INTEGRATED SAFEGUARDS DATA SHEET
CONCEPT STAGE

Report No.:ISDSC17331

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I. BASIC INFORMATION

A. Basic Project Data

Country:	Nepal	**Project ID:**	P149239
Project Name:	Business Models for Private Sector-Led Mini-Grid Energy Access Project (P149239)		
Task Team Leader(s):	Tomoyuki Yamashita		
Estimated Appraisal Date:	16-Oct-2017	**Estimated Board Date:**	30-Jan-2018
Managing Unit:	GEE06	**Lending Instrument:**	Investment Project Financing

Financing (In USD Million)			
Total Project Cost:	8.00	Total Bank Financing:	0.00
Financing Gap:	0.00		

Financing Source	**Amount**
Borrower	0.00
Strategic Climate Fund Credit	2.00
Strategic Climate Fund Grant	6.00
Financing Gap	0.00
Total	8.00

Environmental Category:	F - Financial Intermediary Assessment
Is this a Repeater project?	No

B. Project Objectives

16. The Project Development Objective (PDO) is to increase electricity delivery from renewable energy mini-grids by mobilizing private energy service company (ESCO).

17. The market for private sector-led renewable-energy-based mini-grid will be developed through technical assistance (TA) and financial support. Funding for the mini-grid subprojects will be sourced from the SREP, private developers, the NRREP and the Central Renewable Energy Fund (CREF), and the Government.

C. Project Description

The key results expected and associated indicators are as follows:

PDO indicators:
(a) Generation capacity of energy constructed or rehabilitated (MW)
(b) People provided with new or improved electricity service
(c) Annual electricity output from renewable energy (GWh)

Intermediate indicators:
(a) Number of private sector-developed mini-grid subprojects
(b) Number of annual consultations with citizens and surveys with publicly disclosed reports summarizing findings
(c) Number of beneficiaries disaggregated by type of customers, that is, anchor, business, and community (A-B-C) and women-headed business and households

The proposed project consists of three components: (a) Support to Mini-grid Subprojects, (b) Preparation for Mini-grid Interconnections, and (c) Project Management. The total cost for the proposed project is US$ 6.0 million.

Component 1: Support to Mini-grid Subprojects (US$4.7 million). This component will support the establishment of about seven renewable energy mini-grids based on the A-B-C business model, which will provide modern energy services to A-B-C customers in rural and urban areas. Two subcomponents will provide support to both investment financing and TA necessary to open up the energy service company (ESCO) market.

o Subcomponent 1A: Financial Support for the A-B-C Business Model Mini-grid (US$4.2 million). This subcomponent will provide financing support to ESCOs to facilitate financial closure and enhance financial viability of the subprojects. The SREP grant will be provided to ESCOs in the form of loans with a marginally commercial interest rate for subprojects whose proposals (based on Detail Design (DD) results) are approved by the Independent Evaluation Panel (IEP) and the Technical Review Committee (TRC). The SREP loan will be provided to ESCOs through a few of the CREF partner banks or a new financing channel established by selecting partner banks specifically for this project. Disbursement of the loan will be in tranches tied to explicit milestones in project preparation and implementation. For example, ESCOs will be eligible to receive 50 percent of the total loan as the first tranche when the subproject gets approval for construction (based on the DD results). Support for a subproject shall be revoked when construction has not started within six months from the first lending. According to construction progress until successful completion and testing and commissioning of a subproject, the rest of 50 percent of the total loan will be provided every trimester.

With the proposed US$4.2 million in loan, about seven mini-grids of capacity from 100 kW to 1,000 kW can be supported. To attract subproject developers, the SREP loan conditions should compare favorably to the benefits that the developer could get by opting for the full amount of the government subsidy or by accessing CREF loans from other donors instead. The SREP loan terms, such as with grace period and longer repayment period, will be set to attract ESCOs and to help them in making their business sustainable.

