

Pacific Energy Conference, 7th June 2016

Breakout Session 2 – Access to Electricity: expanding generation and extending networks to provide electricity to more people:

UAE-Masdar & NZMFAT: model partnership for renewable energy deployment in the Pacific: Case Study - Solomon Islands 1MW Solar PV project

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Solomon Islands – Solar PV Plant in Honiara:

Effective donor collaboration for project delivery



Country Context – The Republic of Solomon Islands

- Over 1,000 islands with a total population of circa 600,000 citizens; capital city, Honiara ~12% of the population (about 89% of the country's power generation capacity)
- Over 10,000 customers served by the Honiara grid with a capacity of 26 MW
- Very low electricity access rate at about 23% (difficult geography and dispersed populations);
- 90% of electricity produced in Solomon Islands is generated in Honiara predominantly by diesel generators - one of the highest electricity tariffs in the Pacific (USD 0.86 – 0.92 / kWh as at June 2013)

1,000kWp Solar PV project

- 600 kWp funded by UAE PPF; 400 kWp funded by NZMFAT (extension to original EPC contract for 600kW)
- Energy production – 1,627 MWh / year
- June 2015 - EPC Contract Award (600kW)
- June 2016 - Final commissioning and integration with existing grid and power plant

Project Team

- Plant Owner - Solomon Power (SP); Executing entity (on behalf of donors): Masdar Special Projects
- EPC Contractor: CBS Power Solutions; Construction supervision: IT Power; 3rd Party Independent Testing: Elemental Group



Solomon Islands – Solar PV Plant in Honiara:

Increased energy access with solar PV penetration



Project Impacts

- Economies of scale: larger PV plant at no additional construction period (savings on site mobilization, materials delivery, supervision costs, etc.)
- Relatively quick project implementation – 12 months from contract award (financed project would take longer)
- Increased energy security: reduced dependence on fuel imports and oil price volatility risks
- 7% solar PV penetration; 454,469 liters of diesel fuel saved every year; 1,254 tons of CO₂ emissions avoided every year
- Savings in resources from the Honiara project can enhance energy access provision in other parts of the country
- 3MW transformer installed & additional land acquired by Solomon Power - future PV works can be fast tracked and installed at reduced cost
- Local capacity development – experience in PV solar plant implementation; grid integration with renewable energy source; medium scale project execution (Utility company; regional contractor; local sub-contractors; consultants)
- Initial development of the local supply chain



Completed 1MW Honiara Solar PV plant

