

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

## **NICARAGUA**

### **NATIONAL SUSTAINABLE ELECTRIFICATION AND RENEWABLE ENERGY PROGRAM (PNESER)**

#### **THIRD LOAN (NI-L1063)**

#### **LOAN PROPOSAL**

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<b>REQUIRED</b>	
1.	Environmental and Social Management Report (ESMR) <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37052628">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37052628</a>
2.	Annual work plan (AWP) <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37052629">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37052629</a> <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37052630">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37052630</a> <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37052631">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37052631</a>
3.	Complete updated procurement plan <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36694342">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36694342</a> <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36694343">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36694343</a> <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36694344">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36694344</a>
4.	Monitoring and evaluation arrangements <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36740423">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36740423</a>
<b>OPTIONAL</b>	
1.	National Sustainable Electrification and Renewable Energy Program (PNESER) – First Loan (IDB-I) Document PR-3556 of 17 June 2010 <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35219846">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35219846</a>
2.	National Sustainable Electrification and Renewable Energy Program (PNESER) – Second Loan (IDB-II) Document PR-3718 of 11 July 2011 <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36278027">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36278027</a>
3.	Memorandum of understanding on the National Sustainable Electrification and Renewable Energy Program for Nicaragua, signed on 31 January 2011 <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35820165">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35820165</a>
4.	Main PNESER document <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35078748">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35078748</a>
5.	Technical and economic evaluation of the program <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35062497">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35062497</a>
6.	Original Ministry of Energy and Mining Framework Cooperation Agreement with DISNORTE and DISSUR: Component 1. Expansion of Networks <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35526111">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35526111</a>
7.	Amendment 1. Ministry of Energy and Mining Framework Cooperation Agreement with DISNORTE and DISSUR: Component 1. Expansion of Networks <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36683801">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36683801</a>
8.	Original Ministry of Energy and Mining Framework Cooperation Agreement with DISNORTE and DISSUR: Component 2. Normalization of Service in Settlements <a href="http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35526091">http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35526091</a>

9. Amendment 2. Ministry of Energy and Mining Framework Cooperation Agreement with DISNORTE and DISSUR:  
Component 2. Normalization of Service in Settlements  
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36683805>
10. PNESER Operating Regulations (under review)  
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35924583>
11. Technical and preparation support archives  
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35076761>
12. Loan proposals for financing of energy efficiency projects  
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35361307>
13. Law 791, Law amending Law 788, Law amending and supplementing Law 583, Law establishing Empresa Nacional de Transmisión Eléctrica (ENATREL)  
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=36950466>
14. Project Monitoring Report for the program (5/18/2012)  
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37077337>
15. Final report on the pilot project for normalization of service in settlements  
<http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37079639>

## ABBREVIATIONS

CABEI	Central American Bank for Economic Integration
DISNORTE	Distribuidora de Electricidad del Norte, S.A.
DISSUR	Distribuidora de Electricidad del Sur, S.A.
EIB	European Investment Bank
ENATREL	Empresa Nacional de Transmisión Eléctrica
ENEL	Empresa Nicaragüense de Electricidad
ENPV	Economic net present value
EU	European Union
FSO	Fund for Special Operations
GON	Government of Nicaragua
GWh	Gigawatt-hours
ICB	International competitive bidding
ICFA	International cooperation and finance agency
IDB-I	First IDB loan for the PNESER (NI-L1040) (2342/BL-NI)
IDB-II	Second IDB loan for the PNESER (NI-L1050) (2342/BL-NI-4)
IDB-III	Third IDB loan for the PNESER (NI-L1063)
IERR	Internal economic return rate
INE	Instituto Nicaragüense de Energía [Nicaraguan Energy Institute]
JICA	Japan International Cooperation Agency
KEXIM	Export Import Bank of Korea
kW	kilowatts
LAIF	Latin America Investment Facility
MEM	Ministry of Energy and Mining
MHCP	Ministry of Finance
NCB	National competitive bidding
NDF	Nordic Development Fund
OFID	OPEC Fund for International Development
OPEC	Organization of Petroleum Exporting Countries
PNESER	Programa Nacional de Electrificación Sostenible y Energía Renovable [National Sustainable Electrification and Renewable Energy Program]
SCF	Single Currency Facility
SIEPAC	Sistema de Interconexión Eléctrica para América Central [Central American Electric Interconnection System]

**NICARAGUA**  
**NATIONAL SUSTAINABLE ELECTRIFICATION AND RENEWABLE ENERGY PROGRAM (PNESER)**  
**(NI-L1063)**

Financial Terms and Conditions					
Borrower: Republic of Nicaragua Executing agency: Ministry of Energy and Mining (MEM), Empresa Nacional de Transmisión Eléctrica (ENATREL), and Empresa Nicaragüense de Electricidad (ENEL)				OC	FSO
			Amortization period:	30 years	40 years
			Grace period:	5.5 years	40 years
			Disbursement period:	4 years	4 years
Source	Amount	%	Interest rate:	SCF-Fixed	0.25%
IDB	US\$35,000,000	100	Inspection and supervision fee:	*	N/A
OC	US\$17,500,000	50	Credit fee:	*	N/A
FSO	US\$17,500,000	50	Currency:	US\$ SCF	US\$
Structure and Financing of PNESER					
The proposed operation is the third loan by the Inter-American Development Bank (IDB) for the National Sustainable Electrification and Renewable Energy Program (PNESER). The program structure allows IDB resources to be contributed in 2010, 2011, and 2012 through operations approved independently by the Board of Executive Directors, with investments that are justified and viable autonomously but enable the targets in the results framework to be met cumulatively. The design of the program is keyed to the availability of concessional resources and also serves to leverage resources from other donors, while maintaining the concessionality agreed upon between the Nicaraguan government and the international community as part of the arrangements for reducing Nicaragua’s debt.					
<a href="#">IDB-I (NI-L1040) (2010):</a>	US\$30,500,000	The PNESER will support seven components: (i) rural electrification through network extension; (ii) normalization of service in settlements; (iii) expansion in isolated areas with renewable energy; (iv) preinvestment and studies for generation projects with renewable energy; (v) energy efficiency programs; (vi) strengthening the transmission system in rural areas; and (vii) sustainability of ENEL isolated systems.			
<a href="#">IDB-II (NI-L1050) (2011):</a>	US\$22,000,000				
<b>IDB-III (NI-L1063) (2012):</b>	<b>US\$35,000,000</b>				
ICFA**	US\$264,800,000				
Local and third-party contributions	US\$66,400,000				
<b>Total cost of PNESER</b>	<b>US\$418,700,000</b>				
Project Overview					
The objective of the PNESER is to support the efforts of the Nicaraguan government to reduce poverty by promoting access by a significant portion of the population to efficient, sustainable electricity service, while supporting the creation of conditions to move forward on a change to the energy mix that contributes to better conditions for mitigation and adaptation to climate change.					
<b>Special conditions precedent to the first disbursement:</b> (i) the Bank has received the legal reports on the validity of the obligations assumed by the borrower with regard to IDB-III; (ii) updated annual work plans (AWP) for each sub-program will be presented, including updated procurement plans; (iii) the conditions cited in Article 4 of the Modified Contract No. 3 will be fulfilled; and (iv) evidence will be presented showing completion of the actions envisaged in the action plan to mitigate internal control weaknesses both at ENEL and ENATREL (paragraph 3.1). <b>Special conditions precedent to the disbursement of resources for each subprogram:</b> the MHCP-MEM execution agreement and the agreements between MHCP and ENATREL will be updated (paragraph 3.1). <b>Special execution conditions:</b> The same special execution conditions approved for programs NI-L1040 (IDB-I) and NI-L1050 (IDB-II) will apply to this operation.					
<b>Exceptions to Bank policies:</b> None					
<b>Project consistent with country strategy:</b>					
	Yes [ X ]	No [ ]			
<b>Project qualifies as:</b>	SEQ [X ]	PTI [ ]	Sector [ ]	Geographic [ ]	Headcount [ ]
<b>Procurement:</b> See updated 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 provisions 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.

\*\* International cooperation and finance agencies (ICFAs): European Investment Bank (EIB), Central American Bank for Economic Integration (CABEI), Nordic Development Fund (NDF), Latin America Investment Facility (LAIF), OPEC Fund for International Development (OFID), Japan International Cooperation Agency (JICA), and Export Import Bank of Korea (KEXIM).

## I. DESCRIPTION AND RESULTS MONITORING

### A. Background, problem addressed, and rationale

- 1.1 The National Sustainable Electrification and Renewable Energy Program (PNESER) is a multiyear program<sup>1</sup> supported by numerous international cooperation and finance agencies<sup>2</sup> that is intended to have a transformative effect on national electricity coverage by significantly increasing the coverage rate, while also scaling up the use of renewable energy and promoting energy efficiency<sup>3</sup> in Nicaragua.
- 1.2 The objectives of the PNESER are to: (i) to support the efforts of the Nicaraguan government to reduce poverty by promoting access by a significant portion of the population to efficient, sustainable electricity service; and (ii) to support creation of the conditions to move forward on a change to the energy mix that contributes to better conditions for mitigation and adaptation to climate change. The PNESER supports the following seven components: (i) rural electrification through network extension; (ii) normalization of service in settlements; (iii) expansion in isolated areas with renewable energy; (iv) preinvestment and studies for generation projects with renewable energy; (v) energy efficiency programs; (vi) strengthening the transmission system in rural areas; and (vii) sustainability of ENEL isolated systems.
- 1.3 The PNESER has been set up so that IDB resources can be contributed in a modular fashion, based on the availability of concessional resources, and also used to leverage resources from other donors, while maintaining the concessionality agreed upon between the Nicaraguan government and the international community as part of the arrangements for reducing Nicaragua's debt.
- 1.4 The objective of this document is to present to the Board for consideration the third IDB loan in support of the PNESER (IDB-III, NI-L1063). The proposal includes a progress report on the implementation of the PNESER and on fulfillment of the actions agreed upon with the borrower and executing agencies.
- 1.5 **Sector problems and challenges.** Nicaragua, which ranks second to last in Latin America and the Caribbean in income, also has one of the lowest rates of electricity coverage in the region, which is a major obstacle to socioeconomic

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<sup>1</sup> The Bank approved operation NI-L1040 in July 2010 for US\$30.5 million and operation NI-L1050 in July 2011 for US\$22 million.