For the rural model, after the AEPC shares market intelligence regarding demographic patterns, electrification rates, locations of anchor and business customers, and other salient facts, potential ESCOs will be invited to submit expressions of interest to establish mini-grids in about five locations. On a competitive basis, promising candidates will be selected by the IEP and the TRC to carry out DD and prepare business plans for funding consideration (it is possible that some subprojects among about five candidates will be dropped at this stage). These DDs will be partially funded from the TA budget for the project. Upon completion and submission of DDs and final business plans, another round of evaluation by the IEP and the TRC will determine the subprojects eligible for the SREP loan.

For the urban model, the AEPC will accept subproject proposals (or initial business plan based on feasibility studies) from ESCOs. The IEP and the TRC will evaluate the submitted subproject proposals and select about five eligible subprojects for the DD execution and detailed business plans preparation, partially funded from the project's TA budget. Completed DD results and prepared final business plans for proposed subprojects for the urban model will be evaluated by the IEP and the TRC again to decide eligibility for the SREP loan (it is possible that some proposed subprojects will be dropped at this stage).

o Subcomponent 1B: TA to the A-B-C Business Model (US$0.5 million). The project will support the identification, financing, implementation, and performance assessment of subprojects utilizing the A-B-C business model or other innovative business models in both rural and urban areas. ESCOs will receive training and advisory support. ESCOs that are interested in entering the access to energy business will be assisted with market research and information on suitable technologies that are currently being used successfully in developing country environments, so that they can decide which types of technology partners to approach on their own for a business engagement.

The project will also provide technical support to ESCOs to help them address the challenges in accessing funding sources. Technical support will help build the confidence of anchor customers, which may be skeptical of the ESCO's ability to provide continuous and reliable power as stipulated in the Power Purchase Agreement (PPA), and partner banks, which may be unsure about the ESCO's ability to pay back its debt on time.

This subcomponent will support TA activities, such as:

o Partial cost support for DD executed by ESCOs (except for two pilot subprojects for which DDs may be prepared using either AEPC or World Bank budget during the project preparation period)

o Creation of an enabling environment, such as the preparation of technical specifications for mini-grids and prepaid metering system.

o Promotional activities and capacity building among stakeholders. This includes promotional activities/workshops to connect developers, financiers, anchor customers, end users, and so on. This component will also support capacity development activities aimed at filling specific knowledge gaps among relevant stakeholders (for example, training on business plan development for ESCOs and assessment of business proposals for commercial banks). Activities for capacity building will be aligned with the World Bank-supported Nepal Renewable Energy Training Program, whose target audience, technologies, and content are especially relevant to the proposed project.

o Rural community consultations (inviting both men and women from B and C customers), focus group discussions, periodic socioeconomic survey (for example, a baseline survey and yearly surveys after the subprojects' commissioning), and analysis to monitor the impacts of electrification, including on citizen engagement and gender, by collecting data from the same interviewees. These citizen engagement activities will support the creation of an enabling environment for subprojects and inform awareness raising activities.

Component 2: Preparation for Mini-grid Interconnections (US$0.8 million). This component will allow the AEPC, NEA, mini-grid owners, and potential private sector operators to test different technical arrangements and business models for future interconnections of existing and new mini-grids to the main grid in rural areas. These mini-grids could be powered by hydropower, solar, or hybrid generating systems. This component will have two subcomponents:

o Subcomponent 2A: Financial Support for Different Interconnection Options (US$0.5 million). Financial support to cover the grid connection costs of four existing mini-grids in rural areas will be provided by the project. The mini-grid subprojects will be chosen to test alternative physical and business arrangements. This subcomponent will provide funding support for the physical equipment and software needed for interconnection of pilot subprojects for both MHPs and solar mini-grids, whether community or privately owned.

