PUBLIC
SIMULTANEOUS DISCLOSURE

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

BOLIVIA

RURAL ELECTRIFICATION PROGRAM II

(BO-L1117)

LOAN PROPOSAL

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REQUIRED

1. Multiyear execution plan
2. Annual work plan (AWP)
3. Monitoring and evaluation plan
4. Environmental and Social Management Report (ESMR)
5. Procurement plan

OPTIONAL

1. Economic evaluation of the program
2. Capacity assessment of the executing agencies
3. Environmental and social analysis
4. Technical note on gender
5. Lessons learned from the Rural Electrification Program BO-L1050
6. Diagnostic assessment and strategy for connecting rural households
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ABBREVIATIONS

AE	Autoridad de Fiscalización y Control Social de Electricidad [Electrical Power Social Control and Oversight Authority]
CGE	Office of the Comptroller General
CNA	Censo Nacional Agropecuario [National Agricultural Census]
CNDC	Comité Nacional de Despacho de Carga [National Load Dispatch Committee]
CNPV	Censo Nacional de Población y Vivienda [National Population and Housing Census]
ENDE	Empresa Nacional de Electricidad [National Electricity Company]
ESMP	Environmental and Social Management Plan
FSO	Fund for Special Operations
IRR	Internal rate of return
kV	Kilovolts
kWh	Kilowatt-hours
MEFP	Ministry of Economy and Public Finance
MEPER	Rural Electrification Project Preparation Manual
MHE	Ministry of Hydrocarbons and Energy
MPD	Ministry of Planning and Development
NB-SABS	Normas Básicas del Sistema de Administración de Bienes y Servicios [Basic Standards of the Goods and Services Administration System]
NPV	Net present value
PEU	Program execution unit
PEVD	Programa Electricidad para Vivir con Dignidad [Living with Dignity Electricity Program]
REP	Rural Electrification Program
SCF	Single Currency Facility
SIAP-BID	Integrated Management System for IDB Projects
SIGEP	Sistema de Gestión Pública [Public Management System]
SIN	Sistema Interconectado Nacional [National Interconnected System]
VMEEA	Office of the Deputy Minister for Electricity and Alternative Energy