<sup>2</sup> European Investment Bank (EIB), Central American Bank for Economic Integration (CABEL), Nordic Development Fund (NDF), Latin America Investment Facility (LAIF), OPEC Fund for International Development (OFID), Export Import Bank of Korea (KEXIM), and Japan International Cooperation Agency (JICA).

<sup>3</sup> Nicaragua needs to reduce its energy intensity index (3.00), which is twice the average for Latin America (1.46), according to data from the Latin American Energy Organization (OLADE).

development. Although electrification has gradually increased from coverage of 30% in 1971 to 75% in 2010,<sup>4</sup> it remains far short of the target set by the Central American countries of 90% coverage in all of the countries by 2020. Of the 390,000 dwellings not registered as electricity customers, it is estimated that at least 340,000 (1.8 million people) have no electricity service, and the remainder are customers in informal settlements who have illegal connections providing them with unauthorized low-quality, unsafe, sporadic service. This problem affects not only those who are illegally connected but also paying customers.<sup>5</sup> There are an estimated 164,000 dwellings with legal and illegal connections in these settlements.

- 1.6 Increasing electricity coverage in Nicaragua requires not only legalizing illegal users by normalizing service in the settlements<sup>6</sup> but also implementing projects to expand the grid and electrify isolated areas. In order to connect new users by expanding the grid, the Nicaraguan government will let contracts for goods and works, for subsequent delivery to distribution companies, under a subsidy mechanism that has already been tested and authorized within the regulatory framework. Given that many areas have lengthy distribution circuits and would not be able to store new loads at the voltage levels mandated by current regulations, the system's transmission networks need to be strengthened. Connecting new users in isolated areas has been hampered in the past by: (i) the challenges that ENEL faces with 31 agencies serving the isolated systems, related to problems in commercial management and the high operating costs associated with the use of fossil-fuel plants and the nature of small low-density markets that are hard to reach; and (ii) the lack of a national strategy and policy for serving these markets.
- 1.7 Although recent investments have been made in plants that generate electricity from renewable resources,<sup>7</sup> Nicaragua remains highly dependent on electricity from hydrocarbons, which accounted for 66%<sup>8</sup> of all electricity produced in 2011. This situation, in combination with high system losses, currently around 24%, has eroded the sector's financial position and forced the government to turn to external

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<sup>4</sup> Economic Commission for Latin America and the Caribbean (2011), *Centroamérica: Estadísticas del Subsector Eléctrico, 2010* [Central America: Electricity Sector Statistics, 2010].

<sup>5</sup> As of December 2011, the Nicaraguan Energy Institute (INE) reports 850,603 paying customers in the National Interconnected System.

<sup>6</sup> The normalization strategy consists in installing all electricity infrastructure needed to regularize the connections of illegal users, who will then begin to receive and pay for quality service. This process will be supported by social workers and community leaders, who will be in charge of publicizing the project prior to the construction phase as well as during implementation, ending with the transition stage when the works are delivered to the distributors.

<sup>7</sup> Concessions have been granted and are in execution for hydroelectric, geothermal, and wind projects, with private investments of nearly US\$2 billion, including Tumarín (hydroelectric), Momotombo, San Jacinto, El Hoyo, Chiltepe, Caldera de Apoyo, Casitas, and others (geothermal), and Amayo, Eolo, and Blue Energy (wind).

<sup>8</sup> In 2011, according to statistics from the INE, 1,300 gigawatt-hours (GWh) (or 34% of the 3,824 GWh generated) came from renewable sources.



financing to cover the costs of providing electricity. High initial investment costs, particularly for developing renewable energy, act as a barrier to scaling up the use of these resources in Nicaragua, and as a disincentive to private-sector involvement. Lastly, as demonstrated by experience at the international level, Nicaragua needs not only to increase its power generation from renewable sources but also to reduce its energy intensity index (3.00), which is more than double the average for Latin America (1.46),<sup>9</sup> reflecting the relatively inefficient use of energy in the country.

- 1.8 **Solution. The country's strategy for the sector.** The strategy being pursued by the Nicaraguan government in the electricity sector to address the challenges identified above calls for: (i) reducing dependency on fossil fuels for electricity generation and increasing private-sector investment in generation from hydroelectric, geothermal, and biomass sources;<sup>10</sup> (ii) expanding electricity coverage;<sup>11</sup> (iii) promoting energy efficiency programs;<sup>12</sup> (iv) cutting losses by normalizing service in settlements;<sup>13</sup> and (v) maximizing the opportunities that arise as the Central American Electric Interconnection System (SIEPAC) comes online.
- 1.9 **The Bank's country strategy with Nicaragua and the GCI-9.** The Bank's country strategy with Nicaragua 2008-2012 (document GN-2499) is consistent with and supports the strategic actions of the Nicaraguan government. Its main objectives include improving the quantity, quality, and reliability of the energy supply, and making it efficient, sustainable, and compatible with efforts to promote private investment. IDB-III is a continuation of the support that the Bank has been giving the sector throughout the three phases of the PNESER. It will finance activities in the areas of power generation from renewable sources, transmission, and normalization of service in settlements through pilot projects. Moreover, the PNESER is consistent with the lending targets set forth in the Report on the Ninth General Capital Increase – GCI-9 (document AB-2764), which calls for: expanding support to small and vulnerable countries; financing the development of renewable energy and climate change adaptation and mitigation programs, and intensifying poverty reduction and equity enhancement activities.
- 1.10 **Consistency with Bank policies and initiatives.** The PNESER is consistent with the objectives established in the Public Utilities Policy (OP-708) as well as with the

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<sup>9</sup> According to the Energy Statistics Report 2010, OLADE.

<sup>10</sup> This strategy is consistent with the "[\*Estudio de Barreras al Crecimiento de Nicaragua\*](#) [Study on Barriers to Growth for Nicaragua]," which points out the need to transform Nicaragua's energy mix in order to reduce the cost of electricity and promote growth in Nicaragua.

<sup>11</sup> The expansion of electricity coverage as a tool for reducing poverty has been confirmed by various development impact studies such as the World Bank's "[The Welfare Impact of Rural Electrification: A Reassessment of the Costs and Benefits](#)" and the study "[The challenge of energy poverty: Brazilian case study](#)."

<sup>12</sup> This intervention was identified and described in the study [Loan proposals for financing energy efficiency projects](#), conducted for Nicaragua in 2010.

<sup>13</sup> Idem 8.

Bank's Energy Policy (OP-733), Electric Energy Policy (OP-733-1), and other initiatives related to the sector. One of the Bank's objectives outlined in the Energy Policy (OP-733) is "to efficiently meet the energy requirements of its member countries derived by the process of socioeconomic development." Specifically, the Electric Energy Policy (OP-733-1) promotes the financing of projects designed to increase the availability and security of the energy supply. The PNESER is aligned with both of these objectives inasmuch as it seeks to increase electricity transmission capacity, enhance the efficiency and reliability of the transmission and distribution grids, and increase the supply of renewable energy.

- 1.11 Nicaragua's electricity sector meets the basic conditions stipulated in the Public Utilities Policy (OP-708): (i) there is a separation between policy-making, regulatory, and entrepreneurial functions; (ii) there is a business structure that fosters efficiency by separating natural monopoly activities from potentially competitive activities; (iii) an institutional vehicle appropriate to the specific conditions of the country and the sector has been adopted through an effective regulatory body; (iv) effective management models have been adopted, with both public and private agents operating under entrepreneurial systems; and (v) the authorities remain committed to the objectives of the Public Utilities Policy (OP-708).
- 1.12 **IDB participation in the sector.** The IDB has extensive knowledge of the Nicaraguan electricity sector dating back to 1973, when it supported an initial renewable energy program. In 1998, through loan [1017/SF-NI](#), the IDB was involved in efforts to reform the Electricity Law, which transformed the sector. Electricity Sector Support Programs I, II, and III ([1933/BL-NI](#), [1933/BL-NI-1](#), and [1933/BL-NI-2](#)) have provided support for activities in the area of renewable energy generation, including in isolated areas, in the area of transmission and a pilot program to normalize service in settlements has also been completed.<sup>14</sup> The loan for the National Transmission Investments for Integration with the SIEPAC Project ([1877/BL-NI](#)) is financing works to shore up and adapt Nicaragua's transmission grid so that it can be integrated in the Central American electricity network and market, as part of the SIEPAC project. It has also provided technical assistance in other areas, such as energy efficiency (Development of Energy Efficiency in Nicaragua, [ATN/JF-9884-NI](#)), renewable energy (support for wind energy research on Corn Island, [ATN/SU-9576-NI](#), and Development of Wind Power Generation in Isolated Systems, [ATN/SF-9634-NI](#)), and access to the clean development mechanism ([ATN/OC-11766-NI](#)). Increased confidence in the institutional capacity of the sector is having a positive effect by attracting private investment for electric power generation, as a result of reforms to the Electricity Law ([1017/SF-NI](#)), and there has been a significant decrease in energy rationing, with active participation

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<sup>14</sup> Informe de Gestión de Normalización del Servicio Eléctrico a Usuarios en el Barrio Mariana Sansón [Management Report on the Normalization of Electricity Service for Users in the Mariana Sansón Neighborhood], 13 August 2009. <http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=35078304>

by the IDB through the Electricity Sector Support Program ([1933/BL-NI](#), [1933/BL-NI-1](#) and [1933/BL-NI-2](#)) and the National Transmission Investments ([1877/BL-NI](#)).