o Subcomponent 2B: TA to Support Different Interconnection Options (US$0.3 million). Under this subcomponent, technical and financial studies will be funded to prepare technical standards as well as to identify appropriate financing instruments to support future grid connection of mini-grids in rural areas. In addition, consultations with stakeholders (commercial banks, local communities, mini-grid owners, potential private sector operators, and the GoN) will be held to create an enabling environment. The engineering support from the TA will focus on the technical requirements for achieving an operationally reliable physical interconnection that will allow the mini-grid to operate either in parallel with the main grid or as a stand-alone small electrical system during times of blackouts on the main grid. The business advisory from the TA will explore options to bring in private operators who can assist existing community-owned MHPs in achieving efficient, reliable, and coordinated operations once the interconnection takes place.

Component 3: Project Management (US$0.5 million). This component will support the AEPC to institute and sustainably maintain the Project Implementation Unit (PIU). In particular, it will help in hiring key AEPC contract staff/consultants for the PIU and establish an IEP. The IEP will consist of international and national technical and financial experts to evaluate subproject proposals submitted by ESCOs. Only subprojects approved by the IEP and AEPC (TRC) are eligible to receive the SREP loan. This component will also support the preparation of the Project Operational Manual (POM), including a monitoring and evaluation framework, and other key documents such as a standardized PPA to facilitate long-term engagement between ESCOs and anchor customers, standardized expressions of interest from potential ESCOs to participate in the subprojects, a standardized DD format to demonstrate viability of proposed subprojects, standard bidding documents for potential ESCOs to select contractors, and so on.

D. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

Both Component 1 and Component 2 of the project are likely to involve physical components and infrastructure that may result in adverse environmental and social risks and impacts, as described below.

With regard to Component 1, although subproject sites are not known and will be decided based on the results of DD of subproject proposals, some of the mini-grids for the rural model are likely to be located in relatively remote places in the mountain/hill. The mountain/hill areas of Nepal, such as the Annapurna Conservation Area, Langtang National Park, Manaslu, Upper Mustang, and Everest National Park, will be included in the project locations. The mountain/hills of Nepal are rich in biodiversity and geologically fragile in terms of landslides and soil erosions.

The environmental and social impacts of mini-grid construction and operation subprojects by ESCOs will vary depending on the location and scope of each subproject; it likely that most of them will be moderate given the small size. Environmental and social impacts of most of the subprojects are likely to be moderate. The project supports mini-grid subprojects using renewable-energy-based solutions such as mini-hydropower, solar PV, wind, bioenergy, and hybrid systems. Their precise size and locations are not known at this stage, although pilot subprojects' DD may be carried out during project preparation stage, as deemed feasible. For example, for a 500 kW mini hydropower plant, which diverts partial river flow to the intake by a weir at a height of 2 meters (m), only a part of the river flow will be used for the power generation, the same quantity of water diverted will be returned to the same river. Similarly, for a 500 kWp mini solar farm,

a small land dimension of 50 m in width and 150 m in length is needed for solar panels installation. A distribution/transmission line of either 11 kV at about 10 m height or 33 kV at about 15 m height will be used to evacuate electricity to a mini-grid service area.

Some subproject may be located in the protected area/sensitive natural habitats. These subprojects could be considered to require more attention with regard to risk assessment and management measures. Mini-grids represent more sustainable and cleaner power source based on renewable energy in places where other sources of energy are not easily available. For example, these mini-grids may be used by eco-lodges in national parks built and operated to allow Nepal to benefit from its rich natural capital in a sustainable manner, while also preserving it for future generations. Nevertheless, construction and operation of subprojects in such areas is associated with potential impacts on areas with biodiversity value (e.g. national legally protected areas, internationally recognized areas, and other habitats and ecosystems of significant importance as defined in World Bank Safeguard Policies OP4.04 and OP4.36, with the applicability of the latter to be determined during project preparation), many of which are located across Nepal. The project will also draw on available good international practice with regard to biodiversity conservation to inform design of assessment and mitigation measures, as appropriate. A detailed approach to risk management in this area will be incorporated in the ESMF.