PROJECT SUMMARY

BOLIVIA
RURAL ELECTRIFICATION PROGRAM II
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<table>
<tr><th colspan="6">Financial Terms and Conditions</th></tr>
<tr><td colspan="3" rowspan="2">Borrower: Plurinational State of Bolivia</td><td>Financing</td><td>Ordinary Capital (OC)</td><td>Fund for Special Operations (FSO)</td></tr>
<tr><td>Amortization period:</td><td>30 years</td><td>40 years</td></tr>
<tr><td colspan="3" rowspan="2">Executing agencies: Ministry of Hydrocarbons and Energy (MHE), through the Office of the Deputy Minister of Electricity and Alternative Energy (VMEAA); Empresa Nacional de Electricidad [National Electricity Company] (ENDE); departmental autonomous governments</td><td>Disbursement period:</td><td>5 years</td><td>5 years</td></tr>
<tr><td>Grace period:</td><td>6 years</td><td>40 years</td></tr>
<tr><td>Source</td><td>Amount (US$)</td><td>%</td><td>Interest rate:</td><td>SCF - fixed[a]</td><td>0.25%</td></tr>
<tr><td>IDB (Ordinary Capital):</td><td>85,000,000</td><td>85</td><td>Inspection and supervision fee:</td><td>[b]</td><td>N/A</td></tr>
<tr><td>IDB (FSO):</td><td>15,000,000</td><td>15</td><td>Credit fee:</td><td>[b]</td><td>N/A</td></tr>
<tr><td>Total:</td><td>100,000,000</td><td>100</td><td>Currency:</td><td>US$ - SCF</td><td>US$</td></tr>
<tr><th colspan="6">Project at a Glance</th></tr>
<tr><td colspan="6">Program objective/description: The general objective is to increase access to electricity in rural areas of the Plurinational State of Bolivia, making public and social services available to the population and helping to reduce poverty levels. The specific objectives are to increase: (i) electricity coverage in rural areas; (ii) the consumption of electricity for production-related uses in rural areas, with a gender focus; and (iii) electricity transmission capacity, in order to meet demand in the area where coverage will be expanded under the program and reduce CO_2 emissions associated with the use of fossil fuels in isolated systems.</td></tr>
<tr><td colspan="6">As special contractual conditions precedent to the first disbursement of the loan: (i) the program execution unit (PEU) has selected the coordinator of the PEU in accordance with the terms previously agreed upon with the Bank; and (ii) the program Operating Regulations, including the Environmental and Social Management Plan (ESMP), have been approved and entered into force, in accordance with the terms and conditions previously agreed upon with the Bank (paragraph 3.5).
As special contractual execution conditions (Subcomponent I.1): the PEU has provided the following to the Bank, in accordance with the terms and conditions previously agreed upon with it: (i) prior to the disbursement of resources to each departmental autonomous government participating in the program, evidence of: (a) the signature and entry into force of an inter-governmental agreement between the MHE and the respective departmental autonomous government, for coordination of the activities planned under Subcomponent I.1, as well as a subsidiary agreement between the Ministry of Economy and Public Finance (MEFP), the Ministry of Planning and Development (MPD), and the respective departmental autonomous government, for the purpose of transferring the loan proceeds to the departmental autonomous government for execution and coordination of the activities planned under Subcomponent I.1; and (b) the contracting of the minimum specialized technical staff, and the approval and entry into force of the specific operating regulations for the respective departmental autonomous government; and (ii) prior to the tendering of each infrastructure project under Subcomponent I.1, evidence of the signature and entry into force of a contract between the departmental autonomous government and the respective operating company, for the monitoring, operation, and maintenance of the projects included in Subcomponent I.1 (paragraph 3.10).
As special contractual execution conditions (Component II): (i) precedent to disbursement of the funds allocated for Component II activities, the PEU will provide evidence to the Bank, in accordance with the terms and conditions previously agreed upon with the Bank, of: (a) the signature and entry into force of an inter-agency agreement between the MHE and ENDE, for coordination of the activities planned under Component II, and a subsidiary agreement between the MEFP, the MPD, and ENDE, for purposes of transferring the loan proceeds to ENDE, for execution of the activities planned under Component II; and (b) the hiring of the minimum specialized technical staff, and the approval and entry into force of the specific operating regulations for ENDE (paragraph 3.11); and (ii) that ENDE present the following to the Bank's satisfaction: (a) prior to tendering each infrastructure project, an environmental impact study and evidence of having secured the applicable environmental licenses and other permits from the competent environmental authority; (b) prior to tendering the substation civil engineering works, evidence of having obtained legal title to the land where the projects will be carried out; (c) prior to tendering the civil works to construct the transmission line foundations, evidence of the signature and entry into force of easement contracts and/or community agreements between ENDE and the owners of the land where the works will be constructed, which demonstrate the release of a minimum of 30% of the length of the respective section; and (d) prior to beginning the civil engineering works to construct the transmission line foundations, evidence of the signature and entry into force of easement contracts and/or community agreements between ENDE and the owners of the land where the works will be constructed, which demonstrate the release of the entire length of the respective section (paragraph 2.6).</td></tr>
<tr><td colspan="6">Exceptions to Bank policies: None</td></tr>
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Strategic Alignment						
Challenges:[c]	**SI**	☑	**PI**	☑	**EI**	☐
Crosscutting themes:[d]	**GD**	☑	**CC**	☑	**IC**	☐

(a) The borrower will pay interest on outstanding balances of this portion of the Ordinary Capital loan at a LIBOR-based rate. The rate on the outstanding balance will be set whenever such balance reaches 25% of the approved net amount or US$3 million, whichever is greater.

(b) 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 policies.

(c) SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration).

(d) GD (Gender Equality and Diversity); CC (Climate Change and Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).

