

CLIMATE INVESTMENT FUNDS

July 18, 2017

**[APPROVE BY MAIL]: PSSA: NEPAL: ABC BUSINESS MODELS FOR OFF-GRID ENERGY
ACCESS (SREP) (WORLD BANK)- XSREN504A**

RESPONSE FROM WORLD BANK TO COMMENTS FROM UNITED KINGDOM

A1) The objective of the project is to increase electricity delivery from renewable energy mini-grids in selected areas by mobilizing private energy service companies. Demonstrating financial viability of mini-grids (financed through combinations of subsidy from public sector, marginally commercial debt, and equity) and building confidence of commercial lenders in project-financing mini-grids is the essential change required for achieving the project's objective. Currently, the mini-grid sector is subsidy-dominated and mini-grids are largely under community-ownership. This small operation envisages demonstrating viability of privately owned and operated mini-grids. The project's approach is well aligned with the strategy of the government, which has recently removed policy barriers for private sector to own and operate mini-grids with limited public-sector support. Public sector support is contingent on private sector demonstrating the ability to arrange the gap financing through equity or debt investment. By de-risking debt investment from commercial lenders, this project supports mobilization of (marginally) commercial capital on project-finance basis for mini-grid development. To improve the revenue-stream of mini-grids, the project will improve the load factor (with Anchor, Business, Community model) of these renewable energy mini-grids. Similarly, interconnection with grid of existing mini-grids will improve their operational and commercial performance.

The SREP grant will be a sustainable revolving fund in the AEPC's Central Renewable Energy Fund (CREF) to mobilize loans to private energy service companies (ESCOs), so new mini-grid subprojects could be financed once the loans are paid back by the early borrowers. Given that SREP resources will be recycled after repayment, up to 20 years, the revolving fund will be able to support about 20 mini-grids over the same period. If the model is proven successful, the financing mechanism will attract more commercial capital from the Bank or other development partners to further scale up renewable-based mini-grids in Nepal.

The grounds for confidence are: (i) government's commitment to move from subsidy to credit driven sector; (ii) successful cases in Nepal, India, and Bangladesh of financially viable privately-owned mini-grids; (iii) availability of technology solutions such as affordable solar panels, power electronics, and pre-paid meters; (iv) advent of advanced mini-grids and their ability to deliver adequate, reliable, and quality power – as increasingly observed in developed countries; (v) economic advantage of mini-grids compared to grid extension in remote and rural areas of Nepal; and (vi) World Bank's experience and expertise in renewable energy and energy access projects. The team has received support, funding, and expertise from Energy Sector Management Assistance Program for technical and economic due diligence of mini-grid technologies and subprojects, especially for pilot subprojects. Various Bank experts have been assigned to the project, such as rural electrification, financial market, financial solution, safeguards, procurement, among others to support the client. During implementation, about 15 percent of the project budget will support technical assistance and project management. Therefore, the Bank team has confidence that the project will establish new private sector-led mini-grid sector.

If the designed transformation does not work well, the Bank team will analyze the reasons and adjust the project. For example, terms of the loans to private sector can be revised based on demand and feedback and financing plans at subproject level can be adjusted. In the design of the project, there are several avenues to make incremental adjustments and test the viability of the subprojects based on risk-perception of the developers and lenders and requirements of the beneficiaries. The Bank team considers this project as potentially low risk and high return.

A2) In the subproject areas, one of the core customer groups are businesses. Availability of adequate, affordable, and reliable electricity is expected to increase productivity of commercial and (small) industrial customers and contribute to economic development and employment opportunities. However, the project is not directly financing end-use enterprises; and thus, jobs created are not solely attributable to the project. The team would prefer leaving 'jobs created' out of the results framework for monitoring.

We are grateful to the reviewer for highlighting this important issue. As part of project evaluation, the impact of subprojects on economic development and job creation should be assessed. Similar impact evaluations have been carried out in the past (for example: (i) Nepal, Govind; V. B Amatya. 2006. Understanding Rural Energy Programme and Poverty Reduction Linkage : An Empirical Study of Nepal. 1st ed. Lalitpur: Energy Sector Assistance Programme, Alternative Energy Promotion Centre; (ii) Banerjee, Sudeshna Ghosh; Singh, Avjeet; Samad, Hussain. 2011. Power and people: the benefits of renewable energy in Nepal. A World Bank study. Washington, DC: World Bank). The project team will learn from previous studies and evaluate impacts of the project's slightly larger mini-grids on end-use enterprises, economic development, and job creation.