

**INTEGRATED SAFEGUARDS DATA SHEET  
CONCEPT STAGE**

Report No.: AC1966

**Date ISDS Prepared/Updated: 12/05/2005**

**I. BASIC INFORMATION**

**A. Basic Project Data**

Country: Mexico	Project ID: P088996
Project Name: Mexico (CRL) Rural Electrification Project	
Task Team Leader: Gabriela Elizondo Azuela	
GEF Focal Area: C-Climate change	Global Supplemental ID: P095038
Estimated Appraisal Date: April 24, 2006	Estimated Board Date: June 20, 2006
Managing Unit: LCSFE	Lending Instrument: Specific Investment Loan
Sector: Renewable energy (60%);Power (40%)	
Theme: Rural services and infrastructure (P);Small and medium enterprise support (S)	
IBRD Amount (US\$m.):	15.00
IDA Amount (US\$m.):	0.00
GEF Amount (US\$m.):	15.00
PCF Amount (US\$m.):	0.00
Other financing amounts by source:	
BORROWER/RECIPIENT	70.00
<u>Financing Gap</u>	<u>15.00</u>
	85.00

**B. Project Objectives [from section 2 of PCN]**

The proposed GEF project will support the capacity building, market development and market sustainability components necessary for the implementation of sustainable rural electrification models based on renewable energy for the development of non-agricultural productive uses and social activities. The key objectives of The Project are the following:

-Policy, Strategy and Institutional Capacity Building: The objective is to assist the GoM in the review and implementation of appropriate legal-regulatory frameworks and the development of sound policies and strategies necessary to ensure the development and sustainability of a market for the provision of integrated energy solutions (i.e. those that include renewable energy and are developed to provide communities with electricity for non-agricultural productive activities and social services).

-Market Development and Sustainability: The objective is to assist the GoM in the identification of projects and design of appropriate mechanisms necessary to demonstrate the implementation of least-cost integrated energy solutions which are based on sustainable service provision models and that can be effectively replicated in Mexico and in other nations.

### **C. Project Description [from section 3 of PCN]**

The Project is a five-year program financed by the Global Environmental Facility (GEF), the World Bank, the Government of Mexico and the private sector. The Project aims at increasing access to electricity services and promoting social and economic development in the rural areas of the poorest state of Mexico. The geographical scope of The Project includes: Oaxaca, Chiapas, Guerrero, and Veracruz in Mexico, there have been identified 4,184 localities that are not going to be electrified during the next 5 years, out of this universe some localities will be selected based on a demand driven approach; proposed sub-projects will be considered eligible if they meet a list of conditions. The initiative will start with sub-projects in the States of Oaxaca, Veracruz and Guerrero, where six-year government administrative cycles have recently initiated (sexenios). Chiapas will join the program in January 2007 as the new sexenio in this state starts on December 2006. The Project targets communities of 50 to 2,500 habitants located more than 10 kilometer away from the grid and that will not be reached by the grid in at least 5 years, thus altogether The Project will electrify 50,000 households in the period July 2005-December 2010. The Project is focused on off-grid electrification options including mini-grids and stand alone systems; and is complementary to other governmental initiatives which are increasing access to electrification with grid extensions.

Specifically, The Project will co-finance the following five-components: i) Policy, Regulation and Strategy, ii) Rural Electrification Sub-projects, iii) Technical Assistance for Rural Electrification, iv) Technical Assistance to Increase Productive Uses of Electricity, and v) Project Management.

The typology of The Projects to be implemented is as follows:

#### **I. Wind Generators.**

-Sensibility: Low\*.

-Range Capacity: 0.5KW - 10KW.

-Potential Environmental Problems: Bird population endangered (Minimal), land clearing (Minimal).

-Potential Social Problem: Property issues (i.e. land purchase), conflict within the community (i.e. related to decision making).

#### **II. Wind-Diesel Hybrids.**

-Sensibility: Low\*.

-Range Capacity: 1KW-50KW.

-Potential Environmental Problems: Bird population endangered (Minimal), land clearing (Minimal), Oil spills (Minimal).

-Potential Social Problem: Property issues (i.e. land purchase), conflict within the community (i.e. related to decision making).

#### **III. Biomass**

-Sensibility: Low\*.

-Range Capacity: 1KW-50KW.

-Potential Environmental Problems: Bottom ash (Minimal), dust generation (Minimal), emission to air, (Minimal), water use (Minimal), emissions to water (Minimal).

-Potential Social Problem: Property issues (i.e. land purchase), conflict within the community (i.e. related to decision making).

#### IV. Micro-hydros

-Sensibility: Medium\*.

