

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

MEXICO

**PROMOTION AND DEVELOPMENT OF LOCAL WIND TECHNOLOGIES IN MEXICO
(ME-X1011)**

PROPOSAL FOR OPERATION DEVELOPMENT

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ELECTRONIC LINKS	
1.	DEM questionnaire
	http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36466738
2.	Plan of activities for first disbursement and the first 18 months of implementation
	http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35334620
3.	Procurement Plan
	http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36466861
4.	Monitoring and evaluation arrangements
	http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36468977
5.	Risk Assessment Matrix
	http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36466784

OTHER ELECTRONIC LINKS	
1.	GEF Full Size Document
	http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36467099
2.	Economic Analysis.
	http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36466744
3.	Environmental Impact Assessment (EIA) for the Project
	http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36466935
4.	SENER-CONACYT Financing Letter
	http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36466984
5.	Risk Assessment Matrix (Excel)
	http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36471063

Abbreviations

AMDEE	Mexican Wind Energy Association
CERTE	Regional Wind Technology Center
CIATEQ	Center for Advanced Technology of Queretaro
CFE	Federal Electricity Commission
CONUEE	Energy Efficient Commission of Mexico
CONACYT	National Council for Science & Technology
CO ₂	Carbon Dioxide
CRE	Regulatory Energy Commission
CS	Country Strategy
DG	Distributed Generation
ENACC	National Climate Change Strategy
EA	Executing Agency
EE	Energy Efficiency
EIA	Environmental Impact Assessment
ESR	Environmental Safeguards Review
GENC	IIE's Non-Conventional Energy Unit
GEF	Global Environment Facility
GHG	Greenhouse Gases
GoM	Government of México
FIT	Feed-in-tariff
FS	Financial Secretariat (equivalent to Ministry of Finance)
IIE	Electrical Research Institute
IEC	Electro-technical Commission
INEGEI	National Inventory of Greenhouse Gas Emissions
IDB	Inter-American Development Bank
INE/ENE	Energy Division of the Infrastructure and Environment Department of the IDB
IPP	Independent Power Production
MEM	Mexican Wind Machine
MW	Megawatt
NAFIN	<i>Nacional Financiera</i>
NREL	National Renewable Energy Laboratory
NCB	National Competitive Bid
PECC	Special Program for Climate Change
PEMEX	Mexican State Oil Company
PMCU	Project Management and Coordination Unit
PP	Procurement Plan
PPA	Power Purchase Agreements
RE	Renewable Energy
REDD	Reducing Emissions from Deforestation and Forest Degradation
SECI	Evaluation System for Institutional Capacity
SC	Steering Committee

SCF	Structure and Corporate Finance Department
SEMARNAT	Environment Secretariat (equivalent to Ministry of Environment)
SENER	Energy Secretariat (equivalent to Ministry of Energy)
SPP	Small Power Producers
TCO ₂ e	Tons of Carbon Dioxide equivalent
UNDP	United Nations Development Program

PROJECT SUMMARY
MEXICO
PROMOTION AND DEVELOPMENT OF LOCAL WIND TECHNOLOGIES IN
MEXICO
(ME-X1011)

Financial Terms and Conditions		
Beneficiary: United States of Mexico		
Executing Agency: Electrical Research Institute (IIE, acronym in Spanish).		
Execution Period: 48 months		
Disbursement Period: 54 months		
Currency	US\$	
Source	Amount	%
IDB (grant from the Global Environment Facility – GEF)	5.000.000	13
Parallel-financing		
SENER-CONACYT	9.600.000	25
NAFIN	20.000.000	52
Private Sector (Ruhrpumpen)	4.000.000	10
Sub-total Co-financing:	33.600.000	87
TOTAL:	38.600.000	100
Project at a Glance		
Project Objective/Description: The general objective of the Project is to contribute to enhance Mexico's role as a key player in the world's wind energy market, by enabling the local development of wind turbines for special wind regimes. The specific objectives are : (i) to consolidate the human capacities for the design of state of the art wind turbines for DG; (ii) to structure a value chain for the production of goods and services at the national level in the wind energy sector (iii) to consolidate the technical capabilities for the manufacturing, assembling, operation, testing and certification of wind turbines for DG with a high component of national technology; and (iv) to support the development of a 1.2 Megawatt Class 1A wind turbine for DG and provide capacity building to promote wind power application through DG by Small Power Producers (SPPs).		
Special contractual clauses: None		
Exceptions to Bank policies: None		
Project consistent with Country Strategy:	Yes [X]	No []
Project qualifies for:	SEQ[] PTI[] Sector [] Geographic[] Headcount []	
Procurement: The procurement of works, goods and services, will be carried out by the Executing Agency in accordance with IDB Policies for the Selection and Contracting of Consultants (GN-2350-9) and Policies for the procurement of works and goods (GN-2349-9); and the respective procurement plan.		

(*) The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with the applicable provision of the Bank's policy on lending rate methodology for ordinary capital loans. In no case will the credit fee exceed 0.75% or the inspection and supervision fee exceed, in a given six-month period, the amount that would result from applying 1% to the loan amount divided by the number of six-month periods included in the original disbursement period.

I. DESCRIPTION AND RESULTS MONITORING

A. Background, Problem Addressed, Justification

- 1.1 **General Context.** Mexico is an oil-exporting country rich in fossil fuel resources. However, due to political reasons and scarcity of investment resources, it may not be able to exploit these natural resources at a sufficient rate to ensure future national energy demands. Natural gas production has been insufficient to satisfy domestic demand and the power sector has been particularly affected by this situation. The expected rise of natural gas imports combined with the volatility of fossil fuel prices in the international markets, has prompted growing interest from the Energy Secretariat (SENER, acronym in Spanish) and the Federal Electricity Commission (CFE, acronym in Spanish) to develop domestic sources of Renewable Energy (RE) to complement fossil fuels in power production and supply to the grid low-carbon energy sources.
- 1.2 The National Inventory of Greenhouse Gas (GHG) Emissions (INEGEI, acronym in Spanish) indicates the following breakdown of GHG emissions by sector in Mexico in 2006: energy/electricity accounting for 21% of total emissions, transportation 20%, manufacturing and construction 8%, fugitive emissions 7%, and industrial processes 9%; land use change and forestry 10%; agriculture 6%. Therefore any effort to reduce GHG emissions from the energy/electricity, mainly by RE and Energy Efficiency (EE) is a priority of the Government of Mexico (GoM).
- 1.3 In Mexico GHG emissions due to the combustion of fossil fuels were 383 million tons of carbon dioxide equivalent (Mt CO₂e) in 2006 (54% of national emissions, 715.3 Mt CO₂e). Mexico's Special Climate Change Program (PECC, acronym in Spanish)¹ established the country's strategy for a low carbon economy. In the short-term Mexico committed to reduce 50.7 Mt CO₂e in 2012. The PECC set forth the goal of reducing GHG emissions by 2050 to 340 Mt CO₂e (50% of 2000 level) while a business-as-usual scenario estimated that emissions would have reached 1,100 Mt CO₂e in 2050. In addition, PECC identified the Energy Sector as the main source of emissions which accounted for 430 Mt CO₂e (60%) emissions in 2006, followed by Land-Use & Land-Cover Change sector polluting 131 Mt CO₂e (18%, 2006). Therefore the main opportunities to tackle GHG emissions exist in the areas of EE, RE and Reducing Emissions from Deforestation and Forest Degradation (REED).
- 1.4 According with the PECC during 2008-2012 Mexico's GHG reduction goal is to stop emitting 129 Mt CO₂e by implementing (i) EE projects which in total aim to prevent 60.44 Mt CO₂e, (ii) Scaling up RE deployment from public (CFE) and private sector (7.92 Mt CO₂e), (iii) Improving transport sector with infrastructure and cleaner vehicles (7.7 Mt CO₂e), and (iv) Actions that can be bundled under

¹ PECC (Programa Especial de Cambio Climático).

<http://www.semarnat.gob.mx/programas/semarnat/Paginas/PECC.aspx>

sustainable forestry management and REDD in Land-Use & Land-Cover Change sector (36.15 Mt CO₂e)

- 1.5 As shown in table 1 below, the electricity sector in Mexico relies heavily on thermal sources². At present, RE has a share of 24.16% of supply in the electric power sector. Most of this contribution comes from traditional sources or established technologies.

Table 1: Public installed capacity in Mexico up to 2008

Plant Type	Installed Capacity (MW)
Conventional Thermoelectric	12,895
Combined Cycle	15,590
Turbo gas	2,509
Coal	2,600
Dual (fuel oil/or coal)	2,100
Internal Combustion	182
Permits	6,972
Sub-total Non-Renewable	42,848
Nuclear	1,365
Geothermal	960
Hydro	10,566
Wind (only public projects)	87
Permits	673
Sub-total Alternative	13,651
TOTAL	56,499

- 1.6 **Sector Knowledge.** The RE resources in Mexico have neither been satisfactorily quantified, nor systematically analyzed as to their real potential for electricity generation. Estimates³ have indicated that Mexico's most viable wind resources would be sufficient for the installation of 3,000 – 5,000 Megawatt (MW) of wind power. These figures are based on rough regional estimates⁴ as detailed evaluations of wind resources have yet to be carried out. Other sources⁵ indicate that there are many areas in the country with moderate wind resources that could eventually be efficiently tapped using improved wind turbine technologies. Based on the experiences of other countries, it is reasonable to expect that extensive exploration and improved wind speed measurements throughout the country will result in higher estimates of Mexico's wind energy potential. A study carried out by the Electrical Research Institute (IIE, acronym in Spanish) has estimated that

² These figures show the public installed capacity in Mexico.

