy and power meets demand requirements on Savai'i and Upolu	Project Implementation Plans meet estimated demand per survey. Planned expansion of power generation is based on N-2 criteria.
2. Operational efficiency of EPC improves	<p>Baselines for technical system losses are established and verified by 4th Quarter of 2008 and are to be reduced by 10% by 4th Quarter 2010 and 20% by 4th Quarter 2012</p> <p>Baseline for non-technical system losses established and verified by 4th quarter 2008 and reduced by 10% by 2010.</p>	<p>Baselines figures of Total System losses established on a 12 month moving average at September 2008 are:</p> <p>Upolu: 15.7% Savaii: 18.2% EPC : 15.9%</p> <p>Updated 12 month moving average of total system losses now reported monthly to the Board. End of December 2008 are:</p> <p>Upolu: 17.1% Savaii: 18.2% EPC : 17.2%</p> <p>Not possible to calculate Technical losses due to lack of metering and dedicated resources.</p> <p>Not possible to calculate non-technical losses - this can only be calculated as "<i>total system loss – technical loss</i>"</p> <p>Technical loss is established to be 13.5% from</p>

Design Summary	Performance Targets/Indicators	Current Status
		<p>studies by the Japanese Volunteer and PMU in 4th Quarter 2008.</p> <p>Change in non technical loss can be monitored as technical loss level generally remains static</p> <p>Finance Department have begun diagnostic review of causes of non-technical loss as basis for implementation of reduction measures</p>

<p>3. The financial performance of EPC improves</p>	<p>Consistent application of disconnection policy</p> <p>Fuel audits conducted on all EPC's diesel power stations</p> <p>Timeliness of tariff adjustments in response to cost</p> <p>EPC's collection performance improves such that accounts receivables are below 2 months of sales</p> <p>Government consumers' share of EPC's accounts receivables reduced from 55% in 2007 to less than their share of total sales by 31 December 2009</p>	<p>Procedures reviewed in August 2008 and revised procedures implemented. ACCOUNTS AGING.</p> <p>Fuel Audit's at both Upolu and Savaii Generation Stations introduced 1 May 2008 and now routinely conducted monthly. Results reported monthly to Board.</p> <p>REPORT Q3 2012 AVERAGE.</p> <p>Tariff Increase of 10% from 1 September 2008 incorporated in FY 2009 approved Budget not yet implemented – implementation now anticipated as 1st January 2009.</p> <p>Customers' arrears on 3rd Quarter of 2012 were: Debtor days as = 45.5 days % Government Debt (of total debt) = 4.27% % Government Sales (of total sales) = 9.29%</p> <p>Debt/Sales Ratio: 46.03% Reference Appendix 5</p>
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4. Effective regulation of the power sector is established	<p>Electricity Act Reform to govern the power sector was established by 31 December 2009</p> <p>Amendments of the EPC Act consistent with the Electricity Act by 31 December 2009</p> <p>Regulatory agency established by 31 December 2010.</p>	Not within Scope of this Project
5. Energy demand-side management	Energy conservation and demand-side management public awareness campaign implemented	Not within Scope of this Project
6. Development of clean energy	<p>Number of projects by energy subsector financed by the clean energy fund</p> <p>Number of projects by energy subsector eligible for clean development mechanism</p> <p>Electricity produced by clean energy resources (baseline of 45</p>	Not within Scope of this Project

6. COMPLIANCE WITH LOAN COVENANTS (Beneficiary)

Covenant	Status	Comments
The Beneficiary shall carry out the project with due diligence and efficiency and in conforming with sound administrative, financial, engineering, environmental and public utilities practices	Complied	PMU is carrying out project with due diligence
In carrying out of the Project and operation of the project facilities the Beneficiary shall perform or cause to be performed, all obligations set forth in schedule 5 of the Financing Agreement	Complied	PMU new office at TTTE Bldg is being provided with all facilities
The Beneficiary shall make available promptly, as needed, the funds, facilities, services, land and other resources which are required in addition to the proceeds of the ADB Loan and Grant, and the JBIC Loan and the Government of Australia Grant, for carrying out of the Project and for the operation and maintenance of the Project facilities.	Complied	Yes, Beneficiary committed personnel, funds, and other resources to support the project.
The Beneficiary shall enable ADB's representatives to inspect the Project, the goods financed out of the proceeds of the ADB Loan and the Grant and the JBIC Loan and the Government of Australia Grant, and any relevant records and documents.	Complied	Yes, ADB Mission here on Sept 5 to 7.
The Beneficiary shall take all action which shall be necessary on its part to enable EPC to perform it's obligations under the Project Agreement and shall take or permit any action which would interfere with the performance of such obligations.	Complied	Yes, EPC provided resources to support Project.
The Beneficiary shall exercise its rights under the Subsidiary Financing Agreement in such a manner as to protect the interests of the Beneficiary and ADB and to accomplish the purpose of the Loan and Grant, and the JBIC Loan and the Government of Australia Grant.	Complied	Yes, regard claims against project and managing of contracts.
No rights or obligations under the Subsidiary	Complied	ALL changes to

Financing Agreement shall be assigned, amended, or waived without the prior concurrence of ADB.

contracts are pre approved by ADB including less than 15% of contract amount changes.

7. LOAN EFFECTIVE MILESTONES (Electric Power Corporation)

Details	Status
Settlement of Government arrears as of 30 September 2007	Complied
Subsidiary Financing Agreement with EPC	Complied
Establishment of the Project Steering Committee (PSC)	Complied
Establishment of the Project Management Committee (PMC)	Complied
Establishment of Project Management Unit	Complied
Hire of Implementation Consultant	IC contract expired except completion of 5 hydros feasibility study
Project Manager	Appointment is made
Restructure of PMU	Maintained old flat org. chart. It works.
Project Accountant	Complied
Generation Engineer	Complied
Transmission & Distribution Engineer	Complied

Power System Planner	Complied
Public Relation & Community Liaison Specialist	Complied
SCADA Engineer	Complied
PMU Secretary	Complied
Establishment of Environment and Social Unit	Complied
Legal / Environment Advisor	Complied
Environment Specialist	Complied
Land & Acquisition Specialist	Complied
Effectiveness of the JBIC Loan Agreement	Complied
Commitment of the Government of Australia Grant	Complied, Aussie Aid grant is used up
Legal Opinion from the Attorney General's Office	Complied; all contracts need AGO clearances.

8. RESETTLEMENT (updated quarterly)

Official transfer or lease of Fiaga 97 acres, Vaiaata 100 acres and additional land in Tuanaimato for Fuluasou Substation is still pending; but not affecting progress of project. These will be addressed towards end of the Project. However, Cabinet had approved all 3 properties for EPC to use for power sector facilities. Samoa Land Corporation also approved lease of four 20m x 20m lots to install booster water pumps for Fiaga power plant water supply.

