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Project Information Document/ Integrated Safeguards Data Sheet (PID/ISDS)

Concept Stage | Date Prepared/Updated: 17-Apr-2017 | Report No: PIDISDSC21203



BASIC INFORMATION

A. Basic Project Data

Country Solomon Islands	Project ID P162902	Parent Project ID (if any)	Project Name Electricity Access and Renewable Energy Expansion Project (Phase II) (P162902)
Region EAST ASIA AND PACIFIC	Estimated Appraisal Date Oct 09, 2017	Estimated Board Date Jan 09, 2018	Practice Area (Lead) Energy & Extractives
Financing Instrument Investment Project Financing	Borrower(s) Ministry of Finance and Treasury	Implementing Agency Solomon Islands Electricity Authority (Solomon Power)	

Proposed Development Objective(s)

The development objective is to provide increased access to grid connected electricity and renewable energy in Solomon Islands.

Financing (in USD Million)

Financing Source	Amount
Strategic Climate Fund Grant	6.77
Support for Small Island Developing States (SIDS) DOCK Suppo	1.60
Global Environment Facility (GEF)	0.90
IDA Grant	4.00
Total Project Cost	13.27

Environmental Assessment Category B-Partial Assessment	Concept Review Decision Track II-The review did authorize the preparation to continue
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Other Decision (as needed)



B. Introduction and Context

Country Context

1. **An archipelago of 997 islands, Solomon Islands has a total land area of 29,900 km² spread over 1.34 million km² of ocean.** The population of approximately 572,000 is dispersed across 90 inhabited islands and has among the lowest population densities (19 persons/km²) and urbanization rates (17 percent) in the world. Roughly 80 percent of the population is living in rural areas. The island geography presents formidable and in some cases immutable challenges to service delivery, infrastructure and economic integration. The difference in access to services between urban and rural areas is particularly stark. The electrification rate in the urban areas is approximately 50 percent, compared to a much lower rate of 5 percent in rural areas. In addition, Solomon Islands remains a fragile country.¹

2. **The Solomon Islands economy has rebounded since the civil unrest in 2003, but remains vulnerable to external shocks.** The economy recovered relatively strongly based on export of commodities such as logging and mining. However, the global financial crisis in 2009 hit the Solomon Islands hard, resulting in a sharp contraction of the economy, a budget crunch and a depletion of foreign currency reserves. Solomon Islands Government (SIG) recognized the need for significant reductions in its current spending levels, especially those with significant impact on the balance of payments. The oil price spike of 2008 increased Solomon Islands' vulnerability to oil price volatility, and the country's balance of payments came under severe pressure as fossil fuel makes up a significant portion of all imports. To mitigate the impact of high cost diesel fuel, the Government took the initiative in considering options for development of domestic sources of energy, particularly hydro and other renewables. At the same time, while the country had benefited from the Honiara Club Agreement, the arrangement had also placed a moratorium on new loans, which made public financing of larger infrastructure projects very difficult. While this moratorium has since been lifted, it gave an initial impetus to the drive for private sector participation in infrastructure development, financing and operation - a policy that was later embedded in the Government National Development Strategy (2011-2020).

3. **Income distribution is inequitable across Solomon Islands, particularly geographically, with rural income levels below urban income levels.** The 2012/13 Household Incomes and Expenditure Survey (HIES), released in November 2015, found urban households earn close to three times the average income of rural households, and twice the median and per-capita income. Wages/salaries and business incomes are higher in urban areas accounting for 83 percent of the total cash-income compared with 59 percent in rural areas. As expected, the third highest cash-income of rural households comes from subsistence-based activities (mainly agriculture). In urban and rural areas cash payments for energy is a primary household expenditure. In urban areas, cash-based expenditure primarily consists of rental payments, electricity, water and gas. Liquid fuels as a source of energy are the largest cash-based expense in rural areas.