³ National Commission for Efficient Use of Energy (CONUEE, acronym in Spanish), the New Energy Sources Unit of the Federal Electricity Commission, and the Unit of Non Conventional Energy Sources of the Electrical Research Institute.

⁴ The National Renewable Energy Laboratory (NREL) has provided a rough estimate of Mexico's wind potential of 10,000-MW. More specific estimates by IIE suggest 5,000-MW of proven wind power potential, plus 10,000MW additional estimated in identified windy sites outside *La Ventosa*.

⁵ National Association for Wind Power (AMDEE, acronym in Spanish).

an installed wind energy capacity of 5,000-MW would generate 30,000 direct and 30,000 indirect jobs (both permanent and temporary), bring in around US\$5 billion in private capital investment for plant construction, and avoid the emissions of around 9 millions of tons of GHG emissions, in the next 10 years.

- 1.7 Mexico's strongest wind energy resource is found in a 3,000 km² region known as *La Ventosa* located on the Isthmus of Tehuantepec in the state of Oaxaca. Average annual wind speeds in this region range from 7 to 10 m/s, measured at 30 meters above the ground. It is estimated that up to 2,000-MW of wind power could be commercially tapped in *La Ventosa* given the favorable wind characteristics of the region. Initial data from CFE's 1.5-MW pilot plant indicates that the average capacity factor for future wind power plants over the whole region could exceed 30%, a rate that exceeds the average capacity factors of the majority of identified wind resource areas around the world. In fact, CFE's 1.6 MW pilot plant, located in one of the best windy sites in the region (*La Venta*), has operated at a 5.5 years average capacity factor of 38%, which compares favorably to wind power plants located in the best windy inland sites in the world.
- 1.8 **Wind Projects in Mexico.** The first few grid-connected wind generators installed in Mexico date back from the mid 1990's. These facilities belong to CFE and served for a number of years as pilot/demo installations. The first commercial facility, 83-MW in capacity, was commissioned in 2007 and around 400-MW were commissioned in 2009. According to National Association for Wind Power (AMDEE, acronym in Spanish) by the end of 2010 the total installed wind capacity in Mexico will be 518 MW and 3,000 MW additional projects will be installed in Oaxaca, Baja California and Tamaulipas between 2011 and 2014. Most projects will be implemented under the legally established modalities of Independent Power Production (IPP) with Power Purchase Agreements (PPA) for the sale of power exclusively to CFE, and electricity for self supply. However, it is expected that with the incentive mechanisms to be derived from the Law to Tap Renewable Energy Resources⁶, approved by the Congress, the total wind installed capacity in Mexico will continue to grow.
- 1.9 Moreover, the Inter-American Development Bank (IDB), through its Structured and Corporate Finance Department (SCF) has recently approved two (2) projects to support wind energy development in Mexico: (i) Eurus Wind Project (ME-L1068) and (ii) *La Ventosa* Wind Project (ME-L1076). The former Project (ME-L1068) is a 250-MW wind farm located in *La Ventosa* County of the state of Oaxaca. The project is being developed by Acciona Energy Mexico through a special purpose limited liability company, Eurus S.A.P.I. de C.V. at a cost of US\$525 million with an IDB Loan for US\$45 million. The energy produced will be consumed by Cemex S.A. de C.V under Mexico's self-supply framework in a 20-year PPA. The latter Project (ME_L1076) is located in the adjacent site, La Mata & *La Ventosa*. This wind project consists of 27 wind turbine generators with a nominal capacity of 2.5 MW each (67.5 MW total capacity), including a 115-kV overhead transmission line from the project site to the Juchitán II substation. The

⁶Law to promote usage of RE, approved in November 2008.

project is currently in operation. The total cost of this project is approximately US\$198 million, and the amount of the IDB Loan is the equivalent of US\$ 21.9 million.

- 1.10 **The problem.** According to Mexico’s Special Renewable Energy Program, developed by SENER in early 2009, the total installed wind farms capacity by the year 2015 will be 4,726.6-MW (see link to the Full Size Document, table 2). Additionally 1,000-MW have been approved to date by the Energy Regulatory Commission (CRE, acronym in Spanish). CRE has recently approved a new “Open Season” for the interconnection of additional capacity, which, could bring to 5,000-MW the total permitted capacity to be installed in Mexico in the mid-term.
- 1.11 The GoM recognizes that it will be probably difficult to reach the 2012 goal. Nevertheless, the rate at which wind farm projects are currently being developed in Mexico demonstrates that in the last five years the wind energy legal and regulatory framework has changed in the right direction.
- 1.12 **Distributed generation with wind power applications for Small Power Producers (SPP).** The IIE has been working in the last decade on the promotion of distributed generation⁷ (DG). DG reduces the amount of energy losses in transmission because the electricity is generated near or maybe even in the same site where it is used. This also reduces the size and number of power lines and other supporting infrastructure (substations and so forth) that must be constructed to wheel the electricity over long distances. Although DG can have high upfront costs, typical distributed power sources in a Feed-in-Tariff (FIT) scheme have low maintenance, low pollution and high efficiencies. In Mexico, policy and regulation for DG, especially for the case of wind power generation need the preparation of initiatives to operational this niche of opportunity, including capacity building to install, operate and maintain these systems. On the other hand, the Mexican Law for the use of RE sources emphasizes the need of sharing larger benefits from the deployment of wind turbines among land owners and other stakeholders, as opposed to those minor benefits derived from the leasing fees paid by project developers in the current model of large wind farms. This constitutes an important thrust for the implementation of smaller (few turbines) projects in the DG modality, such as the one to be developed by this Project. It is important to highlight that the Mexican Wind Turbine initiative (MEM, acronym in Spanish) which is the object of this operation, will contribute to the development and testing of wind turbines for smaller projects. Therefore, the wind DG market rather than the production of turbines for large wind farm projects will be its main target.
- 1.13 **Wind Technology Development.** The Global Environment Facility (GEF), through the United Nations Development Program (UNDP) and the GoM co financed the project entitled “Action Plan for Removing Barriers to the Full-Scale

⁷ Distributed Generation also called on-site generation, dispersed generation, embedded generation, decentralized generation, decentralized energy or distributed energy, generates electricity from many small energy sources.

Implementation of Wind Power in Mexico”, to promote and remove major barriers for the inclusion of full scale wind energy in Mexico’s energy matrix. That Action Plan began to be developed in January 2004 under the supervision of the IIE. The project addressed a number of technical issues, including an effort to create the Regional Wind Technology Centre (CERTE, acronym in Spanish), which aims to provide: (i) support to interested wind turbine manufacturers for the characterization of their products under the local conditions at *La Ventosa*; (ii) training to local technicians for operation and maintenance of a diverse range of wind turbines; (iii) a national technology showroom that facilitates the interaction between wind turbine manufacturers and Mexican industries, thus promoting the identification of possible shared business ventures; (iv) a modern and flexible facility to obtain operational data on the interaction of specific types of wind turbines with the electrical system; and (v) a center to support the understanding of international standards and certifications (issued abroad) in order to identify additional requirements to fit local conditions.

- 1.14 Several studies conclude that one of the key factors to facilitate the large-scale implementation of renewable in Mexico is to develop of ad hoc financing for R&D activities that facilitate local market development of these technologies ⁸. This applies to the wind power sector as up until now, all wind projects which have been carried out in Mexico for commercial purposes have incorporated imported technology. Four (4) factors have prompted the IIE authorities to launch an initiative to change this situation: (i) the imbalance between demand and supply in the world turbine market considering the difficulties to purchase a small quantity of wind turbines (one or two units for DG) or replacement of damaged turbines in wind farms; (ii) the limited availability of Class IA turbines in the international market for strong wind regions such as *La Ventosa*; (iii) the conviction that most capacities required for turbine manufacturing are found in Mexico, albeit with varying degrees of competitiveness and (iv) a set of technical problems (fatigue) experienced with wind turbines installed by the CFE in the last years in *La Ventosa*, apparently due to the fact that the technology adopted was not appropriate for the site.
- 1.15 **Solution.** Development of 1.2-MW Class IA wind turbine. Additional considerations that have reinforced the necessity of developing wind turbines suitable to the wind conditions of the Isthmus of Tehuantepec include the fact that strong winds are also a characteristic of neighboring Central American and Caribbean countries, where small local loads and difficult logistics conditions call for distributed generation projects rather than large wind farms. These markets can hardly be served by the large wind corporations currently harvesting the low hanging fruits in the growing off-shore market and other rapidly growing land-based markets such as in the United States.
- 1.16 Given the potential of wind energy generation in Mexico, not having a locally developed and tested wind turbine in the near future will: (i) lead the Project

⁸ Huacuz, Jorge (2004) The road to green power in Mexico –reflections on the prospects for the large-scale and sustainable implementation of renewable energy.

sponsors to purchase equipment (not always suited for areas exposed to strong winds) in the international markets; (ii) delay the transfer of technology, capacity building and potential market advantage that the Mexican industry could acquire; and (iii) contrary to the objectives of current legislation on the use of RE sources, impede the integration in the national mix of wind power generation by SPPs. Moreover, without the proposed Project, the possibilities of developing DG with wind energy in the next decade are low, due to the fact that large scale wind developers and manufacturing companies are not interested in this specific market, thus losing an attractive possibility to generate clean energy in smaller scale with an important contribution from local communities and the resulting additional social benefit.