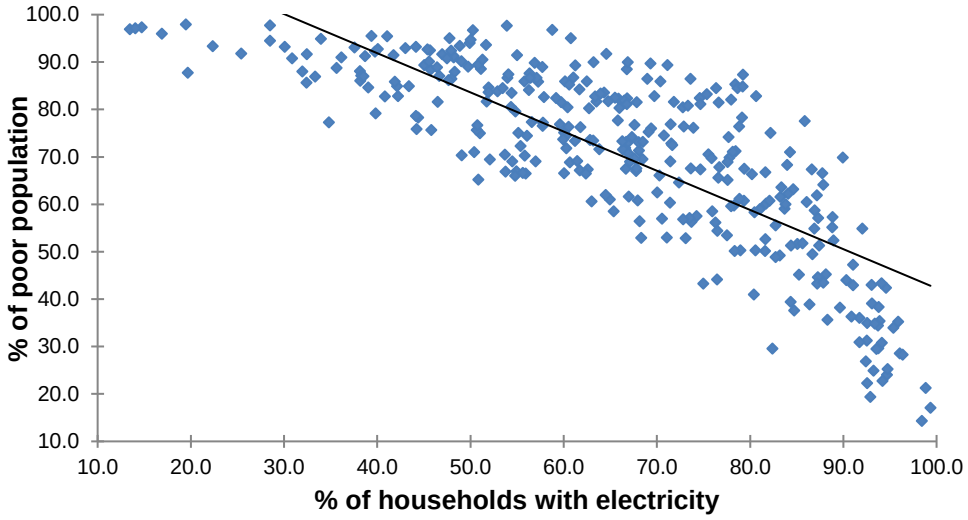
I. DESCRIPTION AND RESULTS MONITORING

A. Background, problem to be addressed, and rationale

1.1 **Country assessment.**[1] Bolivia has a population of approximately 10 million inhabitants, 67% of whom live in urban areas and 33% in rural areas. Between 2000 and 2014, the average annual growth rate of the economy was 4.2%, and 5% starting in 2009,[2] thanks to a favorable external scenario along with good performance of macroeconomic variables. Strong economic performance and social policies have led to gains in household income levels, declines in poverty, and improved income distribution. The external outlook for the next few years is less favorable, given the country's dependence on oil revenue and persistently low commodity prices, and lower growth rates are expected,[3] which poses the challenge of targeting public investment to close social gaps and increase the productivity of the economy.

1.2 **Poverty scenario.**[4] Between 2000 and 2014, urban poverty fell from 55% to 31%, and rural poverty dropped from 87% to 58%. In the same period, extreme poverty fell from 28% to 8% in urban areas, and from 75% to 36% in rural settings. These differences between urban and rural areas are due primarily to the gap in infrastructure and basic public services, which include access to electricity. The 2012 National Census (CNPV 2012) shows a strong correlation between poverty levels and access to electricity (Figure 1).

Figure 1. Access to electricity and poverty at the municipal level



(Source: CNPV 2012)

[1] Bolivia: Country Development Challenges (CDC). IDB (2015).

[2] Bolivia is no longer a low-income country; it is now considered a lower-middle-income nation.

[3] The IMF projects growth rates of 3.8% in 2016 and 3.5% in 2017.

[4] Sources: (i) CDC; (ii) Castellani, F. and Zenteno, J., "Pobreza y movilidad social en Bolivia" [Poverty and Social Mobility in Bolivia], IDB (2015).

1.3 **Rural electrification.** Between 2001 and 2015, rural electricity coverage[5] increased from 25% to 66%, with 1.3 million households connected[6] through public investments by the central government, departmental autonomous governments, municipal autonomous governments, and investment by operators. There are still 375,000 households that do not have electricity, and of that number 86% are located in rural areas, primarily in indigenous and low-income communities. An estimated investment of US$1.9 billion is needed to achieve universal coverage. In all, 90% of rural households without electricity could be connected to the grid, and 10% would be covered using alternative energy sources.

1.4 **Electricity system.** The National Interconnected System (SIN) has 5,190 km of transmission lines, of which 4,088 km are part of the main interconnected system consisting of 69 kV, 115 kV, and 230 kV lines. During the period from 2010 to 2015, the SIN was extended by 1,255 km, with US$253 million in investment. Of the power generated by the SIN, 30% comes from renewable sources, and 70% is from natural gas, with an estimated consumption of 56.427 billion cubic feet per year.[7] Rural communities that have electricity but are not connected to the SIN depend on isolated systems with thermal generation based on natural gas and diesel, with 136 MW of installed power in 2014 and nearly 133,309 users. In 2015, natural gas consumption in isolated systems was 3,384 billion cubic feet per year.