Component 2 of the project, managed by AEPC, involves provision of financial support for physical equipment needed for pilot projects involving mini-grid interconnections. This component will most probably not result in any adverse environmental and social impacts necessitating environmental and social screening and implementation of mitigation measures, since all works (minor equipment installation and line connections) will be executed within existing facility area, such as in power house. Mini-grids for which con nection options would be tested through pilot project are likely to be located in rural areas, may be community or privately owned, and powered by MHPs and solar sources. Risks and impacts of this component will be analyzed further during project preparation to understand whether any impacts are possible in addition to labor/occupational health and safety (OHS) impacts.

Additionally, environmental and social risks associated with subprojects under Components 1 and 2 may involve labor and working conditions issues during construction, potential impacts on physical cultural resources, and Indigenous Peoples. Other impacts of associated access roads (although not anticipated at this time). These aspects will be taken into account during screening and Environmental and Social Impact Assessments (ESIAs) preparation, as appropriate and commensurate with nature and magnitude of risks and impacts.

E. Borrowers Institutional Capacity for Safeguard Policies

AEPC has been implementing World Bank projects for over ten years and is familiar with World Bank's safeguard policies. AEPC implemented demand-driven micro hydropower based mini-grid projects and has been implementing SREP-Supported Extended Biogas Project for which framework approach is being used. Hence, AEPC is familiar with the framework approach. Additionally, relevant environmental and social requirements of Nepal will be further analyzed during project preparation and incorporated into the ESMF. Relevant World Bank Group Environmental, Health, and Safety (EHS) Guidelines will also be applied to subprojects.

Financial Intermediaries' (CREF and local partner bank) capacity varies. Therefore, the capacities of the participating banks/ FIs, and capacity of the AEPC, CREF, ESCOs and other stakeholders for safeguards-related issues will be assessed during the ESMF preparation, and necessary measures for strengthening the capacities of all involved stakeholders, if necessary, will be developed.

F. Environmental and Social Safeguards Specialists on the Team

Drona Raj Ghimire(GEN06)

Ekaterina Grigoryeva(GEN03)

Jun Zeng(GSU06)

II. SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	There is possibility of impacts on physical and biological environment due to construction and operation of the subprojects under both Components 1 and 2.
Natural Habitats OP/BP 4.04	Yes	Some subprojects are likely to be located in the protected areas and/or sensitive critical or natural habitats.
Forests OP/BP 4.36	TBD	This policy remains TBD as potential impacts on forest is not-understood at this stage.
Pest Management OP 4.09	No	Project does not envisage use of pesticide.
Physical Cultural Resources OP/BP 4.11	TBD	This policy remains TBD as potential impacts on PCR not-known at this stage.
Indigenous Peoples OP/BP 4.10	Yes	There are IPs communities collectively attached to proposed subproject areas. At the time the project preparation, exact location of the specific project sites, except for two pilot subprojects for mini-grid, cannot be determined. Therefore, an Indigenous Peoples Planning Framework (IPPF) will be prepared to address the IP issues.
Involuntary Resettlement OP/BP 4.12	TBD	Proposed project activities may cause land taking, but it is uncertain at this moment if land acquisition will be done on willing-seller willing-buyer basis or on involuntary basis. Thus, further clarification will be executed prior to appraisal. If the policy is triggered, a Resettlement Policy Framework (RPF) would be prepared and disclosed before appraisal).
Safety of Dams OP/BP 4.37	No	Run of river mini hydropower scheme requires only small water diversion structure (or weir, less than 5 meter height) and side-intake.
Projects on International Waterways OP/BP 7.50	TBD	Mini-hydropower scheme divert small quantity of water from streams, and water will be returned to the stream after power generation. This will not affect quantity and quality of water body. In addition, mini-hydro will be constructed not in international rivers, but in their small brunch rivers. However, this policy remains TBD.
Projects in Disputed Areas OP/BP 7.60	No	Subprojects will not be located in disputed areas.