-Range Capacity: 50 KW-250 KW

-Potential Environmental Problems: Deforestation as a result of the construction of channels and access roads (Minimal), final disposal of accumulated sediments in the settlement ponds (Minimal), contamination of the ponds (suspended solids) - (Minimal), loss of aquatic fauna through lack of adequate ecological control (Minimal), impacts on natural habitats (Minimal), use and final disposal of residues and combustibles (Minimal), impact of noise and accidents (Minimal).

-Potential Social Problem: Property issues (i.e. land purchase), conflict within the community (i.e. related to decision making).

#### V. PVs

-Sensibility: Low\*.

-Range Capacity: 0.750 KW / household.

-Potential Environmental Problems: Disposal of batteries (Minimal).

-Potential Social Problem: Property issues (i.e. land purchase), conflict within the community (i.e. related to decision making).

#### VI. PVs-Diesel Hybrids

-Sensibility: Low\*.

-Range Capacity: 0.500 KW/productive active, 0.750 KW/household.

-Potential Environmental Problems: Disposal of batteries (Minimal), oil spills (Minimal).

-Potential Social Problem: Property issues (i.e. land purchase), conflict within the community (i.e. related to decision making).

#### VII. PVs & Wind Hybrids

-Sensibility: Low\*.

-Range Capacity: 1KW-50KW.

-Potential Environmental Problems: Bird population endangered (Minimal), land clearing (Minimal), disposal of batteries (Minimal).

-Potential Social Problem: Property issues (i.e. land purchase), conflict within the community (i.e. related to decision making).

#### VIII. Mini-grids associated to any of the above

-Sensibility: Medium\*.

-Range Capacity: Maximum of 6 Km between source and household/locality (which will be installed along rural roads whenever possible).

-Potential Environmental Problems: Same as above.

-Potential Social Problem: Property issues (i.e. land purchase), conflict within the community (i.e. related to decision making).

\*Please see page 4 of the Manual for Social and Environmental Evaluation for Large Scale Renewable Energy Projects in Mexico (2005).

All environmental impacts will be minimal since sub-projects are of small scale. Mitigation measures to all environmental impacts identified will be addressed in the Environmental Impact Assessment of each project. The proposed classification/categorization for The Project is B, from the safeguards standpoint. Safeguards that are not triggered mean that issues related are not expected, according to the team. The Project will have a strong environmental positive impact given that the target population will substitute diesel, wood, kerosene, ocote, and others carbon-based elements, for the proposed renewable energy technologies; diminishing deforestation, CO2 emissions, oil spillage and indoor pollution among others. A Safeguards Manual is being designed for the subprojects. This manual will be applied by the State Implementation Units, which will be in charge of the evaluation of subprojects. The State Implementation Units will assure that not only national environmental and social regulations are being complied but also World Bank environmental and social policies are being complied.

#### **D. Project location (if known)**

The Project will be developed in 4 states: Oaxaca, Chiapas, Guerrero and Veracruz in Mexico . These four SS of Mexico have abundant renewable resources; Veracruz, Guerrero and Chiapas in hydro resources and Oaxaca in wind resources . Small human settlement are spread throughout the mountain range territory, their geographic isolation in part explains their economic exclusion, impacting poverty- roads and other transportation systems are not well developed in these four southern states (â€œSSâ€œ). These four SS have the highest concentration of indigenous people in Mexico; cover 15.5% of Mexicoâ€™s territory and have almost 18% of total Mexicoâ€™s population; and all of them have Pacific Ocean Coast. The four SS have a wealth of cultural assets, such as historical and archeological sites officially recognized: In Chiapas there are 6 major archeological sites, in Guerrero 2, in Oaxaca 10, and in Veracruz 4. The four SS are located within and/or there are natural protected areas inside: In Chiapas there are 11 natural protected areas, in Guerrero 2, in Oaxaca 4, and in Veracruz 4.

-The State of Chiapas: Has multiple microclimates, ranging from mountain to coastline, in consequence is rich in biodiversity. It possesses natural water resources, which are being well-used by hydroelectric energy generation. The most commonly practices activities are commerce and service-related. 25% of the population in Chiapas is indigenous.

-The State of Guerrero: Is a fairly dried and sunny territory with high mountains, scarce valleys, and mostly poor soil supporting tropical jungle. Silver mining has been carried out for centuries in Guerrero, and also, the coastline of Guerrero has several famous tourist destinations. 14% of the population in Guerrero is indigenous.

-The State of Oaxaca: Is similar to the state of Guerrero in terms of climate and topographical conditions; Oaxaca has one of the most rugged terrains in Mexico: a third of Oaxacaâ€™s terrain is covered by western mountain ranges and almost a fifth by coastal mountain ranges. Rivers are less abundant than in the rest of the SS. Oaxaca is mostly a tourist-oriented state with places of interest from mountains down to its coastline. 37% of the population in Oaxaca is indigenous.