1.5 **Production-related use of electricity**[8] in rural areas is limited. According to the 2013 National Agricultural Census (CNA), 8.4% of farmers use electricity for agricultural activities, with the main use being irrigation. Statistically, there is a close relationship between access to electricity and the existence of small and medium-sized enterprises. However, production-related uses of electricity do not occur immediately after electrification. Barriers must first be removed, and efforts made to promote this type of use. Access to electricity increases and diversifies crops through irrigation, although greater coverage also promotes labor diversification by increasing service activities, to the detriment of agricultural activities.[9] Finally, it has been observed that households with electricity have a higher income distribution curve than households without electricity.[10]

1.6 **Gender focus.** Rural women in Bolivia have little access to formal employment opportunities, training, technical assistance, or loans, which limits their labor market participation and their income-generating opportunities. About 80% of these women work in agricultural activities (compared with 72% of men), but in most cases they work on land belonging to their families (63%) and are not paid. Only 24.6% of rural women work independently, and just 9% are employed in the formal sector (see Technical Note on Gender). This program seeks to develop activities

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5 By 2015, national electricity coverage was estimated to be 88% (urban 98%, rural 66%) (Electricity Plan of the Plurinational State of Bolivia-2025).

6 Accountability hearing – Office of the Deputy Minister for Electricity and Alternative Energy (VMEEA) 2015.

7 Annual report – National Load Dispatch Committee (CNDC) (2014).

8 A production-related use of electricity is one that generates income for the user and includes commercial, service, agricultural, livestock, fishing, and cottage industry activities.

9 Based on the CNA analysis and surveys conducted in rural areas in the first half of 2016.

10 Based on surveys conducted in early 2016, households with electricity have higher incomes from their primary activities (20% higher) and secondary activities (39% higher), compared with households without electricity.

for the production-related use of electricity that will help improve the economic and labor situation of rural women and their families.[11]

1.7 **Problem to be addressed and its main determinants.** The link between poverty and wellbeing and access to electricity is widely known.[12] An impact assessment conducted in Ethiopia[13] concluded that access to electricity has a significant effect on the likelihood that households will emerge from poverty. Khandker et al.[14] concluded that electrification may raise household incomes and expenses by up to 28% and 23%, respectively. Barron and Torero[15] (2014) found that adult men reduce leisure time and time spent on agricultural work when they increase the time spent on other job activities, which is reflected in higher incomes. Dynkelman (2010)[16] concluded that electrification increased the employment rate of women by 9.5% over a five-year period in South Africa. A study conducted in Bangladesh by Abul Barkat et al.[17] (2002) showed positive impacts on employment, particularly for women, during the period from 1997 to 2002, and an overall increase in employment in electrified industries of 52.8%, with 41% for men and 121% for women, whereas overall employment in non-electrified industries increased by 28.6%, with 16.2% for men and 56.3% for women.

1.8 With respect to production-related uses, an analysis of electrification in Brazil between 1960 and 2000 estimated that a 10% increase in electricity coverage increases agricultural productivity (through irrigation) by 9.8%; in turn, greater productivity has positive effects on deforestation.[18] Kirubi et al.[19] showed that access to electricity leads to a significant per-worker productivity gains in small rural industries (100%-200%) and a corresponding 20%-70% increase in income, depending on the product made.

1.9 The main determinants of low rural electricity coverage in Bolivia are: (i) the low density and high dispersion of rural communities, and their distance to the electricity grid (which increase the per-beneficiary investment cost and operating and maintenance costs, as the level of coverage rises);[20] and (ii) the low consumption of electricity in rural areas (primarily lighting and communication)

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11 For example, in irrigation, milking machines, spinning mills, handicrafts, carpentry, knitting machines, cheese-making, food processing and service, shops, etc.

12 Energy Sector Framework Document. Energy Division – Document GN-2830. IDB (2015). Section II.

13 Tegene, G., Berhe, G., and Teklemariam, D. (2015), "Impact of Rural Electrification on Poverty Reduction Evidence from Rural Districts of Tigrai, Northern Ethiopia," Journal of Business Management & Social Sciences Research, Volume 4, No.1.