4. **Extreme poverty is relatively high in the Solomon Islands and the country's geography and remote location makes the provision of services, including electricity, particularly challenging.** An estimated 25.1 percent of Solomon Islanders live below the global extreme poverty line, on less than US\$1.90 per person per day (in 2011 PPP terms), higher than elsewhere in the Pacific except Papua New Guinea. An estimated 56.7 percent of the population live on less than US\$3.10 per person per day. The Solomon Islands is one of the few Pacific countries not achieving any of the eight Millennium Development Goals (MDGs), in part reflecting the very high cost of providing essential services to such small pockets of people spread widely across a divided territory.

¹ Solomon Islands belongs to the List of Fragile and Conflict Affected Situation Countries FY16 with a harmonized Country Policy and Institutional Assessment (CPIA) average score of 3.1.



5. **The wide distribution of the population and the low densities make the capital costs of connecting consumers very high relative to the revenue generation.** As a result, there are few roads on most of the islands, limited commercial shipping between islands, and air transportation is unaffordable for most citizens. Access to essential services such as water, sanitation or electricity is low: less than 20 percent of the population has access to any electrical power supply. When electricity is available it is more costly than elsewhere in the world and is often less reliable. Rates of access to an improved water source (primarily piped water), improved sanitation and grid electricity are significantly higher in urban areas, but the gaps are still substantial and the quality of services for those who have them is variable. Provision of infrastructure such as stable supply of grid-based electricity has the potential to promote economic growth, for example, by refrigeration of fish, pumped irrigation, processing of produce, and development of the tourism industry. Low levels of access to an adequate supply of electricity limit the ability of children to study, add to the burden of household work, and severely constrain economic activity.

Sectoral and Institutional Context

6. **Power Sector in the Solomon Islands.** Solomon Islands is almost entirely dependent on imported refined petroleum fuels for national energy needs for electricity generation, transport and lighting. The Ministry of Mines, Energy and Rural Electrification (MMERE) is the supervising ministry, and the Solomon Islands Electricity Authority, trading as “Solomon Power” since December 2015, is the state-owned vertically-integrated power utility. Solomon Power is the main supplier of electricity in the country, and responsible for electric power generation, transmission and distribution to all urban and provincial centers, including Honiara, nine provincial centers (so-called “outstations”) and Noro Township in the Western Province. Outside of Solomon Power’s existing service areas, there are a small number of community operated grids, stand alone diesel generators, or small solar systems for basic lighting and phone charging.

7. **Solomon Power supplies electricity to urban centers through diesel generators.** Solomon Power’s Honiara power system is almost entirely diesel-based, except for a 50 kilowatt (kW) rooftop photovoltaics (PV) pilot project at Solomon Power’s headquarters and a 1 Megawatt (MW) solar farm commissioned in 2016. The total installed generation capacity in Honiara is 32.6 MW, but its available (de-rated) capacity is 30.7 MW. This includes the new 10 MW diesel units commissioned in 2016, but many of the other diesel units are old and inefficient with reduced outputs. Grid based generation capacity on the outstations is approximately 6.9 MW, and Solomon Power also purchases a small share of its total energy from privately-owned generators under a power purchase agreement. The total energy production in 2015 was 85.5 GWh, of which 77.9 GWh (90 percent) was for the Honiara grid. In 2015, the maximum load on the Honiara grid was 14.4 MW.

8. **Solomon Power has successfully rebounded from financial crisis in 2001.** The IDA-funded SISEP, approved in June 2008 with additional financing to scale up the original project approved in November 2014, was instrumental in turning around the financial performance of Solomon Power which, according to its annual report, recorded net revenues of SBD 106 million (~US\$13.6 million) in 2015 and SBD 91 million (~US\$11.7 million) in 2014. Similarly, the Project has delivered significant benefits to customers through improved power system reliability and efficiency. The annual total length of time that a customer is without power in Honiara, taking into account all planned and unplanned outages (system average interruption duration index: SAIDI), has fallen from a very high 51,840 minutes (864 hours) in 2007 (prior to the project) to 3,487 minutes (58 hours) in 2016. Over the same period, the number of times in a calendar year that a customer can expect to experience an interruption in power supply (system average interruption frequency index: SAIFI) dropped from 816 times to 46 times. In 2014, Solomon Power appointed a Capital Program Manager. The Capital Program Manager is tasked with strengthening the Solomon Power’s project management capability, particularly the execution of its extensive capital works activities, including a new powerhouse for the capital city and generation and network upgrades across the country, and those financed under the additional financing. In addition, Solomon



Power took further steps to improve their capability to effectively manage its pipeline of capital works projects, including restructuring the organization, and appointing a Capital Program Manager, and three new experienced engineers including a Planning Manager.