- 1.13 In this framework, the Nicaraguan government requested assistance from the international financial community to execute the PNESER, which supports and complements efforts to significantly transform the electricity sector, substantially increasing national electricity coverage, helping to reverse the dependency on hydrocarbons in the energy mix by using renewable sources of energy, and implementing energy efficiency measures.

## **B. Progress report on implementation of the PNESER**

- 1.14 **Structure of the PNESER.** In May 2012, following the analyses conducted on the implementation status of the PNESER, the Nicaraguan government authorities decided that it was necessary to transfer responsibility for implementation of components C1<sup>15</sup> and C2<sup>16</sup> from the Ministry of Energy and Mining (MEM) to Empresa Nacional de Transmisión Eléctrica (ENATREL). This change was introduced in the framework of Law 791.<sup>17</sup> On 13 September 2012, the Ministry of Finance (MHCP) and the Bank signed Modification No. 3 to the loan contract for the PNESER (IDB-I, NI-L1040, 2342/BL-NI), as modified, taking into account the new framework. The transfer of responsibilities from the MEM to ENATREL as the executing agency for components C1 and C2 does not affect the PNESER's development objectives. ENATREL has demonstrated that it has ample capacity for execution, due to its role in developing and implementing projects to expand and strengthen the transmission system in the National Interconnected System.<sup>18</sup> Components C1 and C2 are designed to expand and normalize distribution networks, activities in line with the capacities of ENATREL, which has an execution unit that has already been strengthened to meet the requirements of projects currently in execution, namely: (i) National Transmission Investments for Integration with the SIEPAC Project, Loan Contract 1877/BL-NI; and (ii) the Electricity Sector Support Program, Loan Contract 1933/BL-NI, and modifications thereto.

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<sup>15</sup> Component C1 includes: (i) materials for rural electrification in 500 communities; (ii) materials and construction of networks for rural electrification in 200 communities – lots A and B; (iii) materials management and logistics; and (iv) design of rural electrification networks in 900 communities.

<sup>16</sup> Component C2 includes: (i) materials for normalizing networks in 90 settlements; and (ii) materials and construction of networks for normalizing 30 settlements.

<sup>17</sup> Law amending Law 788, Law amending and supplementing Law 583, Law establishing Empresa Nacional de Transmisión Eléctrica (ENATREL), and Laws amending Law 272, on the Electricity Industry, and Law 290, on the Organization, Competence, and Procedures of the Executive Branch.

<sup>18</sup> Despite this, there continue to be a number of areas in need of improvement at ENATREL, which require ongoing support from the IDB.

- 1.15 **Cost and financing of the PNESER.** Table 1 presents updated information on costs and financing of the PNESER, which have gradually been modified, both within specific components and with regard to the overall cost of the PNESER, which increased to US\$418.7 million. The execution period for the PNESER, which was initially estimated to be from 2010 to 2014, has been changed to reflect the delays that occurred at the start of the program while initial financing was being approved and the administrative structure consolidated. As a result, the plan now calls for the PNESER to be executed in the 2010-2016 period.
- 1.16 As for financing, the IDB is contributing US\$87.5 million in three loans. Loan I (IDB-I) and loan II (IDB-II, NI-L1050, 2342/BL-NI-4) were approved in 2010 and 2011, respectively, while IDB-III for US\$264.8 million, the subject of this proposal, would come from various co-funders, including: the Export Import Bank of Korea (KEXIM); the Latin America Investment Facility (LAIF); the European Investment Bank (EIB); the Central American Bank for Economic Integration (CABEI); the Nordic Development Fund (NDF); and the OPEC Fund for International Development (OFID), which has already approved and arranged available financing for a total of US\$203.7 million. There are other sources of financing currently in process from the Japan International Cooperation Agency (JICA), KEXIM 2, and OFID 2, for a total of US\$61 million.<sup>19</sup> The remaining US\$66.4 million corresponds to counterpart contributions from the budgets of the MEM, ENATREL, and ENEL to cover administrative and financial costs not being financed by other sources.

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<sup>19</sup> As envisaged under the PNESER, the financing structure has been adjusted to the availability of concessional resources from international cooperation and finance agencies (ICFAs); as a result, some new ICFAs have joined the effort, while others that did not have the necessary resources have withdrawn.

**Table 1. Costs and financing of the PNESER (US\$ millions)**

CATEGORY OF INVESTMENT	TOTAL 2010-2016														Total
	IDB I	IDB II	IDB III	NDF	KE-XIM	KE-XIM 2	LAIF	EIB	CABEI	JICA	OFID 1	OFID 2	Third parties	GON	
<b>ENATREL SUBPROGRAM – (1, 2, and 6)</b>	<b>25.9</b>	<b>10.8</b>	<b>22.9</b>	<b>-</b>	<b>27.2</b>	<b>45.0</b>	<b>9.6</b>	<b>70.0</b>	<b>64.5</b>	<b>-</b>	<b>9.9</b>	<b>-</b>	<b>36.1</b>	<b>24.2</b>	<b>346.1</b>
<b>1. Engineering, Supervision, and Administration</b>	<b>0.6</b>	<b>1.7</b>	<b>2.4</b>	<b>-</b>	<b>2.8</b>	<b>4.3</b>	<b>-</b>	<b>-</b>	<b>2.9</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4.4</b>	<b>19.1</b>
<b>2. Direct costs</b>	<b>24.8</b>	<b>8.8</b>	<b>19.9</b>	<b>-</b>	<b>24.4</b>	<b>40.7</b>	<b>9.6</b>	<b>70.0</b>	<b>61.6</b>	<b>-</b>	<b>9.9</b>	<b>-</b>	<b>36.1</b>	<b>5.4</b>	<b>311.1</b>
C1 Network extension	17.2	8.8	15.1	-	-	-	-	-	38.8	-	7.0	-	20.0	-	106.9
C2 Settlement normalization	5.6	-	3.6	-	-	-	-	-	14.2	-	2.9	-	16.1	-	42.4
C6 Strengthening of transmission	2.0	-	1.1	-	24.4	40.7	9.6	70.0	8.6	-	-	-	-	5.4	161.8
<b>3. Financial expenses</b>	<b>0.5</b>	<b>0.3</b>	<b>0.7</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>14.4</b>	<b>15.9</b>
<b>MEM SUBPROGRAM – (3 to 5)</b>	<b>2.9</b>	<b>3.2</b>	<b>12.1</b>	<b>5.9</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>10.6</b>	<b>12.0</b>	<b>6.1</b>	<b>4.0</b>	<b>-</b>	<b>6.1</b>	<b>62.9</b>
<b>1. Engineering, Supervision and Administration</b>	<b>0.1</b>	<b>0.0</b>	<b>0.4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4.9</b>	<b>5.8</b>
<b>2. Direct costs</b>	<b>2.8</b>	<b>3.2</b>	<b>11.4</b>	<b>5.9</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>10.2</b>	<b>12.0</b>	<b>6.1</b>	<b>4.0</b>	<b>-</b>	<b>-</b>	<b>55.6</b>
C3 Expansion of isolated systems	0.5	0.4	8.2	-	-	-	-	-	-	7.4	-	-	-	-	16.5
C4 Study and preinvestment	0.4	2.6	-	5.9	-	-	-	-	-	-	6.1	4.0	-	-	19.0
C5 Energy efficiency	1.9	0.2	3.2	-	-	-	-	-	10.2	4.6	-	-	-	-	20.1
<b>3. Financial expenses</b>	<b>0.0</b>	<b>0.0</b>	<b>0.3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1.2</b>	<b>1.5</b>
<b>ENEL SUBPROGRAM – 7</b>	<b>1.7</b>	<b>8.0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.0</b>	<b>9.7</b>
<b>1. Engineering, Supervision, and Administration</b>	<b>0.4</b>	<b>0.1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.5</b>
<b>2. Direct costs</b>	<b>1.2</b>	<b>7.8</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>9.0</b>
C7 Sustainability of isolated systems	1.2	7.8	-	-	-	-	-	-	-	-	-	-	-	-	9.0
<b>3. Financial expenses</b>	<b>0.1</b>	<b>0.1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.0</b>	<b>0.2</b>
<b>SUBTOTAL</b>	<b>30.5</b>	<b>22.0</b>	<b>35.0</b>	<b>5.9</b>	<b>27.2</b>	<b>45.0</b>	<b>9.6</b>	<b>70.0</b>	<b>75.1</b>	<b>12.0</b>	<b>16.0</b>	<b>4.0</b>	<b>36.1</b>	<b>30.3</b>	<b>418.7</b>

\* Included under “GON” are contributions from the MEM, ENATREL, and ENEL to cover expenses of the project execution unit and financial expenses.

\*\* Included under “third parties” are contributions from companies, municipalities, and other program executing entities receiving contributions/subsidies.