14 Khandker, S., Barnes, D. F., and Samad, H. (2013), "Welfare Impacts of Rural Electrification: A Panel Data Analysis from Vietnam, Economic Development and Cultural Change," Vol. 61, No. 3, pp. 659-692.

15 Barron M. and Torero M. (2014), *Short Term Effects of Household Electrification: Experimental Evidence from Northern El Salvador*.

16 Dinkelman, T. (2010), *The Effects of Rural Electrification on Employment: New Evidence from South Africa*, Princeton University.

17 Barkat et al. (2002), "Economic and Social Impact Evaluation Study of the Rural Electrification Program in Bangladesh," NRECA Report.

18 Assunção et al. "Electrification, Agricultural Productivity and Deforestation in Brazil" (working paper).

19 Kirubi, C., Jacobson, A., Kammen, D. M., and Mills, A. (2009). "Community-based electric micro-grids can contribute to rural development: evidence from Kenya," World Development, 37(7), pp. 1208-1221.

20 The estimated average cost per beneficiary was: US$580 (2003), US$641 (2007), and US$672 (2010). In the projects constructed as of 2015, the average cost was US$1,646 per beneficiary. The average densification cost in urban areas is US$730 per beneficiary.

which limits utility rate revenues.[21] Other factors that limit the expansion of rural electrification are: (i) the limited expanse of the transmission and sub-transmission system, which restricts the construction of new distribution networks; (ii) the low technical capacity to prepare projects, particularly in the smallest municipios;[22] and (iii) the non-existence of programs to promote production-related uses of energy.

1.10 **Rationale and proposed interventions.** The Plurinational State of Bolivia has requested financing from the Bank for the Rural Electrification Program II to help bridge the poverty gap between rural and urban areas, caused primarily by differences in access to infrastructure and basic public services. The program will support the provision of distribution infrastructure and technical assistance to ensure planned access to reliable, efficient, and sustainable electricity, while promoting production-related uses of electricity as well as the economic empowerment of women. It will also finance the expansion of transmission systems to support the expansion of electricity coverage, thus ensuring the reliability and sustainability of the electricity supply.

1.11 **Target population.** The population identified in the project sample (paragraph 2.2) includes approximately 35,000 rural households without electricity that will be connected through electrical power grids, and approximately 19,000 additional households in the direct service area of the Padilla-Monteagudo-Camiri transmission line. This program seeks to incentivize the use of electricity for production purposes in approximately 1,400 rural households. The rural population without electricity is mostly indigenous (70%) and low-income[23] and has low coverage rates of other public services such as water and sanitation (CNPV 2012).[24]

1.12 **Regulatory framework.** The Bolivian Constitution states that every person has the right to equitable access to basic services, including electricity, and grants exclusive authority for rural electrification to the departmental autonomous governments. The electricity sector is regulated by the Electricity Act 1604 of 1994. There is a separation of roles, with a regulatory body, the Electrical Power Social Control and Oversight Authority (AE); a policy-making body, the Office of the Deputy Minister for Electricity and Alternative Energy (VMEEA); an agency responsible for system planning and operation, the National Load Dispatch Committee (CNDC); and public and private electricity service providers. Generation, transmission, and distribution activities are separate, too, and are the responsibility of the National Electricity Company (ENDE) and its subsidiaries, as well as private companies, cooperatives, and semi-public companies.

1.13 **Rates.** Generators in the National Interconnected System (SIN) dispatch power based on the marginal cost, collecting fees for capacity, reserve, and energy on a competitive basis. The transmission companies receive a usage charge that covers their investment, operating, and maintenance costs, plus a regulated profit

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[21] Average consumption in electrified rural areas is 25 kWh/month per family, for lighting, radio, and a few hours of television. Average electricity consumption in urban areas is 120 kWh/month per family. (ENERGETICA, 2010)

[22] For example, of the initial sample of 23 projects that was received for preparing the loan, only 10 met the established criteria.

[23] In municipios with less than 20% coverage, the poverty rate is above 90%.

[24] Detailed statistics on rural and urban households, with and without electricity, are presented in the statistics and map of electricity coverage 2012.

margin. Distribution rates for each concession area (including urban and rural areas) are set by the AE every four years, based on the Pricing and Rates Regulations (Supreme Decree 26094), and cover investment, operating, and maintenance costs, with the right to obtain a profit. The average residential price is Bs 0.08/kWh.