9. **Solomon Islands has one of the lowest rate of electrification in the region.** Dispersed population across an island archipelago and the poor performance of Solomon Power in the past constrained its capacity to expand the grid even in the capital city (Honiara), but it is currently planning a significant program of grid extensions and development of outstations. According to the 2012/13 HIES, while 45 percent of the households are said to have access to electricity, majority of the households only have small solar panels, typically of 20 watts. The percentage of households supplied by the Solomon Power is merely 12 percent nationally. While 64 percent of the population of Honiara is connected, only 6 percent of the remainder of the country is connected to grid connected electricity.

10. **Solomon power has a goal of doubling its existing customers by 2021.** Solomon Power has recently started to invest in strengthening and expanding its electricity network. The installation of an additional 10 MW of diesel generator capacity at Lungga Power Station in Honiara, and its investment plan includes 23 subprojects to expand the Honiara grid. Solomon Power is also developing two outstations with solar-diesel hybrid systems, while the investment plan lists another 35 potential outstations. These investment plans have been prepared by Solomon Power to help it meet its ambitious goal to double the number of customers from 15,500 to 30,000 by 2021 – a goal which MMERE also supports. However, both MMERE and Solomon Power recognize that the high cost of connection is a serious impediment for new customers, especially the low-income households, to connect.

11. **A major obstacle in expanding the use of electricity and promoting economic development is the high average retail electricity tariff of approximately US\$.80/kWh which is the highest in the Pacific and among the highest in the world.** This is due to its high reliance on expensive diesel generation with costs largely driven by the high transportation costs, inability to harness efficiencies from economies of scale, and exposure to volatility in the global oil prices. Solomon Power's cost of supply (generation and distribution) was approximately US\$.30/kWh in 2015 when global oil prices were around US\$50/barrel, of which about 73 percent or US\$.22/kWh was fuel cost. However, in 2011 when global oil prices were around \$110/barrel, the cost of supply was about US\$.41/kWh of which fuel cost was 87 percent or US\$.36/kWh. This problem is further exacerbated by the distorted tariff methodology which does not benefit the end-users appropriately when global oil prices are lower. While the fuel cost decreased, average retail tariff increased from US\$.72/kWh in 2011 to US\$.80/kWh in 2016 (peaking at US\$.94/kWh in 2014). MMERE and Solomon Power have revised the tariff methodology so that the benefit of lower generation cost will be adequately passed on to the electricity users.² Having said this, unelectrified households currently spend a significant amount on expensive alternative sources of energy such as kerosene lamps, candles, and charging of batteries and mobile phones at diesel-based charging stations, while grid-supplied electricity, albeit expensive by international standards, is still more economical than the currently available alternatives.

12. **Renewable Energy can play a key role in increasing access in a sustainable manner.** In order to reduce the exposure to the volatile global oil prices and to enhance energy security, SIG aims to increase the share of renewable energy to 50 percent of total installed capacity by 2020.³ Apart from the small solar home systems, development of renewable energy has been slow in the Solomon Islands largely due to the weak financial position of Solomon Power

² The Attorney General gazette the new tariff at the end of 2016 and it became effective on 1 January, 2017. It is expected the new implementation of the new tariff structure will result in an immediate 15 to 20 percent reduction in tariff. The new tariff structure also introduces new tiers for residential customers allowing for customers to be put on the tariff structure commensurate with their consumption of energy.