**1.17 Progress of the PNESER.** To date, US\$4.09 million has been disbursed under IDB-I. IDB-II was declared eligible as of 9 March 2012. It is estimated that by the end of 2012, the committed portion of funds from IDB-I and IDB-II will be 92% of the total for those operations (see Table 2). The IDB has made a commitment to the Nicaraguan government to grant concessionality to the PNESER with larger disbursements of IDB funds during the initial years of execution, in order to offset the less concessional contributions of other ICFAs, which begin their disbursements in 2013. Likewise, the IDB-III operation ensures the participation of co-funders KEXIM II and JICA (US\$57 million) with a high degree of concessionality. Currently there are no additional sums committed beyond what was committed at the start of the year. Table 2 shows the bids now in progress, which would allow for the signing of contracts prior to the end of 2012. For optimal and continuous execution of the PNESER, and in line with the multi-donor nature of the operation, IDB-III needs to be approved, in order to maintain the development objectives for the operation and the pace of execution achieved to date with regard to the bidding currently in progress.

**Table 2. Procurement processes currently in progress, IDB-I and IDB-II**

Component	Process	Month of procurement notice	Month of contract signature	Amount to be committed as of end-2012 [US\$ x 10 <sup>6</sup> ]	Disbursement as of end-2012 [US\$ x 10 <sup>6</sup> ]
C1	Materials for rural electrification in 500 communities	Jul-2012	Nov-2012	12.0	3.6
	Materials and construction of networks for rural electrification in 200 communities – Lots A and B	Jul-2012 to Aug 2102	Nov-2012 to Dec-2012	16.5	5.0
	Management and logistics for Components 1 and 2 materials	Sep-2012	Feb-2013	2.0	-
	Design of rural electrification networks in 900 communities	Aug-2012	Dec-2012	1.1	0.2
	Other contracts	Feb to Nov-2012	Aug-2012 to Apr-2013	1.0	0.3
Subtotal C1				32.6	9.1
C2	Materials for normalizing networks in 90 settlements	Aug-2012	Dec-2012	7.3	-
	Materials and construction of networks to normalize 30 settlements	Jun-2012	Nov-2012	3.0	0.6
	Other contracts	Mar to Jun-2012	Aug to Dec-2012	0.3	0.1
Subtotal C2				10.6	0.7
C4	Other contracts	Jun to Jul-2012	Sep to Dec-2012	0.3	0.1
	Subtotal C4			0.3	0.1
C5	15,000 lights for public lighting – Phase I	Aug-2012	Dec-2012	1.6	-
	Other contracts	Mar to Sep-2012	Aug to Dec-2012	0.4	0.1
	Subtotal C5			2.0	0.1
C6	Machinery and equipment for maintenance of transmission system	Apr-2012	Nov-2012	2.0	1.2
	Subtotal C6			2.0	1.2
C7	Personnel to operate and maintain isolated systems	Apr-2012	Aug-2012	0.5	0.3
	Feasibility study and final design for wind-thermal system in isolated areas	Jun-2012	Dec-2012	0.2	-
	Study on losses and optimization of 3 isolated systems	Sep-2012	Dec-2012	0.2	-
	Other contracts	Feb to Jul-2012	Aug to Dec-2012	0.2	0.1
Subtotal C7				1.1	0.4
	Total PNESER			48.6	11.6

- 1.18 **Component 1. Rural electrification through network extension (PNESER US\$106.9 million, of which IDB-III will total US\$15.1 million) and Component 2. Normalization of service in settlements (PNESER US\$42.4 million, of which IDB-III will total US\$3.6 million):** Component 1 will provide access to electric power for rural populations that currently have no service by extending distribution networks in areas that presently have concessions, as well as in those that do not. The PNESER target is to provide access to electricity for 117,390 households in 3,666 rural communities. This third loan will finance the construction of 16,116 new connections for new users and support the normalization of service in 115 settlements. To execute these components, two distribution firms with concessions have been enlisted, and execution agreements have now been signed with them, Distribuidora de Electricidad del Norte S.A. (DISSNORTE) and Distribuidora de Electricidad del Sur S.A. (DISSUR) (jointly referred to here as “distributors”). Component 2 provides for the normalization of electric service in irregular settlements for households with existing electric service, and for new customers. The PNESER target is to serve 125,003 households that are presently customers, in addition to 39,043 new customers. The IDB-III loan will normalize 2,269 existing customers and 709 new customers. These agreements

were included as conditions precedent to approval of IDB-I for the execution of Components 1 and 2 of the PNESER. In February 2012, as the result of a modification and signature of agreements with the distributors, it was established that they would be responsible for approving designs, supervising the execution of works, and giving final approval of the works, with ENATREL responsible for contracting services, providing goods, and constructing works.

- 1.19 In the case of Component 1, there was progress in 2011 in carrying out preliminary designs for 1,278 communities with 38,000 users, equivalent to 32% of the planned coverage. For Component 2, pilot projects have been completed for normalizing electricity service in eight settlements, for a total of 3,200 beneficiary households (16,320 residents). These projects, which are part of the Electricity Sector Support Program, have resulted in an increase in the coverage rate in the targeted communities,<sup>20</sup> which thus serve as the platform for execution of this component.
- 1.20 **Component 3. Expansion in isolated areas with renewable energy (PNESER US\$16.5 million, of which IDB-III will total US\$8.2 million):** Component 3 supports the identification and implementation of electricity supply solutions for rural areas not connected to the National Interconnected System, promoting the use of renewable energy inside and outside areas granted under concessions to the distributors. This component calls for the development of micro and/or small hydroelectric projects, wind power plants, and other sources of renewable energy, such as photovoltaic solar power, designed to promote the sustainable development of electricity supply systems for 3,820 households in the departments of Jinotega, Matagalpa, the North Atlantic Autonomous Region, and the South Atlantic Autonomous Region. One element of this component will involve designing and constructing four small hydroelectric plants, along with a project to extend the networks of existing hydroelectric plants.
- 1.21 **Component 4. Preinvestment and studies for generation projects with renewable energy (PNESER US\$19.0 million; IDB-III will not finance Component 4):** Component 4 seeks to provide and improve the conditions, information, and strategies for planning and expanding power generation, necessary to promote the development of renewable energy generation projects. Preinvestment studies and demonstration projects will be financed to take better advantage of renewable energy sources, primarily hydroelectric, geothermal, biomass, wind, and solar. Implementation of Component 4 will provide studies on the feasibility of using renewable energy sources to create capacity of 358 megawatts, and will help establish the conditions conducive to changing the energy mix. To date, terms of reference have been completed for the Rio Grande

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<sup>20</sup> The average coverage rate in the eight targeted communities increased from 22% to 88% according to the Project Completion Report. For details, see the electronic link [Final Report on the pilot project for normalization of service in the settlements](#).

and Rio Coco Watershed Master Plan, for the prefeasibility study for a geothermal project, and for a feasibility study of wind power generation at six sites.

- 1.22 **Component 5. Energy efficiency programs (PNESER US\$20.1 million, of which IDB-III will total US\$3.2 million):** Component 5 will support implementation of energy efficiency programs aimed at reducing demand for power and current energy consumption in Nicaragua, chiefly refrigeration and lighting in various consumer sectors. The execution of Component 5 will make it possible to: (i) replace four million incandescent bulbs with fluorescent lights in the residential sector; (ii) replace 50,910 magnetic fluorescent lights with electronic equivalents in the government sector; (iii) replace 25,624 mercury lights with sodium vapor lights or other type of efficient technology for public lighting; (iv) install 13 solar water-heating systems in hospitals, hotels, and industrial facilities; (v) promote engineering and development for using thermal solar energy; and (vi) install 750 photovoltaic solar systems in production settings. Work is being done in collaboration with the Nicaraguan Energy Institute (INE) to set the rate schedule for the Efficient Public Lighting Program and, in tandem with this, to establish an agreement with distributors,<sup>21</sup> for the replacement of lights. Terms of reference have been prepared for studies on energy efficiency indicators, regulation, and policies.
- 1.23 **Component 6. Strengthening the transmission system (PNESER US\$161.8 million, of which IDB-III will total US\$1.1 million):** Component 6 includes the substations and transmission lines needed to improve the energy efficiency of the electricity transmission system, provide a reliable energy supply to new users to be connected to the grid as well as those currently with service in the program areas, while incorporating new renewable energy sources into the Nicaraguan system. Thus, 432.5 megavolt-amperes will be added to the system through the remodeling and expansion of substations, while approximately 621 kilometers of transmission lines will also be added. IDB-III will partially finance the construction of investments in the national transmission system, making it possible in the future to connect the new Tumarín Hydroelectric Plant currently under construction (253 megawatts). Environmental studies are currently being prepared, along with topographical surveys and geological studies for the various projects for new substations and transmission lines.
- 1.24 **Component 7. Sustainability of ENEL isolated systems (PNESER US\$9 million; IDB-III will not finance Component 7):** Component 7 is financing actions to improve the sustainability of the isolated systems operated by ENEL, by replacing fossil fuel generation with renewable energy at a capacity of

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<sup>21</sup> The agreement was linked to the replacement of mercury vapor lights, for a 35% saving on energy consumption per light installed. The agreement mandated the establishment of a technical board with the distributor, which would have among its functions that of developing a waste management plan for lights (including those still operating).



1,300 kilowatts and improving the institutional and operating capacity of the systems under ENEL responsibility.