Status of land acquisition and resettlement for subprojects at end of 3rd Quarter 2012:

Subproject	Temporary Land Acquisition	Permanent Land Acquisition	Percentage Obtained %	Commentary on Negotiations and Compensation paid
1) Hospital Feeder Upgrading Stage 1	N/R	N/R	N/R	N/R
2) Single & Three Phase PPM	N/R	N/R	N/R	N/R
3) Tanugamanono Power Station Noise & Emission Control	N/R	N/R	N/R	N/R
4) Refurbishment of Alaoa Hydropower Station	N/R	N/R	N/R	N/R
5) Fiaga Diesel Power Station	NO	YES	100%	Official transfer or lease of land to EPC is outstanding
6) Upgrade of Alaoa 6.6 kV Transmission Line to 22kV	N/R	N/R	N/R	N/R
7) Fiaga Diesel Power Station to Fuluasou Substation 33KV Underground Cable	N/R	N/R	N/R	Cable route is inside road reserve but 30% of existing road is outside of legal road reserve. People planted crops inside legal road reserve. Held consultations with affected people and their crops will be compensated.
8) Hospital Feeder Upgrading Stage 2	N/R	N/R	N/R	Cable is laid inside road legal reserve. Have sorted out all land issues. 100% cable is laid.
9) 22kV Fuluasou Substation	NO	YES	50%	Use old EPC hydropower station land. Cabinet approved 500sq meters of extra land for substation. Land is registered.

10) Low Voltage Network Improvement Program	N/R	N/R	N/R	N/R
11) Fuluasou Substation to Apia Wharf Area 22kV Underground Cable	N/R	N/R	N/R	Underground feeder will terminate at corner of Vaitele and Falealili Road
12) Fuluasou Substation to Leulumoega via Vaigaga 22kV Underground Cable	N/R	N/R	N/R	N/R
13) 22kV Overhead Conductor Upgrading Program	N/R	N/R	N/R	N/R
14) Hydro Schemes	YES	YES	YES	YES
15) Puapua-Asau Transmission Line 22kV Reconductoring	N/R	N/R	N/R	N/R
16) Power Factor Improvement Program	N/R	N/R	N/R	N/R
17) Low Voltage Network Improvement	N/R	N/R	N/R	N/R
18) Fiaga water booster pumps	N/R	YES	90%	SLC approved 4 lots for pump sites

18)Stream Flow Gauging Equipment				
19)HV/LV Testing Equipment	N/R	N/R	N/R	N/R
20)Supply, Installation & Operation of SCADA System	NO	YES	50%	NCC included in Fuluasou Substation at old Fuluasou hydro site. Mini NCC in new Salelologa Substation
21)Public Dissemination	N/R	N/R	N/R	N/R
22)Vending System Expansion				
23)Power System Planning Software	N/R	N/R	N/R	N/R
24) Refurbishment of Salelologa Power Station	N/R	N/R	N/R	Old power plant will be replaced with a new power station at Vaiaata. Old plant will be converted to a substation and a Mini Control Center for Savaii system.
25) Refurbishment of Taelefaga Switchgears	N/R	N/R	N/R	N/R
26)Refurbishment of Samasoni Switchgears	N/R	N/R	N/R	N/R
27) Refurbishment of Tanugamanono Generators	N/R	N/R	N/R	N/R
28)Vaipu Pumping Scheme	YES	YES	0%	Yes, would need approval of land for pump and pipeline
30) Refurbishment of Taelefaga hydro governor system	N/R	N/R	N/R	N/F

9. ENVIRONMENT (updated quarterly)

PUMA approved development consents of all subprojects that are now under construction. PMU is monitoring construction in accordance the DC and reported to PUMA. Inspectors from PUMA also visited construction sites to carry out their own independent inspection of these projects.

ADB approved feasibility study of Vaiaata power plant. Included in FS is Resettlement Plan and Initial Environmental Examination.

Subproject	Constraints	Activities	Action Taken	Comments
1) Hospital Feeder Upgrading Stage 1	NIL	NIL	NIL	Completed
2) Single & Three Phase PPM	NIL	NIL	NIL	93.4% of meters have installed. This brings total number of consumers with PP to 71.87%. Target is 75%.
3) Tanugamanono Power Station Noise & Emission Control	NIL	NIL	NIL	Started Feasibility Study; not finished.
4) Refurbishment of Alaoa Hydropower Station	NIL	NIL	NIL	Project is complete.
5) Fiaga Diesel Power Station	NIL	YES	YES	
6) Upgrade of Alaoa 6.6kV Transmission Line to 22kV	NIL	NIL	NIL	Completed. Followed existing line a long side of road.
7) Fiaga New Diesel Power Station to Fuluasou Substation Underground Cable	NIL	NIL	NIL	Contracts are awarded for supply of materials. EPC will do construction. 33kv Transmission Line is changed to have one circuit overhead and other underground.
8) Hospital Feeder Upgrading Stage 2	NIL	NIL	NIL	Construction continued; 100% of trenching and installation of ducts is complete. Cables

				being pulled and installed terminations.
9) 22kV Fuluasou Substation	YES	NIL	NIL	Cabinet approved 500 sq meters of land for Substation. Land survey has been registered with MNRE.
10) Low Voltage Improvement Program	NIL	NIL	NIL	Received all materials No IEE required
11) Fuluasou Substation to Apia Wharf Area 22kV Underground Cable	NIL	NIL	NIL	Contracts were awarded for supply of materials. Vehicles, tools, equipment and other material have arrived.
12) Fuluasou Substation to Leulumoega via Vaigaga 22kV Underground Cable	NIL	NIL	NIL	NIL
13) 22kV Overhead Conductor Upgrading Program	NIL	NIL	NIL	Construction continued. 60% is complete. New powerline along East Coast Road require easements and social resettlement of affected trees.
14) Hydro Scheme				5 Feasibility Study reports are finalized.
15) Puapua-Asau Transmission Line 22kV Reconductoring	NIL	NIL	NIL	Project is complete.
16) Power Factor Improvement Program	NIL	NIL	NIL	Assessment completed. PF is good. No further work required.

17) Low Voltage Improvement program	NIL	NIL	NIL	Rapid Environmental Assessment has been prepared and submitted to ADB. No IEE required
18) Stream Flow Gauging Equipment	NIL	NIL	NIL	Completed.
19) HV/LV Testing Equipment	NIL	NIL	NIL	NIL
20) SCADA System	NL	NIL	NIL	Contract awarded to Schneider Electric (Australia) Ltd
21) Public Dissemination	NIL	NIL	NIL	NIL
22) Vending System Expansion				
23) Power System Planning Software	NIL	NIL	NIL	NIL
24) Refurbishment of Salelologa Power Station	YES	YES	YES	ADB approved Feasibility study & Resettlement Plan of Vaiaata power plant
25) Refurbishment of Taelefaga Switchgears	NIL	NIL	NIL	NIL
26) Refurbishment of Samasoni Switchgears	NIL	NIL	NIL	NIL
27) Refurbishment of Tanugamanono Generators	NIL	NIL	NIL	NIL
28) Vaipu Pump Assisted Scheme	NIL	NIL	NIL	Need to complete IEE and prepare tender for construction.
29) Upolu hydro schemes				Implementation Consultant revising Faleseela Feasibility study and continued

with rest of FS for
other 4 schemes and
tender of 3 schemes.