³ Apart from the cost implications, diesel generation is a major source of GHG as well as local air and noise pollution.



until mid-2011, and the only prominent renewable energy sources operated by Solomon Power were the mini-hydros supplying Buala town on Isabel Province and Malu'u substation in Malaita. A number of initiatives, however, are under way that will provide additional generation needed to supply new consumers. In 2014, a 50 kW demonstration grid-connected solar installation on the rooftop of Solomon Power's head office parking lot was commissioned, with financing from the Japan International Cooperation Agency (JICA). Solomon Power has commissioned a 1 MW grid-connected solar farm connecting to the Honiara grid which was grant-funded by the governments of the United Arab Emirates and New Zealand. Also, Solomon Power is developing three outstations with solar-diesel hybrid systems, and project preparation is underway with the assistance of the Asian Development Bank (ADB) to hybridize some of the existing diesel-based outstations with funding from the Scaling-up Renewable Energy Program (SREP) for Low-Income countries. In addition, Solomon Power is also preparing to develop the 500 kW Fiu River Hydropower Project to connect to the Auki grid on the island of Malaita with financing from ADB. The World Bank, the International Finance Corporation (IFC), ADB, Australia and other partners are supporting the Government of the Solomon Islands to facilitate private investment into the 15 MW TRHDP which will feed into the Honiara grid. IFC is the transaction advisor and the World Bank is supporting MMERE's project office to prepare the project, while support is also being provided under SISEP to Solomon Power which is expected to be the off-taker.

13. **Potential for solar PV generation and its complementarity to the TRHDP project under development.** It is estimated that the irradiation is in the range of 5.5 to 6.5 kWh/m²/day, and the daily load profile with maximum demand at mid-day makes PV with coinciding peak output hours a favorable option. In addition, the cost of PV continues to reduce and has an extremely low operating cost, making it an increasingly attractive alternative technology. Having said this, its outputs are intermittent and are only available during the day, and so beyond a particular penetration level, PV projects need to include storage and/or be combined with other type of compensation for the intermittency of the solar resource. Battery technologies, particularly lithium-ion batteries, are becoming an attractive enabling technology to address PV's intermittency and to store energy during the day for night-time consumption. While there is no technical limit to the penetration level, batteries however are still relatively expensive to compete against diesel and hydropower in its function to deliver energy and to provide ancillary services. An independent economic optimization study commissioned by the Bank in the framework of the TRHDP demonstrated that while hydropower and PV may compete depending on the combination of load, river discharge and insolation, hydropower predominantly displaces diesel as baseload electricity and facilitates the integration of PV at least-cost to the system.⁴

14. **The initial connection cost and support through Improved Electricity Access Project (P151618).** The initial cost to connect to the power system in Solomon Islands is extremely high. The cost of connection can be divided into (i) the cost of service line and meter to be installed by Solomon Power, and (ii) cost of in-house wiring which has to be installed by a licensed electrical contractor. Solomon Power shoulders the cost of the service line for customers whose house is within 20 meters from the nearest distribution pole, but the customer has to pay SBD 800 (~US\$100) for the meter, and the actual cost of the service line (and auxiliary poles, if required) if the distance exceeds 20 meters. For example, the cost of connection for a house that is 30 meters away from the connection point requiring one auxiliary pole will be about SBD 2,500 (~US\$313) excluding the cost shouldered by Solomon Power for the first 20 meters. Given that the monthly income of the lowest quartile in urban areas is SBD 2,000 and only SBD 850 in rural areas of the outer islands, the cost of the service line and meter is difficult to afford. Moreover, it is the exorbitant cost of the in-house wiring which makes access to grid-supplied electricity extremely difficult particularly for the low-income households. In accordance with the Electricity Act, in-house wiring can only be installed by licensed electrical contractors. Licenses are issued by Solomon Power, and Solomon Power also certifies the in-house wiring before it connects the service line to a

⁴ This is because, although hydropower outputs can also be variable, the reservoir capacity of TRHDP, albeit small, can provide the fast-response needed to compensate the PV's intermittency and to regulate the frequency of the power system. Since it can also provide spinning reserves and inject inertia to keep the system strong, TRHDP can contribute to enabling higher penetration of PV.