- 1.25 During 2011, in parallel with the phase for fulfilling conditions precedent for the IDB-I, CABEL, EIB, LAIF, and NDF loan contracts, the PNESER moved forward in preparing terms of reference and bidding documents for the various projects planned under the seven components. Similarly, in 2011 there was major progress in negotiations with the distributors on introducing modifications to the execution agreements for Components 1 and 2. Once this initial phase was completed, the PNESER launched the bidding process in 2012, which will lead to commitments on contracts for goods, works, and services amounting to US\$65.1 million, with planned disbursements of US\$11.6 million in 2012 (see Table 2). IDB-III will provide supplemental financing for the new procurements needed to reach the execution and outcome targets set for the PNESER for the five-year period 2012-2016.

### **C. Results matrix**

- 1.26 The PNESER results matrix for IDB-I has been updated, with the targets adjusted and some of the indicators corrected (see Annex II). The two main outcomes of the PNESER will be: (i) to help Nicaragua achieve an electricity coverage rate of approximately 84% by the end of the PNESER, as part of the Nicaraguan government's efforts to achieve the 90% target by 2020; and (ii) to support the authorities in generating new renewable energy projects, by contributing to a transformational change in the energy mix in order to reach 44% generation from renewable energy sources by the end of the PNESER and 66% in 2020.

## **II. FINANCING STRUCTURE AND MAIN RISKS**

### **A. Financing instruments**

- 2.1 The proposed operation is the IDB's third loan for the National Sustainable Electrification and Renewable Energy Program (PNESER). The program structure allows IDB resources to be contributed in 2010, 2011, and 2012 through operations approved independently by the Board of Executive Directors, with investments that are justified and viable autonomously but enable the targets in the Results Framework to be met gradually and cumulatively. Table 3 presents the costs and financing for the IDB, and Table 4 shows the disbursement schedule for the entire PNESER.

**Table 3. Costs and financing for the IDB loan for the PNESER (US\$ thousands)**

<b>INVESTMENT CATEGORY</b>	<b>IDB-I</b>	<b>IDB-II</b>	<b>IDB-III</b>	<b>GON</b>	<b>Total</b>
<b>ENATREL SUBPROGRAM – (1, 2, and 6)</b>	<b>25,958</b>	<b>10,730</b>	<b>22,893</b>	<b>91</b>	<b>59,672</b>
<b>1. Engineering, Supervision, and Administration</b>	<b>616</b>	<b>1,712</b>	<b>2,355</b>	<b>-</b>	<b>4,683</b>
<b>2. Direct costs</b>	<b>24,810</b>	<b>8,720</b>	<b>19,858</b>	<b>-</b>	<b>53,388</b>
C1 Electrification through network expansion	17,185	8,720	15,144	-	41,049
C2 Settlement normalization	5,625	-	3,570	-	9,195
C6 Transmission system investments in rural areas	2,000	-	1,144	-	3,144
<b>3. Financial expenses</b>	<b>532</b>	<b>298</b>	<b>680</b>	<b>91</b>	<b>1,601</b>
<b>MEM SUBPROGRAMA – (3, 4, and 5)</b>	<b>2,849</b>	<b>3,283</b>	<b>12,107</b>	<b>42</b>	<b>18,281</b>
<b>1. Engineering, Supervision, and Administration</b>	<b>96</b>	<b>36</b>	<b>435</b>	<b>-</b>	<b>567</b>
<b>2. Direct costs</b>	<b>2,700</b>	<b>3,200</b>	<b>11,410</b>	<b>-</b>	<b>17,310</b>
C3 Expansion of isolated systems	500	400	8,220	-	9,120
C4 Study and preinvestment	350	2,650	-	-	3,000
C5 Energy efficiency	1,850	150	3,190	-	5,190
<b>3. Financing expenses</b>	<b>53</b>	<b>47</b>	<b>262</b>	<b>42</b>	<b>404</b>
<b>ENATREL SUBPROGRAM – (7)</b>	<b>1,693</b>	<b>7,987</b>	<b>-</b>	<b>24</b>	<b>9,704</b>
<b>1. Engineering, Supervision, and Administration</b>	<b>449</b>	<b>62</b>	<b>-</b>	<b>-</b>	<b>511</b>
<b>2. Direct costs</b>	<b>1,213</b>	<b>7,765</b>	<b>-</b>	<b>-</b>	<b>8,978</b>
C7 Sustainability of ENEL isolated systems	1,213	7,765	-	-	8,978
<b>3. Financing expenses</b>	<b>31</b>	<b>160</b>	<b>-</b>	<b>24</b>	<b>215</b>
<b>SUBTOTAL</b>	<b>30,500</b>	<b>22,000</b>	<b>35,000</b>	<b>157</b>	<b>87,657</b>

- 2.2 The international cooperation and finance agencies (ICFAs) and the Nicaraguan government authorities have signed a memorandum of understanding for the PNESER,<sup>22</sup> which serves to coordinate the support of the ICFA signatories. The procedures are set forth in the Operating Regulations for the PSENER, which were approved on 29 March 2011 at the first meeting of the PNESER Monitoring Committee. The purpose of the Operating Regulations is to develop and complement the general and specific rules and procedures that should be consistent with the stipulations established in the two current IDB-financed loan contracts (IDB-I and IDB-II), and the loan contracts and bilateral agreements signed by the Nicaraguan government with the ICFAs.

<sup>22</sup> The ICFAs will sign the MOU (letter of adherence) once the respective financing has been approved.

**Table 4. Disbursement schedule for the PNESER (US\$ millions)**

INVESTMENT CATEGORY	TOTAL 2010-2016						
	2011	2012	2013	2014	2015	2016	Total
<b>International cooperation and financing</b>	<b>4.0</b>	<b>11.6</b>	<b>96.4</b>	<b>120.7</b>	<b>86.1</b>	<b>33.5</b>	<b>352.3</b>
IDB-I (NI-L1040) (2010):	4.0	8.8	15.1	2.6	-	-	30.5
IDB-II (NI-L1050) (2011)	-	2.8	11.8	4.6	2.8	-	22.0
<b>IDB-III (NI-L1063) (2012)</b>	<b>-</b>	<b>-</b>	<b>8.9</b>	<b>17.3</b>	<b>6.2</b>	<b>2.6</b>	<b>35.0</b>
Other ICFA's	-	-	60.6	96.2	77.1	30.9	264.8
<b>Third-party contributions</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>22.0</b>	<b>14.1</b>	<b>36.1</b>
<b>Local counterpart</b>	<b>-</b>	<b>0.4</b>	<b>4.1</b>	<b>8.2</b>	<b>11.2</b>	<b>6.4</b>	<b>30.3</b>
<b>TOTAL</b>	<b>4.0</b>	<b>12.0</b>	<b>100.5</b>	<b>128.9</b>	<b>119.3</b>	<b>54.0</b>	<b>418.7</b>

## B. Environmental and social risks and mitigation measures

- 2.3 The PNESER has a positive net balance of environmental and social impacts, improving the living conditions of low-income populations, increasing the productivity of rural communities, and providing reliable electricity service to facilitate education and health services. Inasmuch as the baseline conditions used in designing the PNESER have been maintained, the environmental and social management arrangements identified in the Environmental and Social Management Report for the IDB's first loan [IDB's first loan](#) (IDB-I), which were designed for the entire PNESER, remain in full effect and unchanged for this third loan.<sup>23</sup> The Environmental and Social Management Framework was developed during the course of IDB-I for the entire PNESER. It was revised and approved by the Bank's Environment and Social Group in 2010 and continues in force for this new operation, inasmuch as the objectives of IDB-III are the same as for the PNESER as a whole, while the typology of sub-projects and the social and environmental impacts and mitigation measures are similar throughout the three operations. Taking into account the Bank's environmental policies and safeguards (OP-703), IDB-III is classified as a category "B" loan.

## C. Fiduciary risk

- 2.4 The IDB's fiduciary obligation to ensure the appropriate, efficient use of funds is fulfilled in this operation by means of compliance with IDB financial and procurement policies and procedures. During preparation of this operation, the MEM, ENEL, and ENATREL reported that the execution of procurements for this operation would be consolidated into a single unit at ENATREL.<sup>24</sup> This situation directly affects the institutional capacity of the sector, as well as, temporarily, the

<sup>23</sup> More details on the special clauses on environmental and social issues can be found in the special execution conditions in the executive summary of the [loan proposal for operation NI-L1040](#).

<sup>24</sup> There were originally expected to be three independent procurement areas, each corresponding to one of the three executing agencies; the new structure centralizes procurements in a single unit. This change was made in order to achieve better program coordination.

level of fiduciary risk with regard to procurements. Accordingly, the IDB will conduct an assessment of the capacity of this new unit in six months. Nevertheless, the level of risk is considered to be high. In order to maintain continuity, to the extent possible, in the execution of procurements, recommendations have been made and are included in Annex III to this document.

- 2.5 Moreover, during preparation of this loan, a number of fiduciary risks related to the executing agencies for subprograms 2 and 3 (ENATREL and ENEL) were identified, thus raising the level of fiduciary risk (with regard to financial management) associated with ENATREL and ENEL to “high.” In the case of ENATREL and ENEL, annual audits have found that the firms do not have the internal control measures needed to properly execute the projects. There has also been an ongoing failure to meet the financial performance ratios stipulated in the agreement (in the case of ENATREL). These two executing agencies presented action plans to mitigate these risks. ENATREL has carried out the necessary actions in a manner satisfactory to the IDB. ENEL, for its part, hired a consulting firm to review the main issues with regard to controls and to resolve the problems raised in the audits. As a result, the action plan was reformulated and is now being implemented.
- 2.6 **Procurement.** Procurements to be financed by the IDB will be conducted in accordance with the Policies for the Procurement of Goods and Works Financed by the IDB (document GN-2349-9) and the Policies for the Selection and Contracting of Consultants Financed by the IDB (document GN-2350-9).<sup>25</sup> In the case of other ICFA, procurements will be handled: (i) in accordance with the specific rules of each ICFA, for procurements involving financing from a single ICFA; and (ii) in accordance with procurement procedures of one of the ICFA determined by common agreement among the financing ICFA, for procurements involving financing from more than one ICFA. The list of electronic links includes the updated procurement plan for the PNESER.