10. LOAN DRAW DOWN TO DATE (1 Jan - 31 March 2012)

10. LOAN DRAW DOWN TO DATE (31 December 2010)

No.	TITLE OF SUBPROJECTS	ADB categ*	Schedule Date Contract Award	Revised Contract Budget	Actual Contract Price	Contract Number	Actual Date Contract Awarded	Draw Down to date	Balance
	ADB Loan			USD\$M					
	ADB Grant			26.61					
	JICA Loan			15.39					
	Ausaid Grant			38.00					
	EPC			8.00					
				12.00					
				100.00					
	CORE SUBPROJECTS								
1	Project Manager (0.37 + 0.38 unallocated)	4	Q4 2007	0.75	0.37	CON-0108	30th Oct 2007	0.06	0.69
2	Project implementation consultant: EBI (73 man-months)	4	Q1 2008	2.67	2.67	CON-05058	2 May 2008	1.74	0.93
3	Hospital Feeder Upgrading Project – Stage 1	3	Q1 2009	0.60		SAM-PSEP-02		1.94	-1.34
4	Single- and Three-Phase Prepayment Metering Project	3	Q3 2008	5.67	5.89	PPM1207	30 July 2008	4.90	0.77
	CANDIDATE SUBPROJECTS								
	UPOLU Generation								
5	Tanugamanono Power Station Noise and Emission Control Program	3	Q4 2009	0.17				0.00	0.17
6	Refurbishment of Alaoa Hydropower Station	3	Q3 2009	1.34		SAM-PSEP-03		0.00	1.34
7	Fiaga New Diesel Power Station Project	3	Q1 2010	22.27	35.88	SAM-PSEP-08		6.10	29.78
	UPOLU Transmission								
8	Upgrade of the Alaoa 6.6 kV Transmission Line to 22 kV Project	3	Q3 2009	1.14		SAM-PSEP-02			-0.80
9	Upolu Diesel Power Station to Fuluasou Substation Underground Cable Project	3	Q1 2010	3.12					3.12
10	Hospital Feeder Upgrading Project - Stage 2	3	Q4 2009	3.20		SAM-PSEP-09		0.84	2.36
11	22 kV Fuluasou Substation Project	3	Q2 2010	2.93					2.93
12	Low-Voltage Network Expansion Program	3	Q2 2010	1.29					1.29
13	Fuluasou Substation to Apia Wharf Area 22 kV Underground Cable Project	3	Q2 2012	0.00					0.00
14	Fuluasou Substation to Leulumoega via Vaigaga 22 kV Underground Cable Project	3	Q2 2012	2.78					2.78
15	22 kV Overhead Conductor Upgrading Program	3	Q3 2009	6.03		SAM-PSEP-09		0.41	5.62
	SAVAII Generation								
16	Hydropower Scheme	3	Q3 2012	10.65					10.65
	SAVAII Transmission								0.00
17	Puapua-Asau Transmission Line 22 kV Reconductoring Project	3	Q3 2009	1.24		SAM-PSEP-02			1.24
18	Low-Voltage Network Expansion Program	3	Q2 2010	0.56					0.56
	Measurement Equipment								
19	Stream Flow Gauging Equipment	3	Q3 2008	0.05		SAM-PSEP-04	23rd Oct 08	0.06	-0.01
20	Electrical Test Equipment	3	Q3 2008	0.06		SAM-PSEP-05	23rd Oct 08	0.07	-0.01
21	SCADA	3	Q4 2009	3.48					3.48
	CORE AND CANDIDATE SUBTOTAL			70.00	44.81			16.12	53.88
	APPROVED NEW SUBPROJECTS								
22	Vending System	3	Q1 2009	0.25				0.10	0.15
23	Public Dissemination	3	Q1 2009	0.10					0.10
24	Power System Planning Software	3	Q3 2008	0.06		SAM-PSEP-06	23rd Oct 08	0.06	0.00
25	Refurbishment of Taalefaga and Samasoni Switchgear	3	Q2 2009	1.60		SAM-PSEP-07		1.97	-0.37
26	Refurbishment of Salelologa Power Station	3	Q2 2009	5.90		SAM-PSEP-10			5.90
27	Refurbishment of Tanugamanono Two Generators	3	Q3 2009	0.75		SAM-PSEP-08		0.47	0.28
28	Upolu Hydro	3	Q1 2010	3.51					3.51
29	Contingency (Vaipu Assisted Pumping Scheme)	3	Q1 2010	0.50					0.50
	NEW SUBPROJECTS SUBTOTAL			12.67	0.00			2.60	10.07
	GRAND TOTAL			82.67	44.81			18.72	63.95

LIST OF WITHDRAWAL APPLICATIONS OUTSTANDING AT END OF Q2, 2012

No	WA No	Contractor	Contract No	Lot	Claim No	Currency	Amount
1	WA 0269	A D Riley	PPM 1207			SAT	\$ 46,303.95
2	WA 0270	A D Riley	PPM1207			USD	\$ 4,040.43
3	WA 0271	BBA JV /Woods / MHI	12/03A			USD	\$ 351,163.87
4	WA 0272	A D Riley	PPM1207			SAT	\$ 18,661.02
5	WA 0273	A D Riley	PPM1207			USD	\$ 1,579.02
6	WA 0274	A D Riley	PPM1207			SAT	\$ 16,341.92
7	WA 0275	A D Riley	PPM1207			USD	\$ 1,342.16
8	WA 0276	Northpower NZ Ltd	14/01		Claim 5	NZD	\$ 435,889.66
9	WA 0277	Northpower NZ Ltd	14/01		Claim 9	NZD	\$ 62,676.23
10	WA 0278	INTRACOR	13/02A	LOT 5	Claim 1	USD	\$ 54,218.64
11	WA 0279	INTRACOR	13/02A	LOT 3	Claim 1	USD	\$ 99,120.00
12	WA 0280	INTRACOR	13/02A	LOT 5	Claim 2	USD	\$ 42,075.25
13	WA 0281	INTRACOR	13/02A	LOT 1	Claim 2	USD	\$ 5,559.68
14	WA 0282	INTRACOR	13/02A	LOT 1	Claim 1	USD	\$ 45,778.07

13. LAST ADB REVIEW MISSION

No ADB Mission during this Quarter. Next Mission is schedule towards middle of year.