- 1.17 **Ability of IIE to execute and develop the Project.** The Electric Research Institute was created by Presidential Decree⁹ from December 1st, 1975; as a decentralized organization with its own legal identity and patrimony, whose main purpose was to conduct scientific and technical research and development, mainly in the electrical (generation, transmission and distribution) and petroleum fields, promote innovation, provide engineering and technical services, training, and the commercialization of the products and processes resulting from its research activities. The IIE organizational structure enables it to achieve its purposes. IIE's headquarters are located in the city of Cuernavaca, Mexico. Using its own resources and additional contributions from the special fund SENER-CONACYT, the IIE has launched the design of the 1.2-MW Class 1A wind turbine. The so called *Máquina Eólica Mexicana* (MEM, by its Spanish acronym) is designed for distributed generation applications and will be constructed, installed, commissioned and operated in the public Regional Wind Technology Center (IIE-CERTE, acronym in Spanish), with the support of GEF's intervention.
- 1.18 The Mexican Chamber has recently proposed the creation of a special fund effective 2011, to support IIE's effort to update the Mexican Inventory of RE, headed by the Mexican Ministry of Energy (SENER, by its Spanish acronym)¹⁰. The fund is part of the program to implement the Law¹¹ for the "Usage of Renewable Energy and the Financing of transmission lines" from 2008. More than 20 years ago, the IIE in partnership with the CFE, identified potential sites for the development of a public wind power project in La Venta, in the Isthmus of Tehuantepec, and in Mexicali in the north of the Country. Based on preliminaries studies prepared by the IIE; in 1990, the CFE developed the first and so far the most technically successful wind pilot project in Mexico. Some of the factors that contribute to the IIE's technical capacity to design and develop the MEM project are: (a) IIE has the largest anemometric network in the country; (b) IIE has

⁹ Decree by which the IIE is created. (D.O. 1-XII-1975) Artículo 11. Diario Oficial, 1º Diciembre, 1975. Reformed (D.O. 30-X-2001). *Diario Oficial de la Federación*, October 30th, 2001.

¹⁰ May 26th 2010. *Segundo Periodo Comisión Permanente. No. Gaceta: 4. ÚNICO*. The Mexican Chamber (Cámara de Diputados de México), requests to SENER to do the required duties with *Secretaría de Hacienda y Crédito Público* within the National Budget Program of 2011 under the Energy to include a budget for IIE for US\$ 10 million.

¹¹ *Nueva Ley DOF 28-11-200. Ley Para El Aprovechamiento de Energías Renovables y el Financiamiento de la Transición Energética*

developed the CERTE located in the outskirts of *la Ventosa* County and is contributing to the analysis of the technical challenges faced by the CFE in the operation of the La Venta II wind farm; (c) IIE is the first institution to operate the CERTE under the “Small Production Modality”, recognized by the Federal Electricity Law¹² for the promotion of small commercial wind power projects; (d) IIE has several patents related to the design of electronic devices that demonstrate its technical capacity in this field; (e) IIE has established close collaborations with other recognized institution of the public and private sector to develop similar technologies.

1.19 **Linkage to the Country Strategy.** The IDB Country Strategy (CS) with Mexico (GN-2595-1) highlights the support for the *climate change* adaptation and mitigation agenda at both the federal and sub national levels as one of its four priorities. In particular, it sets targets to reduce GHGs through public- and private-sector financing for low-carbon projects. It is also mentioned that the Bank will provide technical assistance to ensure effective implementation of new laws and regulations on renewable energy and energy efficiency, to mitigate the risk that weak implementation could adversely affect the ability to attract investment in low-carbon projects.

1.20 **Ninth General Capital Increase (GCI-9):** The project is also aligned with the IDB’s Framework of improving access and quality of electricity service to households.

IDB support for the proposed Project is critical for the following reasons: (i) the success of the proposed Project is a critical step in the development of DG using wind technology; (ii) the Project will promote the participation of the rural sector in the generation of power using RE, which is a requisite in the Law for the promotion of RE (see paragraph 1.18); (iii) the Project leverages technical knowledge, expertise and international best practices to enable its success; (iv) the Project supports the sustainable development of wind energy in the region and in other windy areas of the country through the design of a new turbine adapted to extreme windy conditions of the area and to the characteristics of the distribution grid; and (v) the Project will help to accelerate the dissemination of the technology, both within Mexico and in other countries in the region, and will achieve a substantial reduction in GHG emissions.

B. Objective, Components and Cost

1.21 The general objective of the Project is to contribute to enhance Mexico’s role as a key player in the world's wind energy market, by expanding the country’s wind generation capacity and by enabling the local development and the implementation of wind turbines technologies particularly for DG.

1.22 The specific objectives of the Project are i) to consolidate the human capacities and skills required for the design of state of the art wind turbines for distributed generation; ii) to structure a value chain for the production of goods and services at the national level in the wind energy sector; iii) to consolidate the technical

¹² Última Reforma DOF 22-12-1993. *Ley del Servicio Público de Energía Eléctrica*

capabilities for the manufacturing, assembling, operation, testing and certification of wind turbines for DG with a high component of national technology; and iv) to support the development of a 1.2 MW Class 1A wind turbine for DG and to provide capacity building to promote wind power application through DG by SPPs.

- 1.23 The proposed Project has been structured in four (4) components:
- 1.24 **Component I - Design and Specification of Wind Turbine Components of the MEM Project (not funded by GEF).** This component aims to complete the final design of the wind turbine for DG and its corresponding evaluation¹³ including the development of local capacity (human resources and know how). The Executing agency will hire service providers to carry out the following activities: (i) completion of detailed design of all the components (mechanical, electrical and civil works) and the subsystems of the wind turbine prototype; (ii) development of the blueprints for the manufacturing and assembly of all components and definition of technical specifications of the subcomponents to be integrated in the prototype; (iii) validation of the design by recognized peer reviews; (iv) elaboration of the drafts of operational manuals for the installation, operation, maintenance and safety certifications and (v) development of local capacities for wind turbine in the public and private sector through “on-the-job” training mechanism.
- 1.25 **Component II – Procurement, Manufacturing and Assembly of the Components of the MEM Project (funded by GEF).** This component, funded by GEF, aims at developing the prototype of the 1.2 MW Class IA wind turbine, with a high component of national technology and manufacturing. The activities to be carried out are: (i) procurement of the commercial components required for the integration of all the subsystems of the wind turbine; (ii) verification of the blueprint parameters in comparison to the assembled prototype (iii) engineering and manufacturing of all the components (electrical, electronic, mechanical and civil works); (iv) assembly and testing of the different subsystems; and (v) development of a detailed documentation/ guidance of the manufacturing process of all the components.
- 1.26 **Component III –Erection, Start Up and Operational testing of the Wind Turbine of the MEM Project (funded by GEF):** The objective of this component is to validate and certify the assembled wind turbine as a Class IA wind turbine, and to develop and finalize all the user manuals. The activities to be carried out are: (i) installation of the prototype and the required monitoring instrumentation in the CERTE; (ii) operational testing of the prototype in Class I

¹³ The wind turbine developed by IIE (MEM) is being designed as to satisfy certification requirements for a Type Certificate, according to the requirements established by the International Electro technical Commission (IEC). The proposed IEC Type Certification procedures involve the following steps: (i) Design Evaluation, (ii) Prototype Test; (iii) Manufacturing Quality; and (iv) Final Evaluation. Evaluation and certification of the wind machine MEM will be carried out according to the international norm IEC 61400-22 wind turbine certification requirements.

winds; and (iii) review of the installation, operation, maintenance and safety manuals developed for the wind turbine.

- 1.27 **Component IV – Capacity Building and institutional strengthening to promote wind power market through DG by SPPs (funded by GEF).** This component, funded by GEF, will provide capacity building and institutional strengthening to promote DG for SPPs wind power projects. This component will finance: (i) technical support for the implementation of the financial mechanism designed to promote DG for wind applications by the GoM and provide assistance in any complementary design of financial instruments that could be required to have a sound financial mechanism in place; (ii) the preparation of final versions of the guidelines and operational manuals for wind power application for SPPs; (iii) design and implementation of training courses in the CERTE to improve installation, operation and maintenance skills for DG applications; and (iv) a public awareness campaign that will be targeting universities and energy related research centers, among other institutions to promote the use of wind power for the development of DG by SPPs.
- 1.28 **Cost and Financing:** The total cost of the Project is estimated in the amount of US\$38,600 million; of which the GEF will provide a grant of US\$5 million which will be administered by the IDB, acting as a GEF's implementing agency. The breakdown of the US\$33.6 million corresponding to the *parallel financing* is as follows: US\$9.6 million from resources transferred by the Mexican Government to the SENER- National Council for Science and Technology (CONACYT)¹⁴; US\$20 million from NAFIN¹⁵; and US\$ 4 million from the private sector (Ruhrpumpen)¹⁶. Table 3 shows the indicative budget distributed by activity and source of financing (the budget in the electronic links includes details of the abovementioned co-financing).

¹⁴ The SENER-CONACYT contribution was approved on November 19th, 2009 with reference DATNI/D300/656/09.

¹⁵ *Nacional Financiera* (NAFIN), a local financial entity, would agree to help finance the replication of the prototype in its commercial phase; once it has been certified by an accredited certification test organization. The scope of this project is limited to secure the design, construction, installation, commission and the certification of the prototype. It is worth mentioning that NAFIN could use the resources under the Conditional Credit Line for Investment Projects (CCLIP) granted by the IDB for these types of projects.

¹⁶ Ruhrpumpen in-kind contribution is reflected in the manufacturing, assembling and installation of parts of the 1.2-MW prototype

Table 3 – Summary Cost (in US\$)

Project Components	GEF Financing	Parallel Financing	Total
	(\$)	(\$)	(\$)
1. Design and Specification of Wind Turbine Components of the MEM Project	0	3,850 ¹⁷	3,850
2. Procurement, Manufacturing and Assembly of the Wind Turbine Components of the MEM Project	2,600	6,000	8,600
3. Erection, Start Up and Operational Testing of the Wind Turbine of the MEM Project	1,425	3,500	4,925
4. Capacity Building and institutional strengthening to promote a wind power market through distributed generation by SPPs.	725	20,000	20,725
5. Project management	250	250	500
Total Project costs	5,000	33,600	38,600
Percentage	13%	87%	100%

C. Key Results Indicators

- 1.29 The Results Matrix (Annex II) describes the indicators associated to each component of the Project. These indicators have been formulated to enable the monitoring and evaluation of Project activities in the short and the medium term.