-The State of Veracruz: Is a long strip of land that borders most of the coastline of the Gulf of Mexico. It has varying conditions of latitude and altitude thus is highly diversified from high-mountain to tropical forest. A number of rivers and stream irrigate the territory. Veracruz has

oil resources which are exploited in the Ocean. It is the richest of the four SS, it is an important producer of coffee, tobacco, maize, sugar cane and beef and dairy livestock. 10% of the population in Veracruz is Indigenous.

#### **E. Borrower's Institutional Capacity for Safeguard Policies [from PCN]**

The existing capacity of participating borrowers to deal with The Project environmental and social safeguard aspects is being evaluated. Measures to enhance the capacity of the borrowers to deal with identified environmental and social safeguard aspects will be established. The selected financial institution (NAFIN) has a solid experience with World Bank projects and safeguards policies (as well as with national environmental and social regulations), and has the capacity to implement these policies. However, The Project aims at building such capacity at the local level to plan and implement rural infrastructure projects, through providing a Safeguard Manual and training to apply this manual to the SIUs.

#### **F. Environmental and Social Safeguards Specialists**

Ms Paola C. Solidoro (LCSFE)  
 Mr Hernan M. Gonzalez Figueroa (LCSFN)  
 Ms Elena Correa (LCSEO)  
 Ms Tania Carrasco (LCSES)

### **II. SAFEGUARD POLICIES THAT MIGHT APPLY**

<b>Safeguard Policies Triggered</b>	<b>Yes</b>	<b>No</b>	<b>TBD</b>
<b>Environmental Assessment (OP/BP 4.01)</b>	<b>X</b>		
An environmental assessment will be done as part of project preparation to identify The Project's potential environmental impacts, to develop appropriate mitigation measures for negative impacts, and to recommend enhancement measures for positive impacts. These environmental mitigation and enhancement measures will be summarized in an Environmental Management Plan (EMP) that will include screening criteria and environmental impact assessment procedures for the sub-projects. The EA will also evaluate whether other environmental safeguards are triggered, and develop appropriate procedures, if necessary, to mitigate the adverse impacts.			
<b>Natural Habitats (OP/BP 4.04)</b>	<b>X</b>		
The policy has been shown as triggered, given that the four SS are located within and/or there are natural protected areas inside.			
<b>Forests (OP/BP 4.36)</b>	<b>X</b>		
The forests policy has been triggered given that forests are abundant in the target localities. (The criterion for triggering the Forests Policy is whenever a project has the "potential" to have impacts on the health and quality of forests.)			
<b>Pest Management (OP 4.09)</b>		<b>X</b>	
<b>Cultural Property (OPN 11.03)</b>	<b>X</b>		
This policy has been triggered given that the four SS have a wealth of cultural assets, such as historical and archeological sites officially recognized.			
<b>Indigenous Peoples (OD 4.20)</b>	<b>X</b>		
At least 60% of the targeted location (targeted population meaning population that is not planned to be electrified by the government for the next 5 years) are indigenous people (IP). The Project considers empowering IP populations by facilitating their participation			

<b>Safeguard Policies Triggered</b>	<b>Yes</b>	<b>No</b>	<b>TBD</b>
in the governmental decision-making processes for provision of services, and access to basic services. The Project design will draw heavily upon the findings and recommendations of the Conflict Resolution Mechanism described in point 3.			
<b>Involuntary Resettlement (OP/BP 4.12)</b>		<b>X</b>	
<b>Safety of Dams (OP/BP 4.37)</b>		<b>X</b>	
<b>Projects on International Waterways (OP/BP 7.50)</b>		<b>X</b>	
<b>Projects in Disputed Areas (OP/BP 7.60)</b>		<b>X</b>	

**Environmental Category:** B - Partial Assessment

### III. SAFEGUARD PREPARATION PLAN

- A. Target date for the Quality Enhancement Review (QER), at which time the PAD-stage ISDS would be prepared: 12/13/2005
- B. For simple projects that will not require a QER, the target date for preparing the PAD-stage ISDS: N/A
- C. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing<sup>1</sup> should be specified in the PAD-stage ISDS.  
N/A.

### IV. APPROVALS

<i>Signed and submitted by:</i>		
<b>Task Team Leader:</b>	<b>Ms Gabriela Elizondo Azuela</b>	<b>11/21/2005</b>
<i>Approved by:</i>		
<b>Regional Safeguards Coordinator:</b>	<b>Mr Reidar Kvam</b>	<b>11/28/2005</b>
<b>Comments:</b>		
<b>Sector Manager:</b>	<b>Ms Susan G. Goldmark</b>	<b>11/29/2005</b>
<b>Comments:</b>		

<sup>1</sup> 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.

