

PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: PIDC880

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|---|---|
| Project Name | Waste to Energy Market Development Project (P131592) |
| Region | SOUTH ASIA |
| Country | Nepal |
| Sector(s) | Other Renewable Energy (100%) |
| Theme(s) | Other economic management (70%), Infrastructure services for private sector development (30%) |
| Lending Instrument | Learning and Innovation Loan |
| Project ID | P131592 |
| Borrower(s) | Government of Nepal |
| Implementing Agency | Alternative Energy Promotion Center |
| Environmental Category | B-Partial Assessment |
| Date PID Prepared/ Updated | 08-May-2013 |
| Date PID Approved/ Disclosed | 08-May-2013 |
| Estimated Date of Appraisal Completion | 16-Dec-2013 |
| Estimated Date of Board Approval | 18-Mar-2014 |
| Concept Review Decision | |

I. Introduction and Context Country Context

Nepal has obtained a Scaling Up Renewable Energy (SREP) grant for \$8 million which is to be channeled through the World Bank, and involves market development in Waste to Energy (W2E); this is a renewable energy segment for which there is no national program in place yet. The SREP grant is expected to support the introduction of waste to energy as a business line in transparently selected Nepali private sector companies, through an online call for proposals. Selected firms will receive cost-sharing support for technical assistance and due diligence, as well as cost sharing of pre-feasibility and feasibility studies to determine the likelihood of project viability, and development of a business plan with realistic costing of the project.

Firms whose proposals survive the technical scrutiny and business plan preparation under the feasibility study stage, will then receive a commitment letter from AEPC for up to 20% of funding for their project (subject to a ceiling per firm). The firm will be responsible for arranging funding of

at least 80% of project cost from various other sources including debt and equity, that will come partly from private investors and partly from programs funded by other donor sources.

Sectoral and Institutional Context

Nepal is currently facing an energy crisis of unprecedented proportions. A major focus of IDA resources in the next CAS period is expected to be on hydropower development, cross-border trade, grid-strengthening and capacity building. In recent projects IDA has contributed to off-grid access, but given the large number of bilateral development partners in this space, the World Bank's interventions in this area are likely to be limited and with strategic value. An example of such strategic value is the SREP Waste to Energy (W2E) intervention – it is opening up a space on the renewable energy spectrum that is currently not present in Nepal. It will catalyze market development drawing on global experience, create partnership with IFC to bring in the private sector, support capacity development of AEPC and the private sector in a new market segment, and will assist GoN with further leveraging of external resources.

The Alternative Energy Promotion Center (AEPC), under the Ministry of Environment, Science and Technology, is the designated implementing agency for renewable off-grid energy solutions. Through this program, AEPC will transform the scope of activities undertaken in Nepal under the waste to energy heading, and move from public sector led household sized biogas digesters, to private investor-led commercially viable, transformative waste to energy projects, including of course biogas projects, but on a commercial scale. The National Program for household scale biogas projects will remain in place but the SREP Waste to Energy program would like to support new frontiers of the biogas program, beyond household size. SREP resources for waste to energy projects will be allocated on a market-driven basis.

Relationship to CAS

The World Bank's relationship with Nepal is still under the Interim Strategy Note for FY 12-13, dated August 4, 2011. The ISN's three pillars include: (i) enhancing connectivity and productivity for growth; (ii) reducing vulnerabilities and improving resilience; and (iii) promoting access to better quality services. The proposed SREP Waste to Energy Market Development project meets all of these criteria, but especially promoting access to better services.

Safeguards Management

Since project locations will be determined through a "bottom up" approach, and sites are not known in advance, AEPC will be supported to prepare an Environmental and Social Management Framework (ESMF) document containing the principles and policies which shall apply to all projects where investment is ultimately supported by AEPC. Any investment will be assessed for consistency with the ESMF.

II. Proposed Development Objective(s)

Proposed Development Objective(s) (From PCN)

The objective of the proposed Waste to Energy market development project is to attract private investment for the delivery of innovative, commercially viable waste to energy projects using biomass and biogas through Public Private Partnerships.