14. APPENDICES

POWER SECTOR EXPANSION PROJECT
REVISED INVESTMENT PLAN (Revised) : DECEMBER 7, 2012, WITH ADDITIONAL SUBPROJECTS

No	Location	Contract Description	Contractors / Consultants	Estimate Cost mi(USD)	Subproject Number	% Completed
CORE PROJECTS						
1	Upolu	Hospital Feeder Upgrade Stage 1	Bluebird Ah LAL JV	0.700	SAM PSEP 02/01A	100%
2	Upolu/Savaii	Single & three phase Prepayment Metering	A D Riley	6.143	SAM PSEP 1207	Installation is 91% complete; 73% of All active customers (31,730) have Prepayment Meters
3	Upolu	Project Manager	TBA	0.750		Position Filled
4	Upolu	Consultant Services (Note 1)	Implementation consultant	2.67	CON 0508	Egis International & Individual Consultants, short term consultants, COS and Tariff Study
			Individual consultants	1.50		Individual consultants, short term experts for commissioning, cost of service & tariff review
CANDIDATE SUBPROJECTS						
Upolu Generation						
5	Upolu	T'manono Power	TBA	0.170		0%
6	Upolu	Refurbishment of Alaoa Hydro Power Station:				
		a Electrical - Mechanical	Tenix NZ Ltd	1.291	SAM PSEP 03	100%
		b Civil Works	Silva Transport Ltd	0.536	SAM PSEP 03/01	90%, reduced scope
7	Upolu	Fiaga Power Plant				
		a LOT A (Generators & Powerhouse)	Bluebird/Woods/MHI	29.331	SAM PSEP 12/3A	Bldg-70%; Equip. Supply-80%; Equip. install-70%
		b LOT B (Electrical Switchgear)	Northpower NZ Ltd	3.437	SAM PSEP 12/3B	100% complete. CoC issued on November 19, 2012
		c Survey work	Sepulona Surveyor	0.041		100%
		d Level power plant site	PPG Construction	0.071	SAM PSEP 12/2B	100%
		e Access Road/fence/water pipeline	Silva Transport Ltd	1.420	SAM PSEP 12/2A	100%
		f Fuel & Oil Tanks	Fuelquip/GMA JV	1.200	SAM PSEP 12/04	Construction-60% complete.
		g Water booster pumping system & tanks	EPC	0.300	SAM PSEP 12/06	Bid doc-100%; with ADB to review
		h Water well drilling	EPC	0.032		0%
		i Relocate Units 5A, 7A, & 9A to Fiaga	TBA	3.00	SAM PSEP 12/05	construction 30%, bid preparing
		j Lube oil supply	TBA	0.100	SAM EPC 19/2012	Awarded contract
Upolu Transmission						
8	Upolu	Alaoa Feeder Upgrade 6.6 to 22kV	Bluebird AhLAL JV	0.440	SAM PSEP 02/02A	100%
9	Upolu	33kV Transmission Line from Fiaga to Fuluassou Substation	EPC		SAM PSEP 13/03	10%

		a	Materials	INTRACOR \$ South Austral	5.804		95% materials received
		b	Survey services	Sepulona SS Ltd	0.007		100%
		c	Trench excavation contract	TBA	0.574	SAM PSEP 13/02	bidding
		d	Equipment rental	EPC	0.043		continuing
		e	Land & Social Resettlement compensation		0.087		crop damage compensation
10	Upolu	Hospital Feeder Upgrade - Stage 2 - Contractor		Bluebird AhLAL JV	3.753	SAM PSEP 09/01A	construction 100%, installation 70%
			Materials				
11	Upolu	Fuluasou Substation		Northpower NZ Ltd	6.265	SAM PSEP 12/01	100% complete; CoC issued 19 Nov. 2012
		a	River bank riprap protection	TBA	0.652		preparing bid
12	Upolu	Low Voltage System Improvements		EPC	0.162		materials supply 100%, construction 0%
13	Upolu	22kV UG Fuluasou Substation to Apia Wharf		EPC	1.430	SAM PSEP 10/01	construction 30%, installation 0%
			Materials				
			Ott Transport Ltd contract	Ott Transport	0.066		Extra vaults, pillar boxes and underground conduits: Statrted
14	Upolu	22kV Overhead conductor upgrading program		GMA Construction Ltd	3.360	SAM PSEP 09/2B	construction 60%
			Materials		na		
Savaii Transmission							
15	Savaii	Puapua - Asau 22 kV line reconductoring		Tenix NZ Ltd	0.754	SAM PSEP 02/02B	100%
			Materials				
16	Savaii	Low Voltage Network Improvements		EPC	0.534		materials supply 100% construcion 9%
17	Savaii	Reconductor remaining spans (102)		EPC	0.096		0%
Measurement Equipment						809,646.681	
18	Upolu/Savaii	Measurement equipment: stream flow gauging		EPC	0.062		100%
19	Upolu/Savaii	Measurement equipment: electric HV/current		EPC	0.058		100%
19	Upolu/Savaii	SCADA System		Schneider Electric Ltd	3.548	SAM PSEP 12/05	Design
			Contingency, 5%		0.177		Forecast adding to original scope
APPROVED NEW SUBPROJECTS							
20	Savaii	Vaiaata Power Station		TBA	6.059		Preparing bid
		a	Salelologa Substation	TBA	2.174		Bid closed, evaluation
		b	Resistivity study	Northpower NZ Ltd	0.010		Completed
		c	Geotechnical study	TBA	0.020		Preparing bid
		d	Surveying	Sepulona	0.003		Completed
		e	Prepare access rd and clear site	TBA	0.050		0%
21	Upolu/Savaii	Vending System		A D Riley	0.162		100%
22	Upolu/Savaii	Public dissemination		EPC	0.100		Continuing
23	Upolu	Taelefaga/Lalomauga/Samasoni/Tanugamanono Power Stations Switchgear Refurbishment		Northpower NZ Ltd	2.731	SAM PSEP - 07	100%

	Upolu Transmission					
8	Upolu	Alaoa Feeder Upgrade 6.6 to 22kV	Bluebird AhLAL JV	0.440	SAM PSEP 02/02A	100%
9	Upolu	33kV Transmission Line from Fiaga to Fuluassou Substation	EPC	5.690	SAM PSEP 13/03	10%
		a Survey services	Sepulona SS Ltd	0.007		100%
		b Trench excavation contract	TBA	1.500	SAM PSEP 13/02	biding
		c Equipment rental	EPC	0.043		continuing
10	Upolu	Hospital Feeder Upgrade - Stage 2	Bluebird AhLAL JV	3.753	SAM PSEP 09/01A	construction 100%, installation 70%
11	Upolu	Fuluasou Substation	Northpower NZ Ltd	3.103	SAM PSEP 12/01	construction 70%, installation 5%
		a River bank riprap protection	TBA	0.652		preparing bid
12	Upolu	Low Voltage System Improvements	EPC	0.162		materials supply 100%, construction 0%
13	Upolu	22kV UG Fuluasou Substation to Apia Wharf	EPC	1.430	SAM PSEP 10/01	construction 30%, installation 0%
14	Upolu	22kV Overhead conductor upgrading program	GMA Construction Ltd	3.360	SAM PSEP 09/2B	construction 60%
	Savaii Transmission					
15	Savaii	Puapua - Asau 22 kV line reconductoring	Tenix NZ Ltd	0.754	SAM PSEP 02/02B	100%
16	Savaii	Low Voltage Network Improvements	EPC	0.534		materials supply 100% construcion 9%
17	Savaii	Reconductor remaining spans (102)	EPC	0.096		0%
	Measurement Equipment					
18	Upolu/Savaii	Measurement equipment: stream flow gauging	EPC	0.062		100%
19	Upolu/Savaii	Measurement equipment: electric HV/current	EPC	0.058		100%
19	Upolu/Savaii	SCADA System	Schneider Electric Ltd	3.548	SAM PSEP 12/05	0%
		Contingency, 5%		0.177		
	APPROVED NEW SUBPROJECTS					
20	Savaii	Vaiaata Power Station and Salelologa Substation	TBA	7.683		Separate bids
		a Resistivity study	Northpower NZ Ltd	0.010		start on 15/9/12
		b Geotechnical study	TBA	0.020		
		c Surveying	Sepulona	0.003		start on 11/9/12
		d Prepare access rd and clear site	TBA	0.050		0%
21	Upolu/Savaii	Vending System	A D Riley	0.162		100%
22	Upolu/Savaii	Public dissemination	EPC	0.100		Continuing
23	Upolu	Taelefaga/Lalomauga/Samasoni/Tanugamanono Power Stations Switchgear Refurbishment	Northpower NZ Ltd	2.731	SAM PSEP - 07	100%
24	Upolu	Power System Planning Software	Northpower NZ Ltd	0.051		100%
25	Upolu	Refurbishment of Generators 9A and 7A in Tanugamanono Power Station	MAN Diesel	1.678	SAM PSEP - 08	100%
26	Upolu	Vaipu Pumping Scheme	await EPC/ADB approval	0.477		FS-100%; EIA-80%; Bid-0%