new customer. While this stringent regulation is commendable, since there are only about 60 active licensed electrical contractors (and limited number of suppliers) – all of which are in Honiara – the cost of the in-house wiring services including the material cost seems to be artificially inflated. Evidence suggests in-house wiring can cost more than SBD 10,000 (US\$1,200) for a small house. The Bank has approved the US\$2.5million Electricity Access Expansion Project (EAEP) supported by the Global Partnership for Output Based Aid (GPOBA) in July 2016 to provide targeted subsidies to low-income households to help new customers pay the initial connection fee and basic in-house wiring for low-income households which is a major impediment to increasing the electrification rate. Initial feedback from government and beneficiaries is very positive and there would be interest in expanding the program to more beneficiaries⁵.

15. Scaling-Up Renewable Energy in Low-Income Countries Program (SREP) and the Solomon Islands SREP Investment Plan. SREP is a program which is part of the Strategic Climate Fund and whose objective is to pilot and demonstrate the economic, social and environmental viability of low carbon development pathways in the energy sector by creating new economic opportunities and increasing energy access through the use of renewable energy.⁶ In May 2014 MMERE submitted an investment plan to the SREP sub-committee for endorsement for a funding allocation (total US\$ 15 million) from SREP to be used by the country with the objective of supporting the increased penetration of renewable energy and increased access to energy in Solomon Islands. Based on the Investment Plan, Solomon Islands received an allocation of US\$7 million to be used towards a project to be implemented by the World Bank and US\$6.5 million towards a project to be implemented by the Asian Development Bank.⁷ Each Multilateral Development Bank (MDB) is also expected to mobilize additional resources to leverage the funds allocated by SREP, from their own funds resources, but also from private sector, government, etc., with a minimum leverage factor of a minimum of 1:1 and ideally up to 1:4. The SREP funds were intended to co-finance the Solomon Islands Electricity Access Expansion Project (SIEAEP, financed by GPOBA). However, at the time of SIEAEP project preparation, due to the absence of a suitable renewable energy project readily available for implementation and the lack of IDA allocation (required by SREP), it was agreed in November 2015 to first process the SIEAEP as a standalone OBA project without SREP financing. Following an indication from GSI in February 2016 that it would like to allocate resources from IDA18 for this project, the Bank has

⁵ A willingness to pay analysis was also conducted during preparation of EAEP to determine household's willingness to pay once they received an electricity connection. The economic analysis considered only the consumers' surplus of switching from the supply provided by charging and using car batteries to grid electricity supply. The surplus is based on the cost savings from charging batteries and replacing them every two years, to using grid electricity (30 kWh per month in Honiara, charging batteries cost approximately SBD 45 per charge, and the battery can last around a week, for a limited use of 2 energy efficient lamps, and phone charging. Thus, it is assumed that the willingness to pay of consumers is at least the amount they currently pay of US\$24 a month. Also, switching to grid electricity avoids the need of replacing the battery, usually after 2 years, with a cost of US\$100 per battery. Using the revised electricity tariff (to be approved by mid-2016) for the lowest residential tier below 50 kWh a month of US\$0.70/kWh, the monthly bill would be US\$21, lower than the current cost of charging batteries, but providing much more electricity than before.

⁶ The Climate Investment Funds (CIF) support developing countries as they move toward low emissions and climate resilient development. The CIF provides developing countries with grants, concessional loans, and risk mitigation instruments that can achieve significant leverage of private sector resources, investments from MDBs, and other co-financing. Five Multilateral Development Banks (MDBs) - the African Development Bank (AfDB), Asian Development Bank (ADB), European Bank for Reconstruction and Development (EBRD), Inter-American Development Bank (IDB), and World Bank Group (WBG), including the International Finance Corporation (IFC) - are the implementing agencies of CIF funded projects and programs. The CIF's financial architecture rests on two trust funds: (i) the Clean Technology Fund (CTF): the CTF finances the scaled-up demonstration, deployment, and transfer of clean technologies. The focus is on piloting investments in countries or regions that have the potential for significant greenhouse gas abatement, and (ii) the Strategic Climate Fund (SCF): The SCF finances targeted programs that pilot new approaches with the potential for scaling up. The SCF includes the Forest Investment Program, the Pilot Program for Climate Resilience, and the Scaling-Up Renewable Energy Program in Low-income Countries (SREP).