#### **D. Execution risks**

- 2.7 As part of the execution activities for the first and second PNESER loans, a midyear monitoring workshop was held in 2012. The main risks involved in implementing the PNESER, which apply to IDB-III, were updated on that occasion, along with mitigation measures to address these risks (see [Risk Matrix](#)).

#### **E. Other key issues and risks**

- 2.8 **Institutional and financial viability.** The PNESER will be executed by the MEM, ENATREL, and ENEL, which are currently executing agencies for the Electricity Sector Support Program, IDB-I, and IDB-II. They possess extensive experience and

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<sup>25</sup> For procurements to be financed by the IDB in conjunction with other ICFA, IDB policies will be used.

teams of high-level technical staff, which will receive technical support when needed. As mentioned previously (paragraph 1.14), the execution of some of the components (1 and 2) has been shifted from the MEM to ENATREL. As a result, a new organizational structure, headed by the PNESER coordinator, was created, and will be responsible for direct administration of the PNESER. Moreover, the allocation for program engineering, supervision, and administration expenses includes resources to support ENATREL with program accounting, financial control and management, record-keeping and reporting, and other program administration and strengthening activities.

- 2.9 **Technical and economic viability.** During preparation of IDB-I, the program's viability was confirmed through an [economic evaluation](#) of the entire PNESER program (IDB-I, IDB-II and IDB-III), taking into account that this is a comprehensive program with loans to be approved in three consecutive years to adapt to the availability of IDB funding for the country. The evaluation focused on sample projects for components 1, 2, and 6 that represent the bulk of investment activities. The works to be financed with the third loan are projects largely similar to those included in the samples analyzed and are a good reflection of the type of projects envisaged under the program. In addition to the results of the sample, the rules for selecting and prioritizing specific projects within the universe of each component include technical and economic evaluation criteria to guarantee the viability of the projects.
- 2.10 The average total cost per customer for projects eligible for subsidies under Component 1 is US\$1,244. As the model requires, all individual projects eligible for subsidies have an internal economic rate of return greater than 12%. The economic net present value (ENPV) per electrified household, discounted 12% as of January 2009, is US\$574. For Component 2, the economic viability was assessed in light of information obtained from four pilot projects, two located in León, which are now in operation, and two in Managua, which are under construction. The internal economic return rate (IERR) of the four projects is between 13% and 27%. On average, the total cost of normalizing service for one customer in the sample, excluding the cost of conveyances and meters, is US\$240, producing an ENPV of US\$274. Normalizing service for 130,000 households would produce an ENPV of US\$36 million.
- 2.11 For Component 6, two independent projects were evaluated: (i) construction or remodeling of the Estelí, San Ramón, Terrabona, Ocotal, El Sauce, and Yalí substations, including transmission lines and related works, for an ENPV of US\$141 million at border prices and an IERR of 55%; and (ii) construction of the La Dalia and El Cuá substations, which have an ENPV of US\$15 million and an IERR of 22%.

### III. IMPLEMENTATION AND MANAGEMENT PLAN

#### A. Summary of implementation arrangements

- 3.1 **As special conditions precedent to the first disbursement:** (i) the Bank has received the legal reports on the validity of the obligations assumed by the borrower with regard to IDB-III; (ii) updated annual work plans (AWP) for each sub-program will be presented, including updated procurement plans; (iii) the conditions cited in Article 4 of the Modified Contract No. 3 will be fulfilled; and (iv) evidence will be presented showing completion of the actions envisaged in the action plan to mitigate internal control weaknesses both at ENEL and ENATREL. As a special condition precedent to the disbursement of resources for each subprogram: the MHCP-MEM execution agreement and the agreements between MHCP and ENATREL will be updated. The same special execution conditions approved for programs NI-L1040 (IDB-I) and NI-L1050 (IDB-II) will apply to this operation.
- 3.2 **Organization.** For purposes of executing the PNESER, the ENATREL execution unit was formed, made up of a general coordinator, a deputy general coordinator and seven technical coordinators in charge of each of the components. The ENATREL execution unit coordinates all of the PNESER for the ICFAs.
- 3.3 **Execution mechanism.** The PNESER will be executed based on annual work plans (AWPs), which will identify the specific activities to be financed, the uses and sources of funds, the scheduled targets, and the expected outcomes of each activity. The executing agencies, with support from the organizational structure described earlier, will prepare detailed AWP for the projects and will submit them to the PNESER Monitoring Committee. The activities in the AWP must take into account the interrelation between components and subcomponents, as well as the time periods in which the activities are to be completed, in order to ensure that the objectives proposed under the PNESER are achieved.

#### B. Summary of arrangements for monitoring results

- 3.4 The results matrix will serve as the basic instrument for monitoring the outcomes of the PNESER. The PNESER Monitoring Committee will meet twice each year. The annual review meeting (April) will review performance for the prior year (progress on the fulfillment of actions and targets set forth in the AWP, using agreed indicators). Support projections for the following year will also be identified at this meeting. The annual planning meeting (August) will discuss the general progress made during the first six months (based on the AWP for the current year) and the proposed AWP for the subsequent year.

Development Effectiveness Matrix			
Summary			
I. Strategic Alignment			
1. IDB Strategic Development Objectives	Aligned		
Lending Program	(i) Lending to small and vulnerable countries, and (ii)Lending to support climate change initiatives, renewable energy and environmental sustainability.		
Regional Development Goals	Percent of households with electricity.		
Bank Output Contribution (as defined in Results Framework of IDB-9)	(i) Km of electricity transmission and distribution lines installed or upgraded; (ii) Percentage of power generation capacity from low-carbon sources over total generation capacity funded by IDB, and (iii) 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-2499	Increase the capacity and efficiency of the energy sector, encouraging public and private investment in the generation, especially of renewable sources to reduce oil dependence.	
Country Program Results Matrix	GN-2661-4	The intervention is included in the 2012 Country Program Document.	
Relevance of this project to country development challenges (If not aligned to country strategy or country program)			
II. Development Outcomes - Evaluability	Highly Evaluable	Weight	Maximum Score
	8.9		10
3. Evidence-based Assessment & Solution	9.6	25%	10
4. Ex ante Economic Analysis	10.0	25%	10
5. Monitoring and Evaluation	6.0	25%	10
6. Risks & Mitigation Monitoring Matrix	10.0	25%	10
Overall risks rate = magnitude of risks*likelihood	Medium		
Environmental & social risk classification	B		
III. IDB's Role - Additionality			
The project relies on the use of country systems (VPC/PDP criteria)	Yes	Financial Management: Budget, External control, and Internal Audit. Procurement: Information system, Shopping Method, and use of some national public bidding sub-systems.	
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			
Environment			
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	Yes	With the support from the Technical Cooperation NI-T1094, a first phase of pre-designs was undertaken which will be used to develop extension projects in component 1. 1,550 efficient lighting were purchased with the TC NI-T1034 in support of component 5.	
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.			

The Project is highly evaluable. The proposed operation is the third loan from the Bank for the National Sustainable Electrification and Renewable Energy Program (PNSER). The IDB resources will be disbursed gradually in the years 2010, 2011, and 2012, through operations that will be presented for Board approval independently. Each project is justified and feasible independently, but goals are reached cumulatively. The objective of the PNSER is to support the Government of Nicaragua in reducing poverty by promoting access to an efficient and sustainable electricity service while supporting the creation of conditions to advance a change in the energy matrix that contributes to improving the mitigation and adaptation of climate change. The results matrix has vertical logic and impacts, outcomes and outputs are clearly presented. All performance and product indicators have baselines and numerical targets.

A cost-benefit analysis of the program as a whole is included for three components. However, no specific evaluation is presented for this operation. The economic evaluation presented shows that the program as a whole is viable, on the basis of a representative sample of projects, similar to the ones being financed in this operation. The operation has a monitoring and evaluation plan. The program -not this specific project- will be evaluated with an ex post cost-benefit analysis.

Risks have been identified and ranked by probability of occurrence and magnitude. Mitigation measures are presented for each identified risk.