24	Upolu	Power System Planning Software		Northpower NZ Ltd	0.051		100%
25	Upolu	Refurbishment of Generators 9A and 7A in Tanugamanono Power Station		MAN Diesel	1.678	SAM PSEP - 08	100%
26	Upolu	Vaipu Pumping Scheme		await EPC/ADB approval	na		Included with other hydro projects
27	ALL	Training		TBA	0.238		Linemen & other trainings & computerized maintenance program
28	Upolu	Taelefaga Power Station Hydro Governor System Upgrade		Northpower NZ Ltd	0.95	SAM PSEP 17/01	Contract awarded
					94.78		investment costs
					0.01		contingencies
					5.21		loan interest during construction
					100.00		

	NEW SUBPROJECTS PENDING APPROVAL BASED ON EXTRA FUND FROM JICA					
30	Afulilo Dam Environmental hazard Mitigation			0.750		Design and tender
31	Refurbish hydro m/c control system of 3 hydro plants (Samasoni, FOF, Lalomauga)			1.800		EPC Board to approve
32	Refurb. Penstock, valves, etc. of 4 hydros - Taelefaga, Lalomauga, Samasoni & FOF.			2.400		EPC Board to approve
33	Year make for additonal subprojects			14.322		
				19.272		

Notes

- 1 Include IC completion of hydro study, independent consultants, short term commission consultants, cost of service and tariff study
- 2 Total additional funds of US\$19.272M is from JICA due to exchange rate gains. This amount can change. ADB/JICA to work out how to fix this amount so that PMU can plan subprojects based on a fix funding source.
- 3 Proposed new subprojects for additional funds ones ADB/JICA established amount of new funds.

Appendix 2 – DISBURSEMENT PLAN

See attachment, Appendix 2

Appendix 3 - Revised Project Schedule to end June 2012

NO	TITLE OF SUBPROJECTS	Status	2008				2009				2010				2011				2012				2013				2014				2015				2016			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
CORE SUBPROJECTS																																						
1	Hospital Feeder Upgrading Project – Stage 1	COM																																				
2	Single- and Three-Phase Prepayment Metering Project	IIP																																				
3	Project Manager (0,37 + 0,38 unallocated)	CONT																																				
4	Project implementation consultant: EBI (73 man-months)	CONT																																				
CANDIDATE SUBPROJECTS																																						
UPOLU Generation																																						
5	Tanugamanono Power Station Noise and Emission Control Program	FSIP																																				
6	Refurbishment of Alaoa Hydropower Station	COM																																				
7	Upolu Diesel Power Station Project (Lot A and Lot B)	CIP																																				
8	Fiaga Access Road, Pipeline, and Fence	CIP																																				
9	Fiaga Fuel and oil tanks	CIP																																				
10	Fiaga pumped water system	CIP																																				
11	Relocate Gen Sets 5A, 7A & 9A to Fiaga Power Plant	PL																																				
UPOLU Transmission																																						
12	Upgrade of the Alaoa 6.6 kV Transmission Line to 22 kV Project	COMP																																				
13	33kv transmission line from Fiaga to Fuluasou Substation	CIP																																				
14	33kv underground line from Fuluasou SS to Tanugamaono	CIP																																				
15	Hospital Feeder Upgrading Project - Stage 2	CIP																																				
16	Samasoni hydro underground trans line to Tanugamanono	CIP																																				
17	22 kV Fuluasou Substation	CIP																																				
18	Low-Voltage Network Improvement Program	PL																																				
19	Fuluasou Substation to Apia Wharf Area 22 kV Underground Cable	CIP																																				
20	22 kV Overhead Conductor Upgrading Program	CIP																																				
21	Alaoa & FOF hydros dedicated transmission line to Tanugamanono	CIP																																				
SAVAII Generation																																						
22	Hydropower development	OH																																				
SAVAII Transmission																																						
23	Puapua-Asau Transmission Line 22 kV Reconductoring Project	CIP																																				
24	Low-Voltage Network Improvement Program	PL																																				
Measurement Equipment																																						
25	Stream Flow Gauging Equipment	COMP																																				
26	Electrical Test Equipment	COMP																																				
27	SCADA	CIP																																				
APPROVED NEW SUBPROJECTS																																						
28	Vaiaata Power Station	PL																																				
29	Salelologa Substation	TP																																				
31	Public Dissemination	ONG																																				
32	Refurbish Taeleleaga, & others 22kv switchgears	COMP																																				
33	Power System Planning Software	COMP																																				
34	Refurbishment of Tanugamanono Generators 9A and 7A	CIP																																				
35	Vaipu Pumping Scheme	PL																																				
36	Upolu hydro development - Fuluasou, Tipapata, Faleseela, & Tafitoala	FSIP																																				
37	Refurbish Taeleleaga hydro plant governor control system	CA																																				
38	Afulilo Dam Environmental Hazard Mitigation	TP																																				
39	Training	PL																																				
40	Refurbish No 12 gen in T'manono & 3 gens in Salelologa	NEW																																				
41	Refurbish governor & generator controls of FOF, Lalomauga & Samasoni hydro stations	TP																																				
42	Refurbish pentocks, valves, etc for Taeleleaga, Samasoni, Lalomauga, & FOF hydros	NEW																							</													

NOTES & KEY

- 1 Completion date - actual & planned
- 2 Original subprojects & implementation schedules from RRP Report
- 3 New subprojects NOT in original RRP Report
- 4 Completed
- 5 Construction in Progress
- 6 Planning
- 7 Installation in Progress
- 8 Feasibility Study in Progress
- 9 On-Going
- 10 Contract Award
- 11 On Hold
- 12 Tender Preparation
- 13 New, pending approval