⁷ These amounts are approximate only.



been in touch with other partners to identify the availability of funds that could be used to complement SREP and IDA to achieve at least the minimum 1:1 leverage factor. As of now, in addition to SREP and IDA resources, the Bank is planning to leverage also financing from SIDS-DOCK (Small Islands Development States Multi-donor Trust Fund) and Global Environment Facility (GEF).⁸

Relationship to CPF

16. **Solomon Islands’ 2016-35 National Development Strategy (NDS) places emphasis on increasing electricity access and the promotion of renewable energy.** The Solomon Islands Draft National Development Strategy 2016-2035, prepared by the Ministry of Development Planning and Aid Coordination prioritizes increasing electricity access. It is widely acknowledged that access to electricity contributes to economic and social development, and has particular benefits for improved education and health for women and children. For the case of Solomon Islands doing so through renewable energy enhances the system sustainability and reduced Green House Gas emissions (GHG). This project is consistent with Government of Solomon Islands’ plans to increase electricity access and increase the percentage of renewable energy in the total energy mix.

17. The project complements the ongoing IDA-funded SISEP, EAEP operations, and the TRHPP under preparation. SISEP aims at improving the operational efficiency, system reliability and financial sustainability of Solomon Power. Increases in transmission capacity within the grid, improved efficiency of power supply, and tariff reforms are expected to lay the ground for increasing access to grid-based energy. EAEP supports access to energy for the poor by addressing the ability of poor households to pay the up-front connection cost and the cost of in-house wiring. TRHPP will increase generation capacity of baseload electricity and integration capacity of renewables into the grid.

18. The Solomon Islands Energy Access and Renewable Energy Expansion Project (SIEAREEP) supports the two corporate goals of helping to end extreme poverty and increasing shared prosperity for the poorest 40 percent of the population. It will do this by extending and connecting additional people to electricity networks, while improving sustainability and affordability through the replacement of diesel generation with more affordable sources of power. The Project will also contribute to global efforts to mitigate climate change by promoting the use of clean energy technologies, including the use of solar energy solutions in rural areas, to displace the current use of mainly kerosene for lighting. Finally, the project is consistent with the objectives of clean renewable energy development of the World Bank’s Energy Directions Paper.

C. Proposed Development Objective(s)

Note to Task Teams: The PDO has been pre-populated from the datasheet for the first time for your convenience. Please keep it up to date whenever it is changed in the datasheet.

19. The development objective is to provide increased access to grid connected electricity and renewable energy in the project supported areas.

Key Results (From PCN)

⁸ SIDS-DOCK is an initiative among member countries of the Alliance of Small Island States (AOSIS) to provide the Small Island Developing States (SIDS) with a collective institutional mechanism to assist them transform their national energy sectors into a catalyst for sustainable economic development and help generate financial resources to address adaptation to climate change.



Progress will be measured against the following results indicators:

- Number of People that received a new electricity service through operations supported by this project (number)
- Generation Capacity of Renewable Energy facilities constructed under the project (MW)

The intermediate indicators and other project indicators including the SREP indicators will be developed during project preparation.

D. Concept Description

Note to Task Teams: The following sections are system generated and can only be edited online in the Portal.

SAFEGUARDS

A. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

Component 1 of the project consists of construction of hybrid mini grids in rural areas of the Solomon Islands. Solomon Power has identified 35 potential locations for the mini grids, from which approximately four sites will be chosen. Selection will be based on the number of new connections, land tenure arrangements and site accessibility. Initial designs will be solar photovoltaics (PV) with or without storage with diesel backup and micro-hydros where suitable.