II. FINANCING STRUCTURE AND MAIN RISKS

A. Financial Instruments

- 2.1 The Project will contribute to the national effort of the GoM to reduce barriers for the development of wind power. The GEF contribution will improve the national technical expertise and will promote the local market for wind technologies. The funding requested to the GEF represents 13% of the total Project cost indicated in Table 3 above.
- 2.2 Execution period and disbursement schedule: The execution period will be 48 months and the disbursement period will be 54 months, table 4 provides more details of the disbursements.

Table 4 Disbursement Schedule

Period	Advancement of Funds¹⁸ (2012)	Second disbursement (2013)	Third disbursement (2014)	Fourth disbursement (2015)
Amount (US\$)	400,000	2,800,000	1,600,000	200,000
Percentage of total budget	8	56	32	4

¹⁷US\$3.0 million from Sener-Conacyt; US\$0.85 million from Ruhrpumpem.

¹⁸ When the contract between IIE and IDB is signed and all the conditions prior to disbursement are fulfilled.

B. Environmental and Social Safeguard Risks

- 2.3 This Project will have a positive impact on the environment considering its long-term contribution to the reduction of GHG. The social impact of the Project will be favorable, as well, as reflected in its objectives and scope. As a result, the Environmental and Social Impact Review Secretariat (ESR) confirmed its classification as Category “C”. Moreover, the Environment Secretariat (SEMARNAT, acronym in Spanish) has approved an Environmental Impact Assessment (EIA) for this Project.
- 2.4 As mentioned in the preceding paragraph, the Project will contribute to generate global environmental benefits by reducing direct and indirect carbon emissions. The direct emissions reduction takes into consideration the avoided CO₂ emissions from displaced thermoelectric generation, which represents approximately 75% of the energy matrix. The indirect emissions reduction takes into account the replication effect of the Project due to the installation of 78 new wind turbines (93-MW) in accordance with GEF emission reduction calculation guidelines (see link to GEF Full Size Document: explanation in Part IIA expected global environmental benefits to be delivered).

C. Fiduciary Risk

- 2.5 As a result of the application of the IDB’s Evaluation System for Institutional Capacity (SECI, acronym in Spanish, see Annex III for more information) it was determined that the IIE, has a satisfactory level of institutional capacity, developed financial systems and control environment and presents a low fiduciary and institutional risk as an EA. Therefore, the Bank’s specialists (see fiduciary and procurement annexes) have recommend that the review of the disbursement documentation, be carried out by the Bank ex post and the review of the procurement processes be carried out by the Bank as indicated in paragraph 2.6_below. The final audit of the financial statements of the Project will be submitted by the Borrower to the Bank_120 days following the date of the last disbursement. The financial statements will be audited in accordance with the TORs agreed between the Bank and the *Secretaría de la Función Pública* and will be carried out by a firm of independent auditors acceptable to the Bank.
- 2.6 The Executing Agency will carry out the procurement of works, goods and services (different from consulting services in accordance with Policies for the procurement of works and goods (GN-2349-9)), and the selection and hiring of consultants in accordance with IDB Policies for the Selection and Contracting of Consultants (GN-2350-9) and with the provisions established in the contract for non-reimbursable financing and the respective procurement plan (see electronic link to the PP). In the case of the procurement of goods, works or services (other than consulting services) in the amounts requiring International Competitive Bidding, the Executing Agency will utilize the bidding documents agreed between the Bank and the *Secretaría de la Función Pública* published in the site www.funcionpublica.gob.mx/unaopspf/credito/normace.htm provided that those documents do not violate the Bank’s procurement policies on International

Competitive Bidding. In the case of the procurement of goods, works and services (other than consulting services) in amounts requiring National Competitive Bidding, the Executing Agency will utilize the bidding documents and the procedures agreed between the Bank and the *Secretaría de la Función Pública*, published in the site www.funcionpublica.gob.mx/unaopspf/credito/normace.htm provided that those documents and procedures do not violate the Bank's policies on National Competitive Bidding or the local legislation.

- 2.7 Since, according to the SECI evaluation, the Executing Agency has obtained a low risk rating in connection with its capacity to carry out the procurement of goods, works and services, the Bank's procurement specialist has recommended that the review, by the Bank, of the procurement processes be carried out ex ante for (i) direct contracting independently of the cost of the contract and (ii) procurement of works, goods and services (which are not consulting services) whose cost requires International Competitive Bidding. All other procurement processes will be reviewed by the Bank ex ante, including in the selection of individual consultants and consulting firms independently of the amount of the corresponding consulting fees, for those contracts over US\$ 200,000 for consulting firms and over US\$ 100,000 for individual consultants. For the rest of contracts, an ex post review will be performed.

D. Other Key Issues and Risks

- 2.8 **Intellectual property risk.** The Project team estimates that less than 5% of the total GEF-IDB resources would be used to finance goods or services which would be protected by intellectual property rights. In such case, the IDB will hold the copyright, patent or other intellectual property related to the goods and/or services financed with the resources of the contribution, but will grant a non exclusive royalty free license to the Executing Agency for an indefinite period of time with the right to sublicense. The IDB as the owner of the intellectual property rights may disseminate, publish, distribute or reproduce the protected work. In case the protected work constitutes a derivative work or an improvement from the original work and IIE or a third party holds the copyright, patent or other intellectual property right to the original work, the IIE will hold the IDB harmless against any claims of infringement of copyright, patent or other intellectual property rights. The hold harmless clause in this case will be particularly important to protect the Bank against third party claims because the Executing Agency has executed a Joint Venture Agreement with the firm Ruhpumpen S.A to whom it has granted the preferential right to the manufacture and commercialization of the turbines. In case Ruhpumpen S.A. decides not to exercise its rights and the Executing Agency decides to manufacture and/or commercialize the turbines or to authorize a third party to manufacture and/or commercialize the turbines, the Executing Agency must obtain Ruhpumpen's previous written and express consent, which consent may be withheld. The Agreement between Ruhpumpen S.A. and the Executing Agency also sets forth restrictions regarding the disclosure of information regarding the technology and/or the products resulting from the Joint

Venture. The Executing Agency has indicated that those provisions do not conflict with the Bank's policy on information disclosure regarding this Project.

- 2.9 Other risks have been identified, mitigation measures and indicators have been established (for medium to high risks) to monitor them as shown in the Risk Assessment Matrix (see link).

E. Economic Viability

- 2.10 The main benefit from the project is the know-how that will be developed and owned by the consortium of companies and organizations that execute it. The project will develop a working and certified wind turbine prototype which in the end constitutes a financeable project that has a value for investors and financial institutions (as expressed in co-financing letters and the intention of some local financial institutions to finance the project in later stages). The installation and replication of this turbine will also bring environmental benefits to society by effectively mitigating GHG. With these economic benefits in mind, the project was found to have a positive economic impact within a timeframe of 14 years. The economic rate of return (ERR) of the whole project was 19.56% and the project had a Net Present Value of \$15,079,264 USD (using a discount rate of 12%). It is estimated that if the timeframe was expanded the economic benefits would increase.

III. IMPLEMENTATION AND MANAGEMENT PLAN

A. Summary Implementation Arrangements

- 3.1 **Executing Agency:** The EA will be the IIE. The Energy Division of the IDB (INE/ENE) and the IDB Country Office in Mexico will provide technical support. The IIE's Non-Conventional Energy Unit (GENC, acronym in Spanish) will be responsible for the technical execution of the Project.
- 3.2 **Executing mechanism:** the Finance Secretariat (FS, *Secretaria de Hacienda*) (equivalent to a Ministry of Finance) has informed the IDB that since the IIE is considered a decentralized entity, the IIE is eligible to receive funding directly from the IDB without any financial intermediation, such as NAFIN (*Nacional Financiera*) or BANOBRAS. Therefore resources of the contribution will be disbursed in the form of Advancement of Funds as set forth in the General Conditions based on the Financial Plan of the Project, directly to the IIE. This Project falls under the type of project based on management of risk and performance, therefore the disbursement of funds from IDB to IIE will have to be based on financial needs (for procurement of goods and services mainly) related to the programmed activities and programmed costs stated in the annual plan for disbursements. The EA will have to justify at least 80% of the last disbursement including a projected cash flow in order for the IDB to disburse the next tranche. Paragraph 2.2 shows the disbursement schedule.
- 3.3 The IDB Country Office in Mexico will provide ongoing performance supervision with backstopping from IDB technical staff in Washington. A Steering Committee (SC) will be established to guarantee a strategic overview of the

- Project. It will be composed by a member of each of the following key public entities: SENER, CONACTY, FS, Ruhrpumpen, SEMARNAT, CRE, and IIE.
- 3.4 The Project Management and Coordination Unit (PMCU) will be established within the IIE and will be responsible for the coordination and management of Project's activities, under the policies agreed by the IDB with the GoM.
- 3.5 **Procurement.** A complete procurement plan is attached hereto (see electronic link).
- B. Summary of Arrangements for Monitoring and Evaluating Results**
- 3.6 **Monitoring.** The Project will be closely monitored in accordance with the results matrix (see Annex II). The project will be monitored in parallel by the CONACYT which will require quarterly technical reports and audits on local contribution spending. Additionally, a Monitoring and Evaluation Plan has been developed which will facilitate the process and provide guidance to the PMCU (see link).
- 3.7 The IDB will be monitoring the Project both from INE/ENE and the IDB Country Office in Mexico, with random visits to PMCU and the Project sites. The PMCU will be responsible for the monitoring process and the preparation of quarterly and annual reports following the CONACYT, GEF and IDB requirements during the Project execution period. The PMCU will also be responsible for the preparation of financial documentation needed for the annual financial audits performed to the project. In addition, the PMCU will ensure the proper documentation of counterpart spending including in-kind contributions.
- 3.8 As mentioned before, a SC will be established to guarantee a strategic overview in the Project. Key stakeholders will be the members of the Committee.
- 3.9 The GENC-IIE, with information provided by the PMCU, will be responsible for reporting Project activities to the public financial institution in order to allow the aforementioned disbursement.
- 3.10 **Evaluation.** A mid-term evaluation will be carried out by an independent consultant hired by the IDB. A final independent evaluation will also be carried out by an independent consultant after 3 months of the last disbursement is made. Both audits will be financed by IDB and will use a before and after methodology using the indicators defined in the M&E arrangements annex.
- 3.11 A final report will be prepared by the GENC-IIE, three months after the final disbursement. This report will include all technical and non-technical results, as well as a compendium of the main lessons learned.
- 3.12 The IDB will include an ex-post economic evaluation to review the results of the program from the assumptions that determine their suitability for the design, for which take as their starting point the studies used in the preparation and monitoring of the project and the information collected by the executor.