COMP
CIP
PL
INP
FSIP
ONG
AG
OH
TP
NEW

Appendix 4 - Electricity Receivables

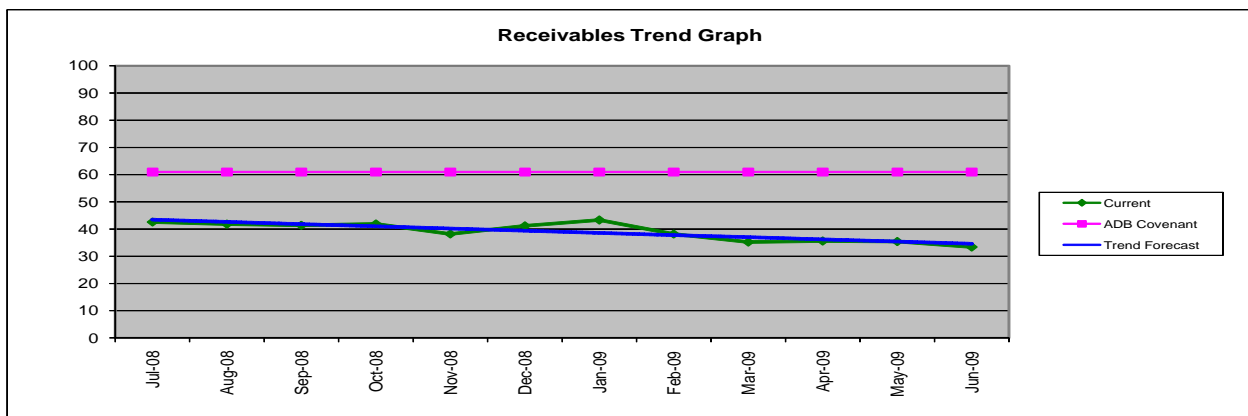
Schedule 3.1

Government and Private Sector Electricity Arrears

Month ended	Previous Quarters						Previous Month	Current Month		Variance
	30-Sep 2008	31-Dec 2008	31-Mar 2009							
By Consumer Category	\$000	\$000	\$000		\$000	\$000	\$000	\$000	%	\$000
Ministries	99	227	99		99	294	208	105	1.44%	(103)
State-Owned Entities	353	351	223		223	229	250	134	1.83%	(116)
CSO Street Lighting	155	-	-		-	-	-	-	0.00%	-
Total Government	607	578	322		322	523	458	239	3.27%	(219)
Private Sector	7,567	7,430	6,576		6,576	6,471	6,500	6,259	85.56%	(241)
Debit Note	906	899	824		824	799	791	817	11.17%	26
Grand Total	9,080	8,907	7,722		7,722	7,793	7,749	7,315	100.00%	(434)
By Aged Debtor Profile	\$000	\$000	\$000		\$000	\$000	\$000		%	
Current	4,566	4,184	3,314		3,314	3,416	3,365	2,973	40.64%	(392)
1 - 30 days arrears	1,380	1,563	1,255		1,255	1,237	1,323	1,275	17.43%	(48)
31 - 60 days arrears	487	581	611		611	546	510	509	6.96%	(1)
61 - 90 days arrears	462	500	454		454	502	447	420	5.74%	(27)
over 90 days arrears	1,279	1,180	1,264		1,264	1,293	1,313	1,321	18.06%	8
Debit Note	906	899	824		824	799	791	817	11.17%	26
Total	9,080	8,907	7,722		7,722	7,793	7,749	7,315	100.00%	(434)
ARREARS (excl Current)	4,514	4,723	4,408		4,408	4,377	4,384	4,342		
12 month total sales	\$74,000	\$75,500	\$80,000		\$80,000	\$80,000	\$80,000	\$80,000		

KEY PERFORMANCE INDICATORS

1) Days of Sales	44.8	43.1	35.2	35.2	35.6	35.4	33.4
PSEP Performance Target	Below 61 days		Actual	33.4 days			
2) Government Debtors							
% Government Debt				3.27%			
% Government Sales				13.46%			
PSEP Performance Target	Less than 100%		Actual	24.28% =Debt/Sales			



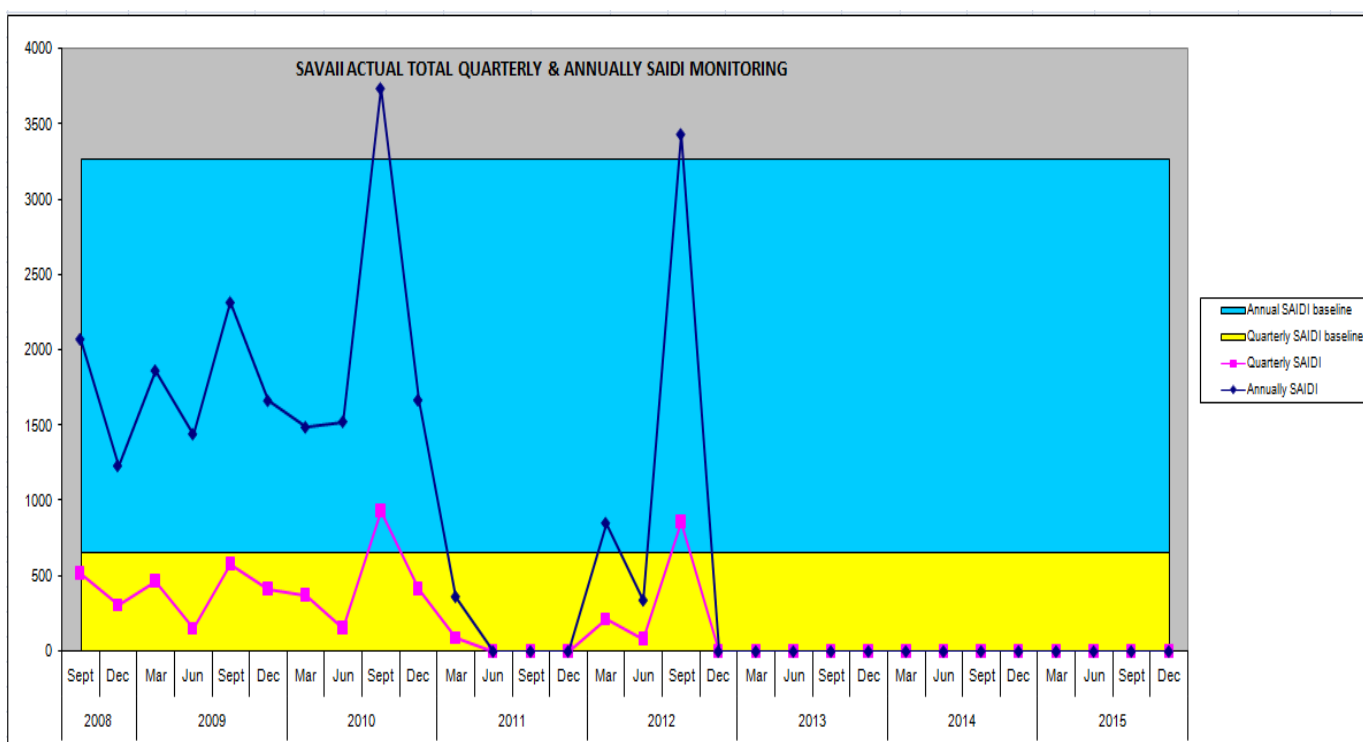
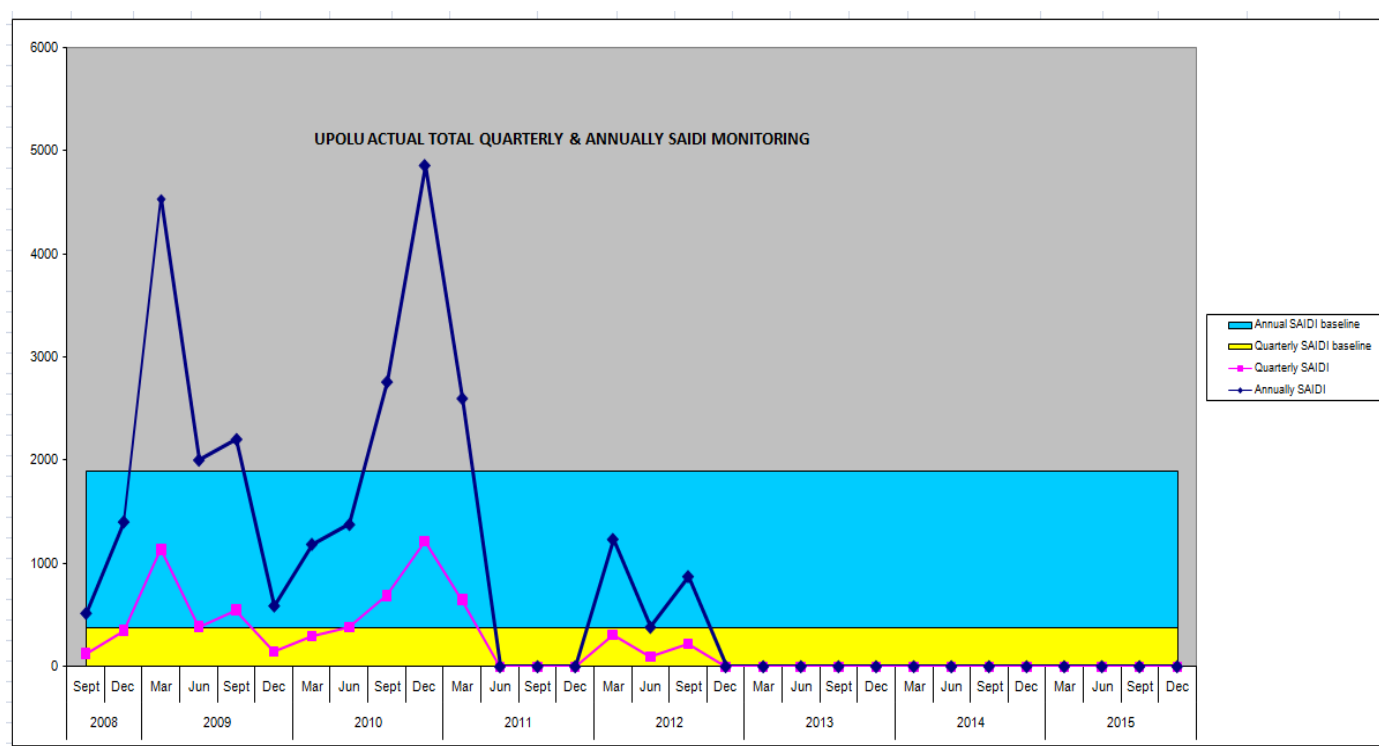
Current	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09
ADB Covenant	42.6	41.8	41.4	41.9	38.2	41.2	43.3	38.2	35.2
	61	61	61	61	61	61	61	61	61