Once the technical and economic feasibility of potential locations is established, communities in the identified sites will be invited by Solomon Power to elect to receive a mini grid under the project. Communities receiving mini grids will provide access to community land (land donation) for the siting of the generation installations and the distribution network. The Bank's consultation and documentation requirements for land donations will need to be satisfied to ensure all parties are actively involved and that no particular individuals experience an unequal burden on behalf of the community. Identified sites will be in villages in rural areas, and site-specific environmental and social management plans will be carried out as part of sub-project design.

The location of the household connections under Component 2 is also not known, beyond that it will be in Honiara, Auki and existing outstations, as well as grids built under Component 1. Studies by the World Bank and Solomon Power have identified possible grid extensions in and around Auki and Honiara.

The location of solar plant(s) under Component 3 will be chosen from a shortlist of four sites in Honiara and Auki. The number of sites used will depend on their relative feasibility and the available funds. The four sites, which are been 0.5 and 2 ha, all consist of cleared grassland with three in and around Honiara and the other close to Auki. Two of the Honiara sites have existing energy infrastructure while the other would require additional works to connect it to the grid. Significant siting issues are not anticipated but this will be further assessed under the ESMF.

Following project appraisal, Solomon Power will conduct feasibility studies in order to select the location for each component's physical investments. This approach has been chosen to allow the project to be scaled up if additional



resources become available, and is expected to expedite project delivery.

B. Borrower’s Institutional Capacity for Safeguard Policies

The Solomon Islands Electricity Authority (SIEA) - currently trading as Solomon Power (SP), the Implementing Agency, has some experience with World Bank Safeguard policies. SP is currently implementing two World Bank projects; (i) the Solomon Islands Sustainable Energy Project, and (ii) the Electricity Access Expansion Project. SP has prepared necessary safeguards documents for the implementation of the investment projects. The project will prepare an ESMF to guide the handling of safeguards, and will supplement all the above with targeted training of both the client, contractors and beneficiaries in environmental and social management aspects.

C. Environmental and Social Safeguards Specialists on the Team

Ross James Butler, Felix Peter Taaffe

D. Policies that might apply

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	<p>This safeguard policy is triggered. The project will involve various physical investments, including construction of solar/battery/diesel hybrid systems, construction of distribution lines on land identified and provided by the communities (based on willing buyer-willing seller, negotiated lease/license or other agreed and documented arrangement), line drop extensions from existing grids, and one or more large new solar plants.</p> <p>The environmental impact of the works under component 1 is expected to be limited, with relatively minor local environmental impacts during construction. Similarly, works under component 2 will have limited impacts that can be managed during the construction phase. Component 3 will require land on the outskirts of Honiara and/or Auki. Although due diligence would be required for the land acquisition which has already been largely completed (and is expected to be completed in the next 3 months), environmental impacts are likely to be minor as the sites are already cleared and the solar panels will not impact on the surrounding land. There are potential impacts associated with the disposal of batteries and solar panels in components 1 and 3. Components 2 has the potential to cause social impacts in the selection of households for grid connection. Currently households cannot be</p>



		<p>connected if they do not have a Temporary Licence to Occupy or Fixed Term Estate (TOL/FTE). There is not sufficient data at present, but it is possible this condition will result in households that cannot afford the TOL/FTE being denied electricity. These aspects will be included in the social analysis (see below).</p> <p>An Environmental and Social Management Framework will be prepared by Solomon Power to provide guidance on the potential environmental and social impacts, including a screening process for the selection of candidate sub-projects in components 1, 2 and 3. The ESMF will describe potential environmental and social impacts of the project and how they relate to the Bank’s safeguards policies, as well as Solomon Islands legislation and regulations. It will include a separate screening process for component 3 in order to guide selection of the solar plant sites. It will also guide the subsequent safeguard instruments for the project, as well as requirements for grievance redress, consultation and disclosure.</p>
Natural Habitats OP/BP 4.04	TBD	It is not expected that the project would cause any impacts on critical natural habitats, as the project sites will be in already developed rural and urban areas. However, the ESMF will make further assessment of the various locations and provide guidance.
Forests OP/BP 4.36	No	The project activities are not expected to create or induce deforestation and their environmental impact is not expected to compromise the integrity and health of forested areas. Some minor clearings of trees, shrubs and undergrowth within urban areas may be necessary under the physical investments.
Pest Management OP 4.09	No	The Project will not involve use of pesticides or herbicides.
Physical Cultural Resources OP/BP 4.11	Yes	It is possible that physical cultural resources may be encountered in excavations during the construction phase of components 1 and 3. For most works this is considered unlikely as there is relatively minor excavation; however, larger earthmoving may be required under component 3. A chance find protocol will be included in the ESMF to address chance find of physical cultural resources.
Indigenous Peoples OP/BP 4.10	Yes	This safeguard policy will be triggered by the project, as Components 1 and 2 provides for activities in rural areas, which on a national level, are inhabited primarily by indigenous peoples. On this basis and