Key Results (From PCN)

Key results expected and associated indicators are as follows:

- (i) AEPC policies prepared and issued on various W2E technologies
- (ii) tonnage of waste collected for commercial energy generation (municipal, commercial, agro-forestry and biomass residue)
- (iii) Capacity for W2E through various technologies established

III. Preliminary Description

Concept Description

A. Concept

The concept of this project is to identify and support existing Nepali private sector entrepreneurs who are willing to invest resources and efforts in entering any type of eligible W2E business, and to support them with identification and delivery of projects that have been agreed as deliverables to the SREP Sub-Committee.

B. Description

The two project components are as follows: Technical Assistance (TA) and Financing of Investments

Component 1: Technical Assistance:

- (a) Identification of Investors--Call for Expressions of Interest from existing companies (in any sector) to identify and invest in W2E projects. Projects should focus on harnessing waste (ranging from municipal solid waste to organic kitchen waste, to animal waste, to agricultural waste and crop residue, to human waste, all proposed to be converted through suitable technology into a source of renewable energy generation which can be thermal or electrical power). Supplies of waste will be sourced from commercial businesses (poultry farms, dairy farms, pig farms, breweries, agri-waste, biomass, etc), from municipal landfills, and from institutional sources (e.g. hospitals, army barracks, boarding schools, university dormitories, etc).
- (b) Support for Market Research of demand and supply and identification of viable projects proposed by private investors on a competitive basis. (Social and Environmental Safeguards will be a key part of project preparation and also supervision during implementation of various AEPC-assisted projects).
- (c) Capacity Building Program for Nepali companies whose proposals are competitively selected--Nepali companies will be supported on a cost-sharing TA basis (i.e. AEPC will not pay the full cost of the market research study that will lead to the private firm's business plan, but will cost-share the technical due diligence with the firm).
- (d) Third Party Due Diligence by AEPC--full scale technical due diligence performed by impartial experts on business plans presented to the Investment Sub-Committee (which will have representation from AEPC, private sector and civil society representatives). This will also include development of a monitoring and reporting system at AEPC, which will be required to report on project progress to the SREP sub-committee according to agreed indicators.
- (e) Support for AEPC to develop policy as required by emerging investors, and create a

conducive environment for market-driven W2E technologies, through TA and leveraging SREP funds. AEPC will be supported to develop policy as required.

Component 2: Financing of Investments

This will involve a limited contribution to achieve financial closure for competitively selected W2E investments led by the private sector, for which the private sector undertakes design, construction, financing (except for viability gap financing to be contributed by AEPC), operation and maintenance.

Firms will be specifically encouraged to approach IFC Kathmandu for equity or debt support as well, and AEPC's own capacity building efforts in the W2E field will benefit from observing IFC Advisory services and IFC due diligence that must be undertaken in this connection.

IV. Safeguard Policies that might apply

| Safeguard Policies Triggered by the Project | Yes | No | TBD |
|--|-----|----|-----|
| Environmental Assessment OP/BP 4.01 | x | | |
| Natural Habitats OP/BP 4.04 | x | | |
| Forests OP/BP 4.36 | x | | |
| Pest Management OP 4.09 | | x | |
| Physical Cultural Resources OP/BP 4.11 | x | | |
| Indigenous Peoples OP/BP 4.10 | x | | |
| Involuntary Resettlement OP/BP 4.12 | | x | |
| Safety of Dams OP/BP 4.37 | | x | |
| Projects on International Waterways OP/BP 7.50 | | x | |
| Projects in Disputed Areas OP/BP 7.60 | | x | |

V. Financing (in USD Million)

| | | | |
|------------------------------|------|-----------------------|------|
| Total Project Cost: | 8.00 | Total Bank Financing: | 0.00 |
| Total Cofinancing: | | Financing Gap: | 0.00 |
| Financing Source | | Amount | |
| Borrower | | 0.00 | |
| Strategic Climate Fund Grant | | 8.00 | |
| Total | | 8.00 | |

VI. Contact point

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