Appendix 5 – Prepayment Meter Installation Projection & Actuals

Project Target is to get 75% of consumers on Cash Power Meters at end of project in 2016. 19,616 meters have converted by A D Riley under their contract. At end of 2nd Quarter of 2012, 71.87% of active consumers have been converted or installed with prepayment meters. There is 3.13% needed to meet target. About 1,384 meters are left to be installed under A D Riley's contract. 75% will be reached with these meters. EPC is still testing a new meter from another supplier, Joy Electric Ltd. Another supplier is sending test meters to be tested on A D Riley vending system. If successful, this will give EPC new suppliers beside A D Riley. There has not been any technical solution on blank screen defective meters. ADR is asked for a solution. They have gone back to factory of CP meters. No word from them.

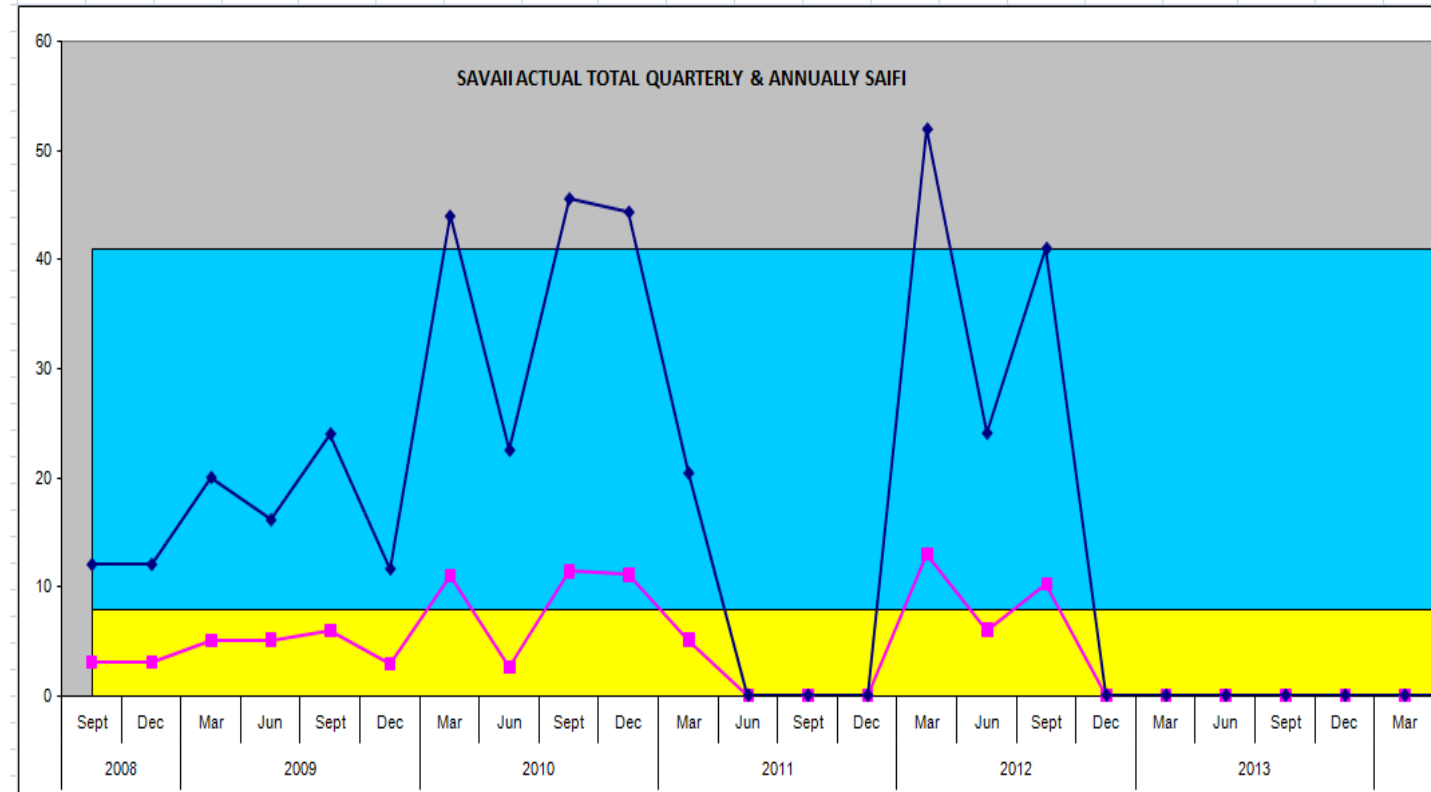
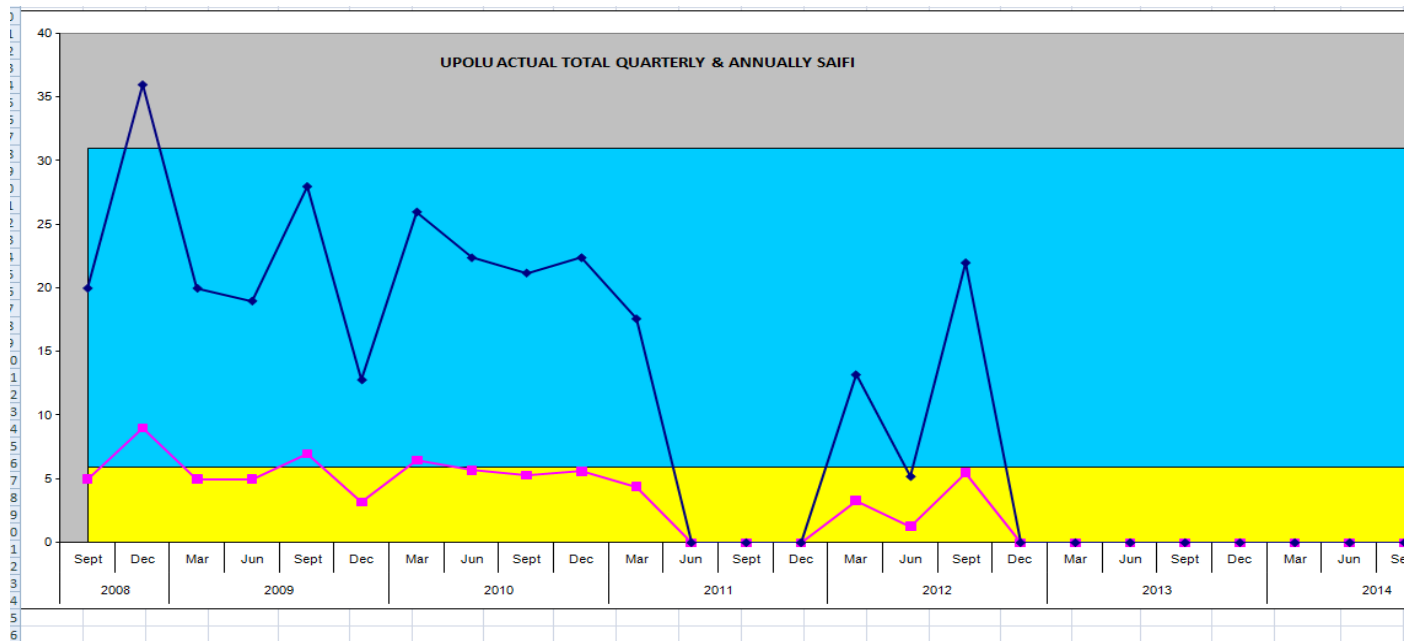
See attached list of meters converted

