

Solomon Power



Renewal Energy

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Solomon Islands Electricity Authority
Trading as Solomon Power



Key Challenges

- Increasing the accessibility
- Increasing affordability

Number of Customers

- Presently Solomon Power has 16,180 customers
- Solomon Power needs to double this to 30,000 by 2021
- This will reduce fixed cost per customer
- This will reduce tariffs

New electricity tariff regulation 2016

- The electricity tariff has dropped by up to 21%
- Tariff has two components
 - Fuel which is 40%
 - Non-fuel which is 60%

Accessibility- present situation

- Only 64% of the population has access to electricity in Honiara
- Only 16% of the population has access to electricity in Solomon Islands

Standard Mini Hybrid Model

- 150 to 300 customers
- Maximum Demand 150 kW to 250 kW
- Cashpower meters(pre-pay)
- 2 personnel per site

Hydro Projects

- Two projects- Fiu River in Malaita and Tina Hydro in Guadalcanal
 - Fiu River- run of the river, 2X 250kW
 - Tina Hydro- Dam, tunnel- 80 GWh, 15 MW (3 5 MW machines)

Fiu River Hydro-issues

- Court case- pending decision on road access land
- Road- potential for another landowner to take action
- Payment demand for water
- Alternate road access adds considerable costs
- Identified loss of head
- No disbursements as yet- 2 years have elapsed

Tina River Hydro- status

- Land has been sorted
- Developer selected
- Concessional financing
- Total cost USD240m- very expensive
- PPA tariff high
- Negotiations in progress to reduce ongoing costs to reduce tariff
- Shareholding in the Special Projects Company being negotiated

Mini Hybrid Farms

- Taro, Choiseul Province (already commissioned)
 - 224 kW PV, 1.2 MWh battery storage, 150 kW diesel back-up
- Seghe, Western Province (commissioning end June 2017)
 - 160 kW PV, 0.9 MWh battery storage, 150 kW diesel back-up

Taro Mini Hybrid Farm



Taro Mini Hybrid Farm



Seghe Mini Hybrid Farm



More Mini Hybrids

- Four sites, next cab of the rank during 2017/2018
 - Hauhui, Malaita Province- 200 kW PV, 1.2 MWh battery storage
 - Arariki, Choiseul Province- 150 kW PV, 0.9 MWh battery storage
 - Sasamunga, Choiseul Province- 200 kW PV, 1.2 MWh battery storage
 - Vonunu, Western Province- 150 kW PV, 0.9 MWh battery storage
- Sites for 2018/2019
 - Pangoe, Choiseul Province
 - Visale & Lambi- Guadalcanal Province

Mini Hybrids- support from ADB

- Total 2 MW of Hybrid (Solar, battery storage and diesel back up)
- At existing outstations in Munda, Malu'u, Tulagi, Lata and Kirakira
- These will replace the existing only diesel generation systems
- Project to be executed during 2016-2019

Already commissioned

- Buala 150 kW Mini Hydro
 - Displaces 180,000 litres of diesel per annum
- Henderson 1 MW Solar Farm- peak output 850 kW
 - Displaces 480,000 litres of diesel per annum
- Ranadi 50 kW Solar Installation
 - Displaces 12,000 litres of diesel per annum

Ranadi 50 kW Solar Installation



Henderson Solar Farm 1MW



Complementing projects

- Output Aid Program
 - Subsidised service connection & wiring
 - Shall connect 2565 low income customers
 - Funded by donors and Solomon Power
- 11000 Volt and 415 Volt network extensions
 - Increase accessibility and affordability
 - Funded by Solomon Power internally