given that indigenous peoples are also the principal beneficiaries of Component 1, a separate Indigenous Peoples Development Plan is not proposed to be prepared. Instead, elements of an Indigenous Peoples Plan, such as informed consultations, stakeholder participation and social assessment, will be incorporated into project design consistent with guidance provided in Environmental and Social Safeguard Instruments for the Pacific Island Countries (ESSIP). The ESMF will include a social assessment, including assessment of potential issues and impacts relating to Indigenous Peoples communities, and guidance for consultation, with description of its modality, methodology and extent. As project areas are unlikely to be known at the time of ESMF preparation, the ESMF is to provide guidance on how best to prepare additional social assessments and to undertake consultation for future sub projects.

For components 1 and 2, land acquisition for the small areas of land required for the physical works is anticipated to be based on willing buyer-willing seller, negotiated lease/license or other agreed and documented arrangement and not to cause physical or economic displacement as a result of the taking of land. Extensions of the national grid around Honiara and Auki (as part of Component 2) will be implemented in peri-urban and rural areas that fall within Solomon Power's concession and it is not expected that land acquisition will be required to serve these ends. The extension of mini grids under Component 2 will require small amounts of land on which to establish drop line connections (the physical connection between the wires in the street and the house). Although the land required for these connections will widely be held under customary title, it is foreseen that the land will be acquired through voluntary arrangements with communities. If Voluntary Land Donation is envisaged, it will follow the VLD protocol developed for the Pacific Islands as documented in the ESSIP and will be included in the Resettlement Policy Framework (RPF), which is to be prepared as part of project preparation. The RPF will either be a stand alone document or appended to the ESMF.

For Component 3, the potential sites are either

Involuntary Resettlement OP/BP 4.12

Yes



government land (Three Honiara sites), or will be based on willing buyer-willing seller, negotiated lease/license or other agreed and documented arrangement . One Honiara site has a squatter and Solomon Power is currently engaging with this occupant to arrive at an agreed solution. The RPF will include due diligence being carried out for the four sites, and that any land acquisition (including the current eviction process) is compliant with the Bank’s safeguard policies.

Although it is not anticipated that the project will involve involuntary acquisition of land, OP/BP 4.12 will be triggered in order to provide a framework for carrying out land access and the previously described voluntary processes. The RPF, which will be included in the ESMF, will describe the issues and measures relating to the different types of land acquisition.

Safety of Dams OP/BP 4.37	No	No dams will be affected by the Project.
Projects on International Waterways OP/BP 7.50	No	No project activities will take place on international waterways.
Projects in Disputed Areas OP/BP 7.60	No	There are no known disputed areas in the project areas of influence.

E. Safeguard Preparation Plan

Tentative target date for preparing the Appraisal Stage PID/ISDS

Aug 11, 2017

Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the Appraisal Stage PID/ISDS

Tentative target date for preparing the Appraisal Stage PID/ISDS Aug 11, 2017

ESMF, including a Resettlement Policy Framework (undertaken by Solomon Power), in March/April, plan to finish by end of May 2017. The ESMF is to include Environmental and Social Codes of Practice for the different sub-project types, to then be included in bidding documents and contracts during project implementation.



CONTACT POINT

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APPROVAL

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Approved By

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Note to Task Teams: End of system generated content, document is editable from here.