**IDB-I, IDB-II and IDB-III**  
**RESULTS FRAMEWORK / MATRIX OF INDICATORS**  
 (Updated as of 8 August 2012)

Program objective	The objective of the PNESER is to support the efforts of the Nicaraguan government to reduce poverty by promoting access by a significant portion of the population to efficient, sustainable electricity service and create conditions to move forward on a change to the energy mix that contributes to better conditions for mitigation and adaptation to climate change.									
	Indicators	Baseline	Target							Means of verification
		2009	2010	2011	2012	2013	2014	2015	2016	
Impact										
Reduce imports of fuel oil (thousands of barrels)	0	438	356	657	1,126	1,309	1,367	1,540		INE statistics
Outcomes										
Increase electric service coverage in the country	66.7%	74.6%	76.1%	77.7%	79.2%	80.8%	82.3%	83.8%	90.0%	ECLAC statistics
Proportion of electricity generated by renewable energy sources	27.9%	34.7%	31.5%	34.8%	40.5%	43.3%	42.9%	44.1%	65.8%	INE statistics
Total generation (GWh)	3,110	3,321	3,485	3,636	3,805	3,993	4,199	4,340		INE statistics
Renewable generation (GWh)	869	1,153	1,097	1,265	1,541	1,731	1,801	1,912		INE statistics
Reduce consumption through energy efficiency programs (initial projects)	0 GWh/yr	0 GWh/yr	0 GWh/yr	0 GWh/yr	0 GWh/yr	90 GWh/yr	180 GWh/yr	221 GWh/yr		MEM ex post evaluations
Reduce nontechnical losses of electricity in settlements	4.56%	4.56%	4.56%	4.56%	4.0%	2.7%	1.3%	0%		ENATREL ex post evaluations
Increase reliability of service by strengthening the transmission system (failure rate = number of failures/year/100 km)	6.42	6.42	6.38	6.33	6.30	6.10	6.10	6.10		ENATREL statistics

<sup>1</sup> The PNESER will contribute, from 2012 to 2016, to fulfillment of the targets set by the Nicaraguan government for 2020.



Outputs	Baseline 2010	Targets						
		2011	2012	2013	2014	2015	2016	Total
<b>Component 1: Rural Electrification through Network Extension</b>								
Dwellings connected (Total PNESER)	0	0	0	14,455	23,254	30,452	49,629	117,790
Dwellings connected (IDB-I)	0	0	0	14,455	1,562	0	0	16,017
Dwellings connected (IDB-II)	0	0	0	0	10,065	0	0	10,065
Dwellings connected (IDB-III)	0	0	0	0	5,627	13,101	0	18,728
Dwellings connected (Co-funders)	0	0	0	0	6,000	17,351	49,629	72,980
<b>Component 2: Normalization<sup>1</sup> of Service in Settlements</b>								
Settlements with normalized electric service (Total PNESER)	0	0	0	75	191	191	191	648
Settlements with normalized electric service (IDB-I)	0	0	0	64	0	0	0	64
Settlements with normalized electric service (IDB-II)	0	0	0	6	0	0	0	6
Settlements with normalized electric service (IDB-III)	0	0	0	5	16	0	0	21
Settlements with normalized electric service (Co-funders)	0	0	0	0	175	191	191	557
Normalized dwellings of existing customers (Total PNESER)	0	0	0	14,468	36,845	36,845	36,845	125,003
Normalized dwellings of existing customers (IDB-I)	0	0	0	7,164	875	-	-	8,039
Normalized dwellings of existing customers (IDB-II)	0	0	0	1,171	-	-	-	1,171
Normalized dwellings of existing customers (IDB-III)	0	0	0	2,269	-	-	-	2,269
Normalized dwellings of existing customers (Co-funders)	0	0	0	3,864	35,970	36,845	36,845	113,525
Normalized dwellings of new customers (Total PNESER)	0	0	0	4,519	11,508	11,508	11,508	39,043
Normalized dwellings of new customers (IDB-I)	0	0	0	2,238	273	-	-	2,511
Normalized dwellings of new customers (IDB-II)	0	0	0	366	-	-	-	366
Normalized dwellings of new customers (IDB-III)	0	0	0	709	-	-	-	709
Normalized dwellings of new customers (Co-funders)	0	0	0	1,207	11,235	11,508	11,508	35,458

Outputs	Baseline 2010	Targets						
		2011	2012	2013	2014	2015	2016	Total
<b>Component 3: Expansion in Isolated Areas with Renewable Energy</b>								
Strategy developed for serving isolated areas (NI-T1094)	0	0	1	0	0	0	0	1
Plans implemented for management training, accounting and billing systems, and microbasin protection and management at companies in isolated areas (IDB-I [34%]; IDB-III [66%])	0	0	0	0	0	2	2	4
Monitoring and evaluation plan for projects in isolated areas completed (IDB-I)	0	0	0	0	1	0	0	1
Baseline study and project impact evaluation studies for 4 hydroelectric micro-plants in isolated areas completed (IDB-I and IDB-III)	0	0	0	0	2	2	0	4
Users connected to renewable energy systems	0	0	0	320	0	2,625	875	3,820
Users connected to renewable energy systems (IDB-III)	0	0	0	64	0	1,575	525	2,164
Users connected to renewable energy systems (Co-funders)	0	0	0	256	0	1,050	350	1,656
<b>Component 4: Preinvestment and studies for generation projects with renewable energy</b>								
National power generation planning and expansion strategy prepared and approved (IDB-I)	0	0	0	0	1	0	0	1
Master plan for the Río Grande de Matagalpa Basin and the Upper Río Coco Basin developed (Co-funder: NDF)	0	0	0	0	1	0	0	1
MW of renewable energy with feasibility studies completed (Co-funder: OFID)	0	0	0	0	100	100	158	358
Study completed – Wind power prospecting and evaluation and feasibility study for wind generation systems at six sites for connection to the National Interconnected System (Co-funder: NDF)	0	0	0	0	0	1	0	1
Study completed – Feasibility study for the implementation of distributed power generation in Nicaragua (IDB-II)	0	0	0	1	0	0	0	1
Study completed – Geological map and prefeasibility study for the Cosigüina Volcano project (IDB-II [75%] and NDF [25%])	0	0	0	0	1	0	0	1

Outputs	Baseline 2010	Targets						
		2011	2012	2013	2014	2015	2016	Total
<b>Component 5: Energy Efficiency</b>								
Lights installed – Public lighting savings plan (Total PNESER)	0	0	0	5,000	15,362	5,262	0	25,624
Lights installed – Public lighting savings plan (IDB-I)	0	0	0	5,000	1,448	0	0	6,448
Lights installed – Public lighting savings plan (IDB-II)	0	0	0	0	5,000	1,145	0	6,145
Lights installed – Public lighting savings plan (Co-funders)	0	0	0	0	8,914	4,117	0	13,031
Lights installed – Replacement of incandescent bulbs with compact fluorescent bulbs in the residential sector. Phase II	0	0	0	1,750,000	1,750,000	500,000	0	4,000,000
Lights installed – Replacement of incandescent bulbs with compact fluorescent bulbs in the residential sector. Phase II (IDB-III)	0	0	0	700,000	100,000	0	0	800,000
Lights installed – Replacement of incandescent bulbs with compact fluorescent bulbs in the residential sector. Phase II (Co-funders)	0	0	0	1,050,000	1,650,000	500,000	0	3,200,000
Lights installed – Replacement of magnetic fluorescent lights with electronic lighting in the government sector	0	0	0	10,000	40,910	0	0	50,910
Lights installed – Replacement of incandescent bulbs with compact fluorescent bulbs in the residential sector. Phase II (IDB-III)	0	0	0	0	12,365	0	0	12,365
Lights installed – Replacement of incandescent bulbs with compact fluorescent bulbs in the residential sector. Phase II (Co-funders)	0	0	0	10,000	28,545	0	0	38,545
Thermal systems installed – Demonstration project for the installation of thermal solar systems in Nicaragua. Phase I and Phase II (Co-funders)	0	0	0	10	3	0	0	13
Systems installed – Engineering and development of refrigeration and climate control systems using solar energy (Co-funders)	0	0	0	0	75	0	0	75
Systems installed – Photovoltaic systems for the implementation of productive systems in Nicaragua's rural areas (Co-funders)	0	0	0	0	375	375	0	750
Study prepared – Development of procedure to ensure compliance with energy efficiency standards (IDB-III)	0	0	0	1	0	0	0	1
Study prepared – Development of a policy, national program, and legislative bill on energy efficiency (IDB-I and IDB-II)	0	0	0	1	0	0	0	1
Training activities held: Institutional strengthening on energy efficiency issues: electric, thermal, compressed air, and industrial processes (IDB-I)	0	0	0	3	0	0	3	3

Outputs	Baseline 2010	Targets						
		2011	2012	2013	2014	2015	2016	Total
<b>Component 6: Strengthening the Transmission System in Rural Areas</b>								
Lot of maintenance and operation equipment procured and in service (IDB-I)	0	0	0	1	0	0	0	1
Additional MWs installed in remodeling or expansion of substations (Co-funders)	0	0	0	0	285	147,5	0	432,5
Km of transmission lines installed (Co-funders)	0	0	0	0	50 double circuit 336 single	185 double circuit 50 single	0	235 double circuit 386 single
<b>Component 7: Sustainability of ENEL Isolated Systems</b>								
ENEL agencies connected to new business management system (Total PNESER)	0	0	0	0	14	14	0	28
ENEL agencies connected to new business management system (IDB-I)	0	0	0	0	14	0	0	14
ENEL agencies connected to new business management system (IDB-II)	0	0	0	0	0	14	0	14
kW of renewable energy evaluated (IDB-II)	0	0	0	3,500	0	0	0	3,500
Number of isolated communities with studies of renewable energy potential prepared (IDB-II)	0	0	0	0	20	0	0	20
kW of renewable energy installed	0	0	0	0	300	0	1,000	1,300
kW of renewable energy installed (IDB-II)	0	0	0	0	300	0	0	300
kW of renewable energy installed (IDB-III)	0	0	0	0	0	0	1,000	1,000

<sup>1</sup> Normalization includes works for distribution, metering, and internal connections so customers can have a safe and reliable supply of energy with effective commercial monitoring and accurate electricity service metering. The target involves both existing customers already on the distributors' records and customers obtaining service illegally, who will be incorporated as new customers. In addition to the total number of normalized clients, a separate indicator shows the new customers that are taken into account for the coverage indicator.