Development Effectiveness Matrix			
Summary			
I. Strategic Alignment			
1. IDB Strategic Development Objectives		Aligned	
Lending Program	Lending to support climate change initiatives, renewable energy and environmental sustainability in Mitigation and Sustainable Practices.		
Regional Development Goals	Stabilization of CO2 equivalent emissions (metric tons per habitant) and Countries with planning capacity in mitigation and adaptation of climate change		
Bank Output Contribution (as defined in Results Framework of IDB-9)	Percentage of power generation capacity from low-carbon sources over total generation capacity funded by IDB; National frameworks for climate change mitigation supported; Climate change pilot projects in agriculture, energy, health, water and sanitation, transport, and housing.		
2. Country Strategy Development Objectives		Aligned	
Country Strategy Results Matrix	GN-2595-1	The IDB Country Strategy (CS) with Mexico highlights the support for the climate change adaptation and mitigation agenda at both the federal and subnational levels as one of its four priorities.	
Country Program Results Matrix	GN-2576	Mexico Country Programming Document 2010. The project is included in the pipeline.	
Relevance of this project to country development challenges (If not aligned to country strategy or country program)			
II. Development Outcomes - Evaluability		Highly Evaluable	Weight
		8.5	Maximum Score
			10
3. Evidence-based Assessment & Solution		7.5	25%
4. Ex ante Economic Analysis		10.0	25%
5. Monitoring and Evaluation		6.6	25%
6. Risks & Mitigation Monitoring Matrix		10.0	25%
Overall risks rate = magnitude of risks*likelihood		Low	
Environmental & social risk classification		C	
III. IDB's Role - Additionality			
The project relies on the use of country systems (VPC/PDP criteria)	No	In the case of International and National Competitive Biddings, the Executing Agency will utilize the bidding documents agreed between de Bank and the <i>Secretaría de la Función Pública (SFP)</i> .	
The project uses another country system different from the ones above for implementing the program			
The IDB's involvement promotes improvements of the intended beneficiaries and/or public sector entity in the following dimensions:			
Gender Equality			
Labor	Yes	Employment of Staff to develop the Wind Turbine Prototype.	
Environment	yes	Reductions of CO2 emissions of the IIE (Wind Turbine Prototype).	
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project			
The ex-post impact evaluation of the project will produce evidence to close knowledge gaps in the sector that were identified in the project document and/or in the evaluation plan.			
<p>Evaluability Assessment Note: The purpose of this note is to provide an overall assessment of the project's evaluability based on the standards described in the Evaluability Guidelines, as well as to ensure that the Board understands why scores were or were not given to the project. The following information should be developed in order to achieve this purpose. Assess and summarize the diagnosis and the level of empirical evidence to support it. Assess and summarize the level of empirical evidence (or cost-effectiveness) of the solution proposed. Assess and comment on Results Matrix Quality. Asses and describe evaluation methodology ex ante and ex post to be used by the project to demonstrate its results. Describe the main type of risk the operation is subject to and its intensity. Describe whether mitigation measures are in place and whether the can be monitored during the life of the project.</p>			

PROMOTION AND DEVELOPMENT OF LOCAL WIND TECHNOLOGIES IN MEXICO

**RESULTS FRAMEWORK
MATRIX OF INDICATORS**

Result	Indicator	Baseline 2011	Annual target				Final target	Means of verification
			2012	2013	2014	2015		
Impact								
Increase in the proportion of wind power generation over total power generation.	(%) Annual GWh of wind power/total GWh produced	1.5 ¹⁹	0.79 ²⁰	0.0	0.0	1.5	2.29	Installed wind power capacity-SENER
Increase in the generation of wind power through distributed generation	MWh per year	919	0.0	0.0	0.0	3,679	3,679	Annual report prepared by the IIE
Outcomes								
Increase in the annual generation of energy by the 1.2-MW Class I-A wind turbine connected to the distribution grid in area affected by project intervention	MWh per year	0.0	0.0	0.0	0.0	3,679	3,679	Annual report prepared by the IIE
Increase in the number of 1.2-MW Class I-A wind turbine replicated in the market	Number of Class I-A wind turbines installed	0.0	0.0	0.0	0.0	1	1	Annual report prepared by the IIE

¹⁹ CFE's website-Total installed capacity including IPP (2011): 51,180 MW. ME-X1011Full size doc-Total wind power capacity by 2011: 800MW

²⁰ Include wind power projects: Oaxaca I, II and III.

Outputs								
1.2-MW Class I-A wind turbine certified and functioning.	Number of wind turbines	0.0	0.0	0.0	0.0	1	1	Permissions approved published through CRE, ²¹ s website.
Persons trained in the construction, installation, operation and maintenance of the Class I-A wind turbine.	Number of persons	5	5	25	25	25	80	Annual report prepared by the IIE
Manual for the operation of the Class I-A wind turbine completed	Number of manuals	0.0	0.0	0.0	0.0	1	1	Manual prepared and validated by the Certification authority
Set of Blueprints for the reproduction of the Class I-A wind turbine completed	Set of blueprints ²²	0.0	3	1	0.0	1	5	Set of blueprints
Manual for the maintenance of the Class I-A wind turbine completed	Number of manuals	0.0	0.0	0.0	0.0	1	1	Manual prepared and validated by the Certification authority

²¹ CRE: Federal Regulatory Commission (Acronym in Spanish)

²² Set 1: rotors, blades and pitch; Set 2: Nacelle (brake, low speed shaft, gear box, generator, controller, anemometer, wind wane, high speed shaft; Set 3: yaw drive, yaw motor; Set 4: tower; Set 5: foundation



FONDO MULTILATERAL DE INVERSIONES

ANÁLISIS DE RIESGO PARA OPERACIONES DE CT FOMIN

PROPÓSITO:

LA HERRAMIENTA DE ANÁLISIS DE RIESGO HA SIDO DISEÑADA CON EL OBJETO DE RELEVAR LAS CARACTERÍSTICAS, EXPERIENCIA Y CAPACIDADES DE LA AGENCIA EJECUTORA PROPUESTA PARA UN PROYECTO FOMIN E IDENTIFICAR LOS POSIBLES RIESGOS DE IMPLEMENTACIÓN DEL MISMO. EL FORMULARIO CONTIENE TRES PARTES:

SECCIONES:

- I PERFIL INSTITUCIONAL DE LA AGENCIA EJECUTORA QUE PERMITE DETERMINAR LA SITUACIÓN LEGAL, LA CAPACIDAD DE APOORTE DE CONTRAPARTIDA Y OTROS ASPECTOS DE LA INSTITUCIÓN PROPONENTE.
- II EVALUACIÓN DE LA EXPERIENCIA Y CAPACIDADES INSTITUCIONALES DE LA AGENCIA EJECUTORA PROPONENTE QUE PERMITE DESTACAR LAS FORTALEZAS Y DEBILIDADES PARA LLEVAR A CABO LA EJECUCIÓN DEL PROYECTO EN TRES ÁREAS PRINCIPALES: ADQUISICIÓN DE BIENES Y SERVICIOS, GESTIÓN ADMINISTRATIVO-FINANCIERA Y CAPACIDAD TÉCNICA Y DE MONITOREO.
- II IDENTIFICACIÓN DE RIESGOS DE IMPLEMENTACIÓN Y SECTORIALES DEL PROYECTO Y MEDIDAS DE MITIGACIÓN A SER REALIZADAS DURANTE SU EJECUCIÓN.

SECCIÓN I - PERFIL INSTITUCIONAL DE LA AGENCIA EJECUTORA PROPONENTE

NÚMERO DE PROYECTO: ME-X1011
NOMBRE DE PROYECTO: Promotion and Development of Local Wind Technologies in Mexico
NOMBRE DE LA AGENCIA EJECUTORA: Electrical Research Institute (IIE) PÚBLICA: PRIVADA:
DIRECCIÓN Y TELÉFONO: Calle Reforma 113. Colonia Palmira. Cuernavaca, Morelos, 62490 México
PERSONA DE CONTACTO: Dr. Jorge M Huacuz V **PÁGINA WEB:** www.iie.org.mx
EMAIL: jhuacuz@iie.org.mx

INSTRUCCIONES: EL ESPECIALISTA DE LA OFICINA DE PAÍS ASIGNADO AL EQUIPO DE PROYECTO DEBERÁ, EN COLABORACIÓN CON LA AGENCIA EJECUTORA PROPONENTE, COMPLETAR Y ENVIAR ESTA PARTE AL MOMENTO DE SOLICITAR EL NÚMERO DE LA OPERACIÓN PARA REGISTRARSE EN EL OPUS. EL JEFE DE EQUIPO ADJUNTARÁ ESTA PARTE COMPLETADA COMO ANEXO AL ABSTRACTO AL MOMENTO DE SER SOMETIDO A CONSIDERACIÓN DEL COMITÉ DE POLÍTICAS Y OPERACIONES (POC POR SUS SIGLAS EN INGLÉS) DEL FOMIN.