III. SAFEGUARD PREPARATION PLAN

A. Tentative target date for preparing the PAD Stage ISDS:

05-Oct-2017

B. 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 PAD-stage ISDS.

The overall project is classified as FI (Financing Intermediary) since the Bank's funding under Component 1 (main project component) will be provided through CREF (a wholesale FI/ apex) to retail FIs - participating financial institutions (or local partner banks) for on-lending to final borrowers (ESCOs).

Based on the overall design of Component 1 of this project, the core responsibility for ensuring that ESCOs carry out adequate ESIAs commensurate with the nature and level of risks and impacts, will rest with AEPC. Outcomes of the ESIA − including resulting Environmental and Social Management Plans (ESMPs) for mitigation of identified risks and impacts − will be integrated into the process for sub-project selection conducted by IEP and TRC. Subsequently, through its legal and contractual relationships with partner banks, AEPC (with assistance from CREF, as feasible) will ensure that appropriate legal covenants concerning environmental and social compliance are included in lending agreements between partner banks and ESCOs for financing of identified subprojects. This will include appropriate remedial measures and a defined role for AEPC, CREF and partner banks to monitor ESCO's compliance with them.

Accordingly, to ensure the above risks and mitigation requirements are adequately understood and implemented by all involved parties (AEPC, CREF, local banks, and ESCOs), Environmental and Social Framework (ESMF) will be prepared by the main implementing agency, AEPC, before project appraisal and in consultation with project participants and other stakeholders. The ESMF will include the screening process for categorization of subprojects (A, B, or C) and detail the applicable requirements in line with the World Bank safeguards polices and relevant good international practices, to ensure that adequate ESIAs, ESMPs, and other necessary instruments are prepared and implemented by ESCOs for all subprojects under Component 1 (and by AEPC for Component 2, only if needed). The ESMF will clarify the roles and responsibilities of AEPC, IEP, TRC, CREF, Participating Financial Intermediaries (PFIs), and ESCOs regarding environmental and social (E&S) due diligence, management of risks and impacts, and monitoring/ supervision. The ESMF will also incorporate processes for compliance monitoring, as well as a capacity building plan for all key stakeholders, as needed and commensurate with their respective roles. Additionally, IPPF and RPF (if necessary) would be prepared and disclosed before appraisal as the subprojects locations would not be known at that time. However, in case where the project preparation phase will identify two pilot projects for development of a Detailed Design (DD), the site-specific instruments (ESIA, ESMP, and other instruments, as relevant) would be prepared in addition to the framework.

During project preparation, further efforts will be made to identify risks and impacts, as well as appropriate mitigation measures and plans associated with potential subprojects based on ESIA results for the pilot subprojects (as feasible). The ESIAs and corresponding mitigation instruments (ESMPs etc.) will be prepared prior to making a financing decision by AEPC and CREF/ PFIs on each subproject, in order to better integrate E&S considerations into investment decision-making cycle, as per the good practice in projects involving private and financial sector. Key ESMP actions would be incorporated into loan agreements between PFIs and ESCOs.

The project will follow World Bank's consultation and disclosure requirements. The ESMF will be disclosed locally/in-country and on World Bank's website. During project preparation, the project team will assess the system and capacity of all key project participants (AEPC, CREF, local banks, and ESCOs) for adequately fulfilling their respective responsibilities for environmental and social assessment and propose measures to strengthen capacity, as necessary.

Public Disclosure Copy

V. Approval

Task Team Leader(s):	Name: Tomoyuki Yamashita	
Approved By:		
Safeguards Advisor:	Name: Maged Mahmoud Hamed (SA)	Date: 28-Feb-2017
Practice Manager/Manager:	Name: Demetrios Papathanasiou (PMGR)	Date: 09-Mar-2017

[1] Reminder: The Bank's Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.