## **FIDUCIARY AGREEMENTS AND REQUIREMENTS**

<b>Country:</b>	Nicaragua
<b>Project number:</b>	NI-L1063
<b>Name:</b>	National Sustainable Electrification and Renewable Energy Program – third loan (IDB-III) for Nicaragua
<b>Executing agency:</b>	Ministry of Energy and Mining (MEM), Empresa Nacional de Transmisión Eléctrica (ENATREL), and Empresa Nicaragüense de Electricidad (ENEL)
<b>Prepared by:</b>	Brenda M. Alvarez Junco, Fiduciary Specialist in Procurement (FMP/CNI), and Juan Carlos Lazo, Senior Fiduciary Specialist in Financial Management (FMP/CNI)

### **I. EXECUTIVE SUMMARY**

Fiduciary management of procurements was evaluated based on the ex post review reports of 20 January 2012, prepared as part of operation 1933/BL-NI. The financial management evaluation was conducted based on the Institutional Capacity Assessment System reports on the MEM, ENEL, and ENATREL, updated to reflect the performance of the executing agencies during 2011.

Fiduciary management in Nicaragua is being improved and requires various measures to bring current practice in line with international best practices and make it consistent with Bank policies. In terms of fiduciary issues, the executing agencies, i.e., the MEM, ENEL, and ENATREL, have experience in executing projects financed by the Bank and are currently executing operations 1877/BL-NI, 1933/BL-NI, and 2342/BL-NI.

The present program is being financed in collaboration with other donors, including the Nordic Development Fund (NDF), the Japan International Cooperation Agency (JICA), the Central American Bank for Economic Integration (CABEI), the European Investment Bank (EIB), the OPEC Fund for International Development (OFID), the Export Import Bank of Korea (KEXIM), and the European Union/ Latin America Investment Fund (EU/LAIF). The fiduciary agreements on procurements established for the PNESER I and its first modified contract, as reflected in the memorandum of understanding between the Republic of Nicaragua and the IDB, the CABEI, and the EU/LAIF remain in effect.

### **II. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY**

During preparation of this operation, it was determined that the execution of procurements for this operation by the MEM, ENATREL, and ENEL would be consolidated and handled by a single unit at ENATREL. This will have a direct effect on the institutional capacity of the sector, as well as, in the short term, on the level of fiduciary risk associated with

procurements. The backgrounds of all of the personnel responsible for executing procurements, as well as the manual outlining organizational structure and functions, are unknowns.

On matters of financial management, the MEM has maintained an execution capacity and control environment acceptable to the Bank, thus constituting a low level of risk. In the past, however, ENEL and ENATREL saw significant erosion in the quality of their control environments. Since then, there has been a notable improvement at ENATREL. This is not the case at ENEL, but an understanding was reached with ENEL officials in June 2012 on measures to be implemented to remedy the existing shortcomings. Given the program participation of each of the executing agencies, it is recommended that a “high” rating for overall risk be maintained with regard to financial management, subject to a re-evaluation after review of the audited financial statements for 2012.

### **III. FIDUCIARY RISK EVALUATION AND MITIGATION MEASURES**

Some of the key personnel dealing with contracts in ENATREL’s procurement division have been transferred to strengthen the procurement unit, in the framework of the new operation 2342/BL-NI. This situation directly affects the institutional capacity of ENATREL, so the sector decided that the staff should continue to help carrying out the procedures until ENATREL’s new procurement unit has been formed. The Bank will update the assessment of procurement capacity six months after issuing this annex.

With regard to financial management, there has been a substantial improvement in performance at ENATREL, which should be consolidated in 2012-2013. In the case of ENEL, the action plan has been redefined in light of the 2011 audited financial statements. FMP/CNI will provide monthly follow-up, for the remainder of 2012, on compliance with the recommended measures.

### **IV. CONSIDERATIONS FOR THE SPECIAL CONDITIONS OF CONTRACTS**

In order to facilitate the negotiations of the project team and especially those of the Legal Department (LEG), the following agreements and requirements should be considered in the special conditions:

- a. No additional and/or different factor beyond those issues addressed in the agreements signed previously as part of the PNESER program.
- b. Except in special cases, and only with the prior authorization of the Bank, no direct payments to providers will be made to bank accounts located in Nicaragua, given that the country lacks the legal framework to process such payments.

### **V. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION**

Procurements will be executed through the procurement unit at ENATREL, which will be responsible for executing procurements for this operation.

In addition to financing from the IDB, the operation will receive funding from various donors (EIB, CABEL, NDF, EU/LAIF, OFID, KEXIM, and JICA). Contracting and procurement will be carried out pursuant to the specific policies of each of the financing entities in the case of procurements funded by resources from a single source. For procurements that draw on more than one funding source, the procurement will be carried out pursuant to policies defined and agreed upon by the donors.

Procurements carried out with IDB resources will be executed pursuant to the provisions of documents GN-2349-9 and GN-2350-9, both of March 2011, and in accordance with the provisions of the loan contract.

- a. **Procurement of works, goods, and nonconsulting services:** Contracts for works, goods, and nonconsulting services<sup>1</sup> generated under the program and subject to international competitive bidding (ICB) will be executed using standard bidding documents issued by the Bank. Procurements subject to national competitive bidding (NCB) will be executed using national bidding documents recommended by the Bank.
- b. **Selection and contracting of consultants:** Contracts for consulting services generated under the program are listed in the initial procurement plan and will be executed using the standard request for proposals issued by the Bank.
  - a. **The short list of consulting firms**<sup>2</sup> may comprise entirely (100%) national firms<sup>3</sup> in the case of contracts with a value of less than US\$200,000, the threshold set by the Bank<sup>4</sup> for Nicaragua.
  - b. **Selection of individual consultants:** This process will take into account the individuals' respective qualifications for performing the work, based on a comparison of qualifications of at least three candidates.

**Table of Threshold (US\$ thousands)**

CATEGORY OF EXPENDITURE	AMOUNT IN US\$ thousands	METHOD OF PROCUREMENT	IDB REVIEW
Works	≥1,500	ICB	Ex ante for all procurements
	<1,500 ≥ 150	NCB	Ex post for all procurements valued at US\$150,000 or less
	< 150	PC	Ex post for all procurements
Goods	≥150	ICB	Ex ante for all procurements
	≤150 > 25	NCB	Ex post for all procurements valued at US\$25,000 or less
	≤ 25	PC	Ex post for all procurements

<sup>1</sup> In accordance with the Bank's procurement policies, nonconsulting services are treated like goods.

<sup>2</sup> Pursuant to Section V of the Policies for the Selection and Contracting of Consulting Services, the selection of individual consultants does not require the use of a shortlist or the standard request for proposals.

<sup>3</sup> This does not preclude the participation of foreign firms.

<sup>4</sup> VPC/FMP establishes these threshold amounts.

CATEGORY OF EXPENDITURE	AMOUNT IN US\$ thousands	METHOD OF PROCUREMENT	IDB REVIEW
Nonconsulting services	>150	ICB	Ex ante for all procurements
	≤150 > 25	NCB	Ex post for all procurements valued at US\$25,000 or less
	≤ 25	PC	Ex post for all procurements
Consulting firms	>200	International short list	Ex ante for all procurements
	≤200	National short list	
Individual consultants	See Section V, Policy GN-2350-9		Ex post for all procurements

Note: The thresholds established for ex post review are applied on the basis of the executing agency's fiduciary execution capacity and may be modified by the Bank to the extent that this capacity changes.

### 3. Initial procurement plan

The PNESER has three procurement plans, one for each executing agency—2342/BL-NI-1, 2342/BL-NI-2, and 2342/BL-NI-3—which will receive resources for this operation. Thus, no initial procurement plan will be produced for operation NI-L1063.

### 4. Procurement supervision

The ex post reviews will be conducted every six months in accordance with the program supervision plan. The ex post review reports will include at least one physical inspection visit,<sup>5</sup> selected from among the procurements subject to ex post review. At least 10% of the contracts reviewed must be physically inspected.

### 5. Records and files

Each executing agency will be responsible for keeping files and records for each executed procurement, maintaining in a single file a record of all of the steps in the process up until the loan contract is finalized. Each executing agency will set aside a secure space for safeguarding the files and will assign one of its administrative personnel with responsibility for this task.

## VI. FINANCIAL MANAGEMENT AGREEMENTS AND REQUIREMENTS

### a. Financial administration system

ENATREL and the MEM already have SIGFA-PRO, but only the MEM actually uses it. Pursuant to the agreement reached between the Bank and ENATREL during the recent program mission, ENATREL will update information in SIGFA-PRO, train its staff in the use of this application, and use it going forward. ENEL is currently working with VAN but is giving consideration to migrating to SIGFA-PRO in the medium term.

### b. Disbursements and cash flow

The operation will have three dedicated accounts to manage funds, one at each executing agency. A system of advances will be used, with advances being made to cover liquidity needs during the following four months.

<sup>5</sup> The inspection verifies that the procurements occurred, leaving verification of quality and compliance with specifications to the sector specialist.



**c. Accounting and financial reports**

- a. Audited financial statements will be required annually and as stipulated in the Bank's guidelines and policies.
- b. The executing agencies will also deliver midterm financial reports. These reports do not need to be audited and may be delivered together with the technical monitoring report or progress report.

**d. Internal control and internal audit**

The three executing agencies have internal auditing units and mechanisms defined for maintaining an acceptable internal control environment. In practice, however, the guidelines for these units are not observed, a situation that has led to a deterioration of the aforementioned control environment.

**e. External control**

There is no change from the provisions agreed upon in the previous loans approved as part of the PNESER.