- 1 LA AGENCIA EJECUTORA CUENTA CON SU PROPIA PERSONERÍA JURÍDICA O SE PROPONE UN MECANISMO DE ARREGLO INSTITUCIONAL CLARO QUE LE PERMITA AL FOMIN ENTRAR EN UN CONVENIO LEGAL? (INDICAR: LA NATURALEZA DE LA AGENCIA EJECUTORA - CON/SIN FINES DE LUCRO - AÑO DE CONSTITUCIÓN Y BREVEMENTE EL OBJETIVO/MISIÓN PRINCIPAL DE LA INSTITUCIÓN).
R: El Instituto de Investigaciones Eléctricas (IIE) es un Organismo Público Descentralizado, del Gobierno Federal Mexicano, y forma parte del Sector Energía de este país. Fue creado por decreto presidencial en diciembre de 1975. Cuenta con personalidad jurídica y patrimonio propios, lo que le permite establecer convenios legales, tanto con instituciones públicas, como privadas y organismos internacionales. No tiene fines de lucro, pero de acuerdo con la Ley Mexicana de Ciencia y Tecnología, puede tener excedentes monetarios en su operación, los cuales son destinados al desarrollo de nuevos proyectos a través de un fideicomiso creado ex-profeso para ello. La misión del IIE es promover y apoyar la innovación tecnológica en el sector eléctrico mexicano.
- 2 LA AGENCIA EJECUTORA TIENE DISPONIBILIDAD DE RECURSOS DE CONTRAPARTIDA? (INDICAR FUENTES, MONTOS -EN US\$- Y CONDICIONES QUE SE PREVÉ PODRÍAN INTEGRAR LA CONTRAPARTIDA LOCAL PROPUESTA EN EL PROYECTO - DESEABLE POR MEDIO DE UNA CARTA DE COMPROMISO).
R: El IIE tomó la iniciativa de desarrollar tecnología eólica con sus propios recursos. A la fecha, ha invertido 2.24 millones de UDS en este desarrollo. Recientemente el Gobierno Mexicano, a través del Fondo SENER-CONACYT Sustentabilidad Energética, asignó recursos a fondo perdido por la cantidad de XXX US\$ para la continuación del proyecto, los cuales se complementan con una aportación en especie de XXX US\$ por parte de una empresa industrial asociada con el proyecto. Las correspondientes cartas de asignación de recursos, convenios de vinculación y otros elementos de prueba, se adjuntan al Documento de Proyecto
- 3 LA AGENCIA EJECUTORA TIENE EXPERIENCIA PREVIA CON EL FOMIN O EL BANCO? SI LA TIENE, ÉSTA FUE (ES) POSITIVA/EXITOSA? (EN CASO AFIRMATIVO, INDICAR LOS NÚMEROS DE PROYECTO, ESTADO DE EJECUCIÓN Y PRINCIPALES RESULTADOS ALCANZADOS).
NO
- 4 LA AGENCIA EJECUTORA CUENTA CON UN SISTEMA ADMINISTRATIVO, FINANCIERO, DE CONTROL INTERNO Y DE AUDITORIA ESTABLECIDO? (EXPLICAR BREVEMENTE LAS PRINCIPALES CARACTERÍSTICAS DE DICHO SISTEMA).
R: El IIE cuenta con una División de Administración y Finanzas, A esta División pertenece la Gerencia de Recursos Financieros integrada por los departamentos de tesorería, presupuestos y cuentas; también pertenece la Gerencia de Recursos Materiales, integrada por los departamentos de adquisiciones, mantenimiento y servicios generales. La Gerencia de Asesoría Jurídica pertenece a esta División, la cual se encarga de todos los aspectos legales de contratos con terceros. El IIE se apoya en un despacho de contaduría externo que realiza las auditorías correspondientes, y periódicamente está sujeto a las auditorías de la Contaduría Mayor de la Federación. El Organismo Interno de Control, dependencia de la Secretaría de la Función Pública, vigila que las operaciones del IIE se apeguen estrictamente a las leyes y normas establecidas en el país.
- 5 LA AGENCIA EJECUTORA Y SUS PRINCIPALES EJECUTIVOS NO HAN ENFRENTADO ALEGACIONES CRIMINALES U OTRAS DEMANDAS LEGALES (INCLUYENDO FRAUDE) EN LOS ÚLTIMOS CINCO AÑOS? (INCLUIR DECLARACIÓN JURADA DEL REPRESENTANTE LEGAL)
R: NO

Comentarios del Especialista FOMIN:

SECCIÓN II: EVALUACIÓN INSTITUCIONAL DE LA AGENCIA EJECUTORA

NÚMERO DE PROYECTO: ME-X1011
NOMBRE DE PROYECTO: Promotion and Development of Local Wind Technologies in Mexico
NOMBRE DE LA AGENCIA EJECUTORA: Electrical Research Institute (IEE)

INSTRUCCIONES: EL ESPECIALISTA DE LA OFICINA DE PAÍS PODRÁ ENVIAR ESTA SECCIÓN A LA AGENCIA EJECUTORA PROPONENTE PARA QUE SEA COMPLETADA COMO AUTO-EVALUACIÓN. UNA VEZ QUE EL PROYECTO HA SIDO DECLARADO ELEGIBLE POR EL POC, EL ESPECIALISTA DE LA OFICINA DE PAÍS DEBERÁ VALIDAR LA INFORMACIÓN PROPORCIONADA POR LA AGENCIA EJECUTORA, Y ENVIAR LOS RESULTADOS AL JEFE DE EQUIPO PARA QUE SE ADJUNTE EN LOS ARCHIVOS TÉCNICOS DEL PROYECTO. PARA LA VALIDACIÓN DE LA INFORMACIÓN, EL ESPECIALISTA DE LA OFICINA DE PAÍS PODRÁ SOLICITAR APOYO DE OTROS ESPECIALISTAS (FIDUCIARIOS DE ADQUISICIONES Y/O FINANCIEROS). LA AGENCIA EJECUTORA DEBERÁ PROVEER INFORMACIÓN AMPLIADA Y/O

RESPUESTAS AGENCIA EJECUTORA

(A) CONTRATACIÓN DE SERVICIOS y ADQUISICIÓN DE BIENES

		SI	NO	COMENTARIO
1	En la institución existe asignación formal de responsabilidades para la adquisición, administración y custodia de bienes y servicios?	X		Existe un gerente de compras y dos jefas de compras una de compras nacionales y otras de compras internacionales,
2	Cuenta la institución con un Manual de Procedimientos (escritos o buenas prácticas) para la adquisición de bienes y servicios que contemple: i) monto límite para compras directas de bienes, (ii) montos entre los cuales se realiza comparación de precios, (iii) monto a partir del cual se realizan cotizaciones/licitaciones, iv) procedimientos para la contratación de consultores ?	X		Si se tiene un procedimiento para adquisiciones, manual P-PM-101, revisado en Marzo 2010
3	En la institución existe un código de ética y/o políticas claras que eviten y establezcan sanciones en casos de conflictos de interés en los procesos de adquisiciones o contrataciones, tales como el involucramiento de familiares y/o directivos?	X		Existe un código de conducta que se distribuye entre los empleados y que está publicado en su página de internet.
4	En la institución existe separación de funciones en las actividades de adquisiciones (o sea que la persona que recibe los bienes no es la misma que la que paga y no es la misma que adjudica, etc.)?	X		Si en su manual de organización estan definidas las funciones y responsabilidades de cada persona en el
5	Dentro del sistema de administración de bienes y servicios de la institución (sea automatizado o manual) se contempla que toda compra o contratación realizada cuente con la documentación de respaldo suficiente que permita identificar la naturaleza y objeto de la misma?	X		Si se reviso un expediente fisico
6	La institución cuenta con un sistema de administración de contratos (sea automatizado o manual) que le permite identificar los compromisos desde su inicio y establecer un vínculo con los pagos?	X		Sólo se cuenta con un sistema automatizado en el caso de contratos de individuos, en el caso de firmas se mitiga
7	La institución dispone de un sistema de archivo (espacio físico seguro y personal responsable asignado) de la documentación de soporte de adquisiciones de bienes y servicios y de contratación de expertos/consultores?	X		Se tiene un archivos de adquisiciones y adicionalmente se tiene un archivo independiente y centralizado con un
8	En la Institución se asigna un comité de selección para la contratación de expertos y la adquisición de bienes y servicios?	X		El CAAS comité de adquisiciones, arrendamientos y servicios lo integran el responsable de compras, una responsable de
9	La Institución tiene experiencia previa en la contratación de consultorías y/o adquisiciones de bienes y servicios con organizaciones donantes o de financiamiento internacional? Si es afirmativo, especificar las organizaciones en Comentarios.	X		
10	La institución tiene algún método de selección y contratación de personal y/o expertos (ejemplo: Tercerización de la búsqueda, registro de consultores, temas, etc) ?		X	Las contrataciones de personal las realiza su área de RH y evaluación del desempeño. No usan servicios de
11	Previo a la adquisición de bienes y servicios -diferentes a los de consultoría-, la institución realiza sondeos de mercado y/o cotizaciones con más de un proveedor?	X		Si de hecho se realizan previos a iniciar los procesos de adquisiciones para identificar el nivel de presupuesto
12	Antes de decidir sobre la compra de un bien o servicio, la institución verifica el cumplimiento de especificaciones técnicas del bien y decide sobre el menor precio?	X		
13	La institución realiza inventarios físicos de bienes al menos una vez al año?	X		