1.14 **Discounted rate (*tarifa dignidad*).** This rate, in effect since 2006, provides a 25% discount for consumption below 70 kWh/month, which is covered through a fund financed by the electricity companies that operate the wholesale electricity market, and benefits nearly a million residential users (48% of the total), most of whom are in rural areas.

1.15 **Strategy of the Bolivian government.** The objective of the Living with Dignity Electricity Program (PEVD), which is under the authority of the VMEEA, is to provide universal access to electricity by 2025. The PEVD includes rural electrification programs financed by international cooperation, coordinates actions involving public and private institutions, and is the operating arm of the VMEEA. A pillar of the Patriotic Agenda 2025 is the universalization of basic services by 2025, and the 2016-2020 Economic and Social Development Plan sets a target of 90% rural coverage by 2020.

1.16 **Bank's sector knowledge.** The IDB has extensive knowledge about the Bolivian electricity sector. In recent years, it has provided over US$270 million in financing, including for pre-investment, generation, transmission, distribution, and rural electrification efforts.[25] The operation "Support for the Development of the Electricity Sector in Bolivia" (ATN/OC-14941-BO) was approved in 2015 for US$300,000, which includes resources to support the preparation of this loan.

1.17 In 2010, the Bank approved loan 2460/BL-BO for US$60 million to finance the Rural Electrification Program (REP),[26] currently being executed by a program execution unit (PEU) that was set up under the PEVD, within the institutional structure of the VMEEA. To date, 87% of the loan proceeds have been disbursed, 3,073 km of distribution lines have been installed (3,000 km were planned), and the two planned transmission lines (200 km) came on line in 2015. Several support tools were developed, including: (i) a Rural Electrification Project Preparation Manual (MEPER); (ii) a database of unit prices; and (iii) an update of the Bolivian standard for rural areas (NB 148011:2014). The outcome indicators include 5,000 new connections (21,500 planned) that were installed.[27] The low rate of connection in the REP is due to lack of information and coordination between the various actors. To improve this situation, a diagnostic assessment was prepared along with a strategy, now in execution for the REP (Diagnostic assessment and strategy for connecting rural households to the electricity grid). As part of the execution plan for the proposed program, specific actions were included to improve the connection rate (paragraph 1.19).

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[25] Misicuni Renewable Energy Hydroelectric Project (2238/BL-BO); Rural Electrification Program (2460/BL-BO); Cochabamba-La Paz Transmission Line (2654/BL-BO); Program to Support Preinvestment for Development (3534/BL-BO); and Program for Rural Electrification with Renewable Energy (GRT/NV-14258-BO).

[26] The REP and REP-II are not part of a multi-phase program. REP-II is proposed as a separate loan that taps the lessons learned during execution of the REP loan (2460/BL-BO).

[27] Connections are an outcome indicator because they are the responsibility of the operating companies and are not financed by the REP.

1.18 The midterm evaluation of the REP confirmed that the design hypothesis is valid (low rural coverage) and found that satisfactory progress has been made, even considering delays in execution. The delays are related to: (i) duration of the eligibility process for loan 2460/BL-BO, and signature of the agreements; (ii) competitive bidding processes declared void; and (iii) the temporary shortage of necessary materials (posts) on the national market. The evaluation recommends the following for the design of future programs: (i) more clearly define supervision and inspection functions in order to improve execution; and (ii) upgrade the monitoring system to improve the flow of information between supervisors and decision-makers. These recommendations will be implemented in this program, and will include monitoring specialists in the execution plan (paragraph 3.8).

1.19 **Lessons learned from the REP.** Based on implementation of the REP, some adjustments to the execution plan have been identified that are needed to improve coordination and maximize results within the existing regulatory framework. These were considered in the design of this program and included: (i) actively incorporating the departmental autonomous governments in project execution (paragraph 3.6), instead of a centralized approach, in order to improve decentralized monitoring and oversight of the projects; (ii) actively including operating companies in the monitoring process from the start of project execution, in order to improve the coordination and pace of connections (paragraph 2.10); (iii) including field verification of the number of beneficiaries as one of the project eligibility criteria, in order to ensure that results targets are properly tallied (paragraph 3.7); (iv) facilitating connection of rural users to the grid through operator financing of hookups and meters (paragraph 2.9); (v) promoting the use of electricity for production purposes in the program, in order to promote connections and increase the benefits of the program (paragraph 1.26); and (vii) including an impact evaluation in the program (paragraph 3.16), in order to verify the results achieved.