Appendix 6 - System Average Interruption Duration Index (SAIDI) Monitoring



- SAIDI to be reduced by 20% by 2015
- Plan interruption is included since 1st Quarter 2009.

Appendix 7 – System Average Interruption Frequency Index (SAIFI)



- SAIFI to be reduced by 20% by 2015
- Plan interruption is included since 1st Quarter 2009.

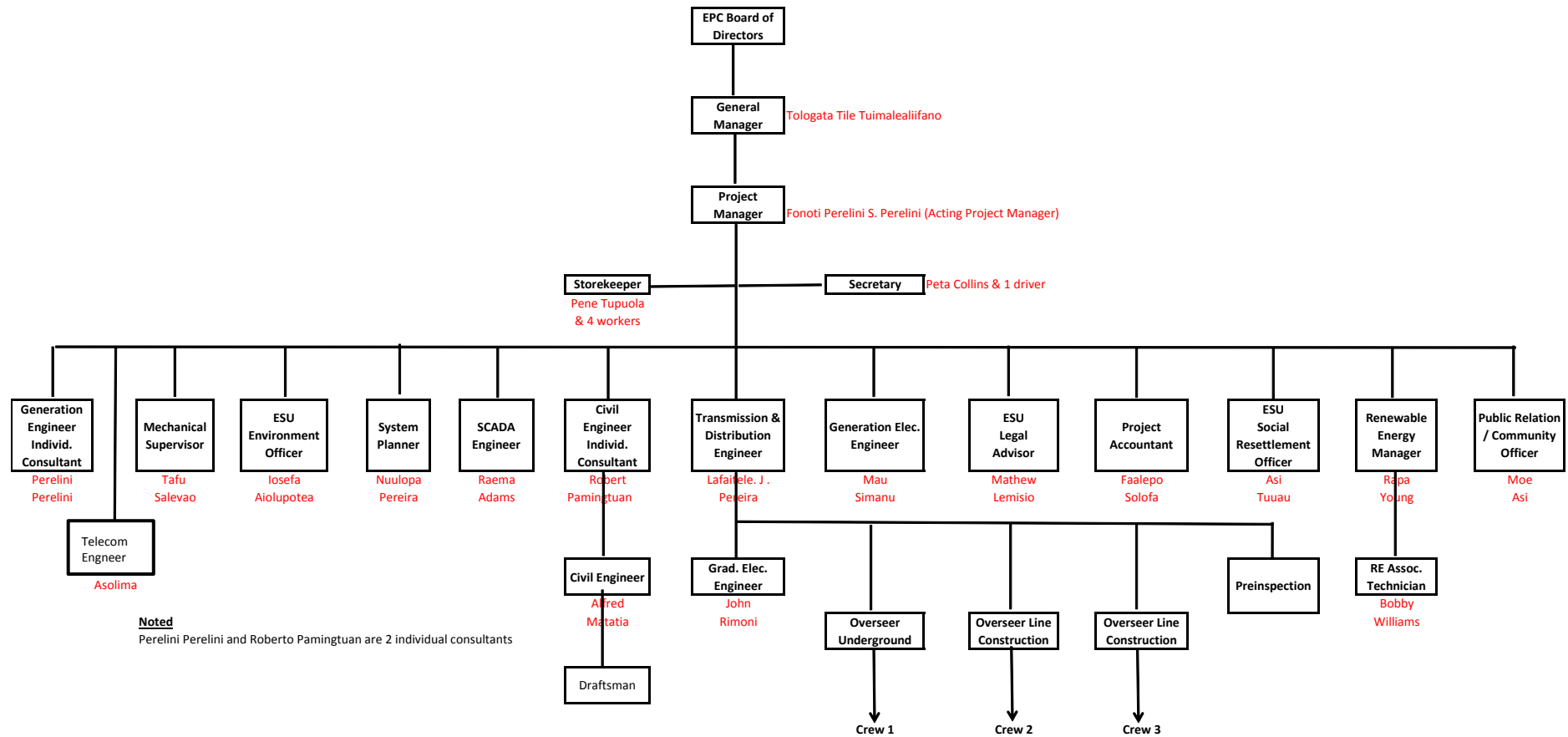


Asian Development Bank

Appendix 8 – PMU Current Organisational Structure

EPC PROJECT MANAGEMENT UNIT

Revised 14 Sept 2012



Appendix 9 - Withdrawal Applications by Contract as of June 30, 2012