SECCIÓN II: EVALUACIÓN INSTITUCIONAL DE LA AGENCIA EJECUTORA

NÚMERO DE PROYECTO: ME-X1011
 NOMBRE DE PROYECTO: Promotion and Development of Local Wind Technologies in Mexico
 NOMBRE DE LA AGENCIA EJECUTORA: Electrical Research Institute (IE)

(B) GESTIÓN ADMINISTRATIVA - FINANCIERA- CONTABLE

RESPUESTAS AGENCIA EJECUTORA		COMENTARIO
SI	NO	
X		El instituto tiene un alrededor de 1,000 empleados por lo tanto sólo se cuenta con un departamento de relaciones laborales. Si el departamento de relaciones laborales tiene los perfiles anivel Jefe de departamento al menos.
X		Si el equipo gerencial tiene al menos 10 años de ser el mismo
X		Area IT bastante robusta capaz de adecuar y disenar sistemas que de hecho
X		Si en el manual de Organización de la Gerencia de Recursos Financieros M-RF-2011 revisada en junio de 2010.
X		Si de nivel Jefe de área hacia arriba las áreas contables y financieras tienen
X		El IIE opera tiene bastante experiencia en administración de proyectos, su contabilidad es bastante adecuada.
X		Se sugiere evaluar por el IIE a mendida que avance el proyecto la necesidad de personal adicional.
X		Si el IIE tiene un presupuesto anual de 800 mdp
X		Se maneja la contabilidad por proyectos de people soft
	X	
X		
X		
X		si las modificacion se hacen a nivel Jefatura de departamento
X		Si se cuenta con un archivo centralizado de contabilidad y finanzas.
X		Si en el manual de Organización de la Gerencia de Recursos Financieros M-RF-2011 revisada en junio de 2010.
X		Si generalmente y todas pasan por el area de control presupuestal.
X		Las gerencias de Rec Financieros, Materiales y Relaciones laborales
X		Se tienen dictámenes financieros, fiscales, presupuestal y seguro social
X		Si esto es normado por la SFP y revisado por los auditores externos y por el organo sistema de control

- 1 La Institución cuenta con un **organigrama actualizado** que refleja las líneas jerárquicas de la **totalidad** del personal que trabaja en ella?
- 2 La Institución cuenta con **descripciones/perfiles de cargos** para los principales puestos (por ejemplo: Gerencia y mandos medios)?
- 3 El equipo gerencial de la institución se ha mantenido estable en los últimos tres años?
- 4 La institución cuenta con **hardware, software y conectividad** (Internet) suficientes y modernos para llevar a cabo sus actividades? (Al menos 2 computadoras con antigüedad no mayor a 5 años)
- 5 Dentro de la Institución existe personal con **responsabilidades asignadas** para la Administración Financiera (Presupuesto, Tesorería, Contabilidad)?
- 6 En la institución el personal asignado al área financiero-contable posee **grados académicos y experiencia** (por lo menos 3 años) relativa a las tareas contable financieras?
- 7 El personal asignado al área financiero-contable cuenta con **experiencia en la administración de proyectos** financiados por **organizaciones donantes o de financiamiento internacional?**
- 8 La carga de trabajo del personal asignado al área financiero-contable le permitiría **absorber** tareas relacionadas a la **administración de un proyecto adicional?**
- 9 En la institución existe disponibilidad de **recursos** para sufragar el salario al personal y la operación de la unidad financiero-contable durante la ejecución del proyecto propuesto?
- 10 La institución dispone de un **sistema contable informático** que le permita identificar, verificar y controlar las transacciones por **fuerza de financiamiento?**
- 11 El sistema contable informático permite realizar transacciones en moneda local y moneda extranjera (**bimonetario** - USD y moneda local)?
- 12 El sistema contable informático permite realizar **cierres contables** mensuales?
- 13 Los comprobantes del sistema contable informático incluyen el **número de copias a emitir**, el destino de cada una y las firmas que son necesarias en ellos?
- 14 El(los) funcionario(s) autorizado(s) para **modificar los registros contables** del sistema informático tiene(n) **suficiente jerarquía dentro de la institución** (por ejemplo: Jefe de la Unidad Contable ó Gerente General)?
- 15 La institución dispone de un **sistema de archivo** (espacio físico seguro y personal responsable asignado) para la documentación de soporte de las transacciones financieras que le permita referenciar e identificar en forma directa las operaciones?
- 16 La institución dispone de un **manual de procedimientos** contable-financiero (que incluya indicación de autoridades y responsabilidades para los procesos contables)?
- 17 Todas las **transacciones financieras**, incluidos los compromisos adquiridos, se registran en el sistema en el **momento de su ocurrencia?**
- 18 Existe **separación de funciones** para la gestión financiera-administrativa dentro de la agencia ejecutora (por ejemplo: él que autoriza los cheques no los paga)?
- 19 La institución cuenta con Estados Financieros anuales **Auditados y con opinión limpia?**
- 20 La institución tiene al día sus **obligaciones tributarias?**

PARTE II: EVALUACIÓN INSTITUCIONAL DE LA AGENCIA EJECUTORA

NÚMERO DE PROYECTO: ME-X1011
NOMBRE DE PROYECTO: Promotion and Development of Local Wind Technologies in Mexico
NOMBRE DE LA AGENCIA EJECUTORA: Electrical Research Institute (IRE)

(C) CAPACIDAD TÉCNICA Y DE MONITOREO

RESPUESTAS AGENCIA EJECUTORA

- 1 La Institución cuenta con **experiencia previa** en las actividades relacionadas con la iniciativa propuesta? Si contestó afirmativamente, indique en Comentarios el número de proyectos similares ejecutados en los últimos cinco años y los resultados alcanzados
- 2 La institución tiene contratado **personal con experiencia** en las actividades y en el tema a ser abordado por el proyecto?
- 3 La institución cuenta con un **grado aceptable de legitimación** (capacidad y/o autoridad reconocidas) entre el grupo meta (ejemplo: empresarios, asociaciones y comunidades)
- 4 La institución aplica un **Plan Estratégico que** es revisado periódicamente (anual, bi-anual o tri-anual)?
- 5 La institución cuenta con un **Plan Operativo Anual** que se **actualiza periódicamente**?
- 6 El Plan Operativo Anual institucional vigente incluye detalle a nivel de **actividades, indicadores** por actividades, definición de **responsables, tiempos y presupuesto** por rubros?
- 7 La Institución tiene información sobre los beneficiarios que permita la construcción de una **línea de base**?
- 8 La institución posee **instrumentos o sistemas** (manuales o automatizados) para la evaluación de resultados de sus proyectos?
- 9 Los instrumentos o sistemas con los que cuenta le permiten monitorear: (i) **Acciones** (actividades completadas); (ii) **Resultados** (productos entregados); (iii) **Efectos** (cambios en los beneficiarios)?
- 10 El instrumento o sistema emite **reportes** que son **utilizados por la gerencia** u otro personal delegado para monitorear los proyectos?

	SI	NO
1	X	
2	x	
3	x	
4	x	
5	x	
6	x	
7	x	
8	x	
9	x	
10	x	

COMENTARIO

Primera etapa del proyecto objeto de esta iniciativa. Creación del Centro Regional De tecnología Eólica

SECCIÓN II EVALUACIÓN INSTITUCIONAL DE LA AGENCIA EJECUTORA
RESULTADOS Y RECOMENDACIONES

NÚMERO DE PROYECTO:	ME-X1011	
NOMBRE DE PROYECTO:	PROMOTION AND DEVELOPMENT OF LOCAL WIND TECHNOLOGIES IN MEXICO	
NOMBRE DE LA AGENCIA EJECUT	ELECTRICAL RESEARCH INSTITUTE (IIE)	
		PUNTAJES OBTENIDOS
NIVEL DE RIESGO (RANGO)	(A) CONTRATACIÓN DE SERVICIOS y ADQUISICIÓN DE BIENES	90
BAJO (76-100)	Capacidad satisfactoria para contratación de servicios y adquisición de bienes. No requiere acompañamiento o capacitación. Elegible para la revisión ex-post de las adquisiciones de bienes y servicios anual.	X
MEDIO (51-75)	Capacidad moderada para la contratación de servicios y adquisición de bienes. Requiere acompañamiento y capacitación con financiamiento del proyecto. Elegible para revisión ex-post de las adquisiciones de bienes y servicios semestral.	
ALTO (0-50)	Capacidad baja para la contratación de servicios y adquisición de bienes. Requiere acompañamiento y capacitación con financiamiento del proyecto y una nueva evaluación para ser elegible para la revisión ex post de las adquisiciones de bienes y servicios.	
NIVEL DE RIESGO (RANGO)	(B) GESTIÓN ADMINISTRATIVA - FINANCIERA- CONTABLE	90
BAJO (76-100)	Capacidad satisfactoria para gestión financiera y administrativa. No requiere acompañamiento o capacitación. Elegible para revisión ex-post de desembolsos anual y estado financiero auditado final al cierre del proyecto.	X
MEDIO (51-75)	Capacidad moderada para gestión financiera y administrativa. Requiere acompañamiento y capacitación con financiamiento del proyecto. Elegible para la revisión ex-post de desembolsos semestral y estado financiero auditado final al cierre del proyecto.	
ALTO (0-50)	Capacidad baja para la gestión financiera y administrativa. Requiere acompañamiento y capacitación con financiamiento del proyecto y una nueva evaluación para ser elegible para la revisión ex post de desembolsos. Las auditorías del proyecto serán intermedia y final.	
NIVEL DE RIESGO (RANGO)	(C) CAPACIDAD TÉCNICA Y DE MONITOREO	100
BAJO (76-100)	Capacidad satisfactoria en el área técnica y monitoreo. No requiere apoyo adicional.	X
MEDIO (51-75)	Capacidad moderada en el área técnica y/o monitoreo. Requiere apoyo adicional en: (llenar los temas e incluirlos para ser financiados con el proyecto).	
ALTO (0-50)	Capacidad baja en el área técnica y monitoreo. Requiere apoyo adicional en: (llenar los temas e incluirlos para ser financiados con el proyecto).	

Description of the contract and estimated cost of procurement	Procurement method ²³	Review (prior or post)	Source of financing and percentage		Prequalification (Yes/No)	Estimated dates		Status (pending, in process, awarded, cancelled)	Comments
			IDB-GEF %	Local /other %		Publication of specific procurement notice	Completion of contract		
1. Goods									
<ul style="list-style-type: none"> ○ Commercial components: generator, motors, control panel, cables, joints, bearings, PLC's, power conditioner Estimated cost (US\$1,800,000) 	PC	Ex-post	0.0	100	No	N/A	4Q 2012		
<ul style="list-style-type: none"> ○ Blades (rotor, line) Estimated cost (US\$1,030,880) 	DC	Ex-ante	100	0.0	No	N/A	4Q 2014		
<ul style="list-style-type: none"> ○ FVR components, heat exchanger, screws, gears Estimated cost (US\$600,000) 	PC	Ex-post	0.0	100	No	N/A	1Q 2013		
<ul style="list-style-type: none"> ○ Tower Estimated cost (US\$823,160) 	NCB	Ex-ante	100	0.0	No	2Q 2014	1Q 2015		
<ul style="list-style-type: none"> ○ Rotor, yaws, chasis, pitch, low speed shaft, housing for the main shaft, gear box housing Estimated cost (US\$3,000,000) 	PC	Ex-post	0	100	No	N/A	1Q 2013		
<ul style="list-style-type: none"> ○ Variable speed motor for high speed shaft test Estimated cost (US\$365,440) 	NCB	Ex-ante	00	0.0	No	3Q 2012	2Q 2013		
<ul style="list-style-type: none"> ○ Electronic devices for wind turbine test Estimated cost (US\$1,502,497) 	NCB	Ex-ante	72	28	No	2Q 2014	4Q 2014		
2. Services									
<ul style="list-style-type: none"> ○ Component bench tests Estimated cost (US\$300,000) 	PC	Ex-post	0.0	100	No	N/A	3Q2012		
<ul style="list-style-type: none"> ○ Packing of components for transportation, transportation Estimated cost (US\$300,000) 	QCBS	Ex-ante	100	0.0	No	N/A	4Q2014		
<ul style="list-style-type: none"> ○ Hiring a consultant to conduct assembling and commissioning of wind turbine Estimated cost (US\$72,000) 	QCII	Ex-ante	100	0.0	No	3Q 2013	4Q2015		

²³ **ICB:** International competitive bidding; **LIB:** limited international bidding; **NCB:** national competitive bidding; **PC:** price comparison; **DC:** direct contracting; **QCBS:** Quality- and cost-based selection **QBS:** Quality-based selection **FBS:** Selection under a fixed budget; **LCS:** Least-cost selection; **CQS:** Selection based on the consultants' qualifications; **SSS:** Single-source selection; **QCII:** Comparison of qualification of the international individual consultant; **QCNI:** Comparison of qualification of the national individual consultant

Description of the contract and estimated cost of procurement	Procurement method ²³	Review (prior or post)	Source of financing and percentage		Prequalification (Yes/No)	Estimated dates		Status (pending, in process, awarded, cancelled)	Comments
			IDB-GEF %	Local /other %		Publication of specific procurement notice	Completion of contract		
<ul style="list-style-type: none"> ○ Wind turbine test under windy conditions at the CERTE Estimated cost (US\$1,444,203) ○ Certification of wind turbine power curve Estimated cost (US\$133,000) ○ Hiring a consultant to guide certification of wind turbine Estimated cost (US\$72,800) ○ Hiring a consultant in commercial wind power project development Estimated cost (US\$18,200) ○ Hiring a consultant (IT Engineer) Estimated cost (US\$111,440) ○ Hiring a consultant (Electrical Engineer) Estimated cost (US\$145,040) ○ Hiring a consultant (Project Analyst) Estimated cost (US\$135,440) ○ Hiring a consultant (Project Coordinator) Estimated cost (US\$215,160) ○ Hiring a consultant (Project Administrator) Estimated cost (US\$168,840) 	QCBS	Ex-ante	75	25	No	N/A	4Q 2015		
	QCBS	Ex-ante	100		No	2Q 2015	4Q 2015		
	QCII	Ex-ante	100		No	4Q 2014	4Q 2015		
	QCNI	Ex-ante	100		No	1Q 2015	4Q 2015		
	QCNI	Ex-ante	100		No	3Q 2012	4Q 2015		
	QCNI	Ex-ante	100		No	3Q 2012	4Q 2015		
	QCNI	Ex-ante	100		No	3Q 2012	4Q 2015		
	QCNI	Ex-ante	100		No	2Q 2012	4Q 2015		
	QCNI	Ex-ante	100		No	2Q 2012	4Q 2015		
3. <u>Civil works</u>									
<ul style="list-style-type: none"> ○ Erection of the wind turbine Estimated cost (US\$1,686,497) ○ Construction of tower foundation Estimated cost (US\$357,720) 	NCB	Ex-ante	75	25	No	3Q 2014	1Q 2015		
	PC	Ex-ante	100	0.0	No	1Q 2014	4Q2014		

SAFEGUARD POLICY FILTER REPORT

This Report provides guidance for project teams on safeguard policy triggers and should be attached as an annex to the PP (or equivalent) together with the Safeguard Screening Form, and sent to ESR.

1. Save as a Word document.
2. Enter additional information in the spaces provided, where applicable.
3. Save new changes.

PROJECT DETAILS	IDB Sector	ENERGY-ALTERNATIVE SOURCES OF ENERGY
	Type of Operation	Technical Cooperation
	Additional Operation Details	
	Investment Checklist	Power Wind
	Team Leader	Gischler Blanco, Christiaan (CHRISTIAANG@iadb.org)
	Project Title	Development of Local Wind Technologies
	Project Number	ME-X1011
	Safeguard Screening Assessor(s)	Jose Emiliano Detta (jdetta@iadb.org)
	Assessment Date	2011-10-20
	Additional Comments	

SAFEGUARD POLICY FILTER RESULTS	Type of Operation	Investment Grants	
	Safeguard Policy Items Identified (Yes)	The Bank will make available to the public the relevant Project documents.	(B.01) Access to Information Policy–OP-102
		The operation is in compliance with environmental, specific women's rights, gender, and indigenous laws and regulations of the country where the operation is being implemented (including national obligations established under ratified Multilateral Environmental Agreements).	(B.02)

		The operation (including associated facilities) is screened and classified according to their potential environmental impacts.	(B.03)
		An Environmental Assessment is required.	(B.05)
		The Bank will monitor the executing agency/borrower's compliance with all safeguard requirements stipulated in the loan agreement and project operating or credit regulations.	(B.07)
	Potential Safeguard Policy Items(?)	No potential issues identified	
	Recommended Action:	Operation has triggered 1 or more Policy Directives; please refer to appropriate Directive(s). Complete Project Classification Tool. Submit Safeguard Policy Filter Report, PP (or equivalent) and Safeguard Screening Form to ESR.	
Additional Comments:			

ASSESSOR DETAILS	Name of person who completed screening:	Jose Emiliano Detta (jdetta@iadb.org)
	Title:	
	Date:	2011-10-20

SAFEGUARD SCREENING FORM

This Report provides a summary of the project classification process and is consistent with Safeguard Screening Form requirements. The printed Report should be attached as an annex to the PP (or equivalent) and sent to ESR.

1. Save as a Word document.
2. Enter additional information in the spaces provided, where applicable.
3. Save new changes.

PROJECT DETAILS	IDB Sector	ENERGY-ALTERNATIVE SOURCES OF ENERGY
	Type of Operation	Technical Cooperation
	Additional Operation Details	
	Country	MEXICO
	Project Status	
	Investment Checklist	Power Wind
	Team Leader	Gischler Blanco, Christiaan (CHRISTIAANG@iadb.org)
	Project Title	Development of Local Wind Technologies
	Project Number	ME-X1011
	Safeguard Screening Assessor(s)	Jose Emiliano Detta (jdetta@iadb.org)
	Assessment Date	2011-10-20
	Additional Comments	

PROJECT CLASSIFICATION SUMMARY	Project Category: C	Override Rating:	Override Justification:
	Conditions/ Recommendations		Comments:
		<ul style="list-style-type: none"> • No environmental assessment studies or consultations are required for Category "C" operations. • Some Category "C" operations may require specific safeguard or monitoring requirements (Policy Directive B.3).Where relevant, these operations will establish safeguard, or monitoring requirements to address environmental and other risks (social, disaster, cultural, health and safety etc.). • The Project Team must send the PP (or equivalent) containing the Environmental and Social Strategy (the requirements for an ESS are described in the Environment Policy Guideline: Directive B.3) as well as the Safeguard Policy Filter and Safeguard Screening Form Reports. 	

SUMMARY OF IMPACTS/RISKS AND POTENTIAL SOLUTIONS	Identified Impacts/Risks	Potential Solutions
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ASSESSOR DETAILS	Name of person who completed screening:	Jose Emiliano Detta (jdetta@iadb.org)
	Title:	
	Date:	2011-10-20