1.20 **Strategic alignment.** The program is consistent with the Bank's country strategy with Bolivia for the period 2016-2020 (document GN-2843) and contributes to the strategic objective of enhancing the provision of quality public goods and services, by increasing rural electrification coverage and extending the length of SIN transmission lines. The program is consistent with the Update to the Institutional Strategy 2010-2020 (document AB-3008) and is aligned with the following development challenges: (i) social inclusion and equality, under the relative criteria, by building infrastructure to provide sustainable electricity service to low-income rural populations; and (ii) productivity and innovation, by promoting the use of electricity in production-related activities with a gender focus in rural areas; and by building capacity to plan, develop, and implement rural electrification projects. The program is also aligned with the crosscutting themes of: (i) gender equality and diversity inasmuch as it will increase job and business opportunities for rural women through the use of energy for production purposes; and (ii) climate change and environmental sustainability, inasmuch as it will help to reduce CO_2 emissions. Furthermore, the program is consistent with the priority areas of the Sustainable Infrastructure Strategy for Competitiveness and Inclusive Growth (document GN-2710-5), inasmuch as it will finance the expansion and improvement of electricity transmission and distribution infrastructure, helping to meet projected demand. The program is included in the Operational Program Report 2016 (document GN-2849) and will contribute to the Corporate Results Framework 2016-2019 (document GN-2727-4) through the CO_2 emissions reduction indicator,

and the associated output indicators: (i) households connected to the power grid; and (ii) transmission and distribution lines constructed.

1.21 **Public Utilities Policy (document GN-2716-6).** The program fulfills the economic evaluation and financial sustainability conditions of the Public Utilities Policy: (i) all of the projects in the representative sample were evaluated using a cost-benefit methodology acceptable to the Bank, and demonstrate economic viability (paragraph 1.32); and (ii) the projects are financially sustainable, and the electricity rates to be charged by the operating companies for the projects will be those established for their concession area. These rates are regulated and will cover all operating and maintenance costs of the investments (paragraph 1.13). The electricity sector is consistent with the principles set out in the Public Utilities Policy in terms of supporting basic needs and providing an appropriate institutional framework and sector structure, having clearly defined: (i) the separation of roles and generation, transmission, and distribution activities; and (ii) an established regulatory system with quality service conditions and periodic rate-setting (see Rationale for the Program with the Public Utilities Policy (document GN-2716-6)).

1.22 **Energy Sector Framework Document (document GN-2830-3)**. The program is consistent with the sector framework, inasmuch as it will support the promotion of universal, reliable, and affordable access to energy services, which includes expanding access to electricity for the low-income rural population.

B. Objectives, components, and cost

1.23 **Objectives.** The general objective is to increase access to electricity in rural areas of the Plurinational State of Bolivia, making public and social services available to the population and helping to reduce poverty levels. The specific objectives are to increase: (i) electricity coverage in rural areas; (ii) the consumption of electricity for production-related uses in rural areas, with a gender focus; and (iii) electricity transmission capacity, in order to meet demand in the area where coverage will be expanded under the program and reduce CO_2 emissions associated with the use of fossil fuels in isolated systems. The program has two components:

1.24 **Component I. Distribution infrastructure to increase rural electricity coverage and promotion of its use for production-related purposes (US$65 million).** There are three subcomponents:

1.25 **Subcomponent I.1. Extension of distribution networks (US$60 million).** This subcomponent will finance projects to expand monophase and triphase electricity distribution networks with voltages below 69 kV (paragraph 2.2). The projects will consider, among other things, the demand for production-related uses, as well as residential, commercial, and public lighting demand. A total of 5,200 km of lines should be installed, benefiting approximately 35,000 households. The operating companies will be responsible for connecting beneficiaries to the grid (paragraph 2.9). The projects will be submitted by the departmental autonomous governments to the VMEEA for approval based on the eligibility criteria established in the program Operating Regulations (paragraph 3.7).

1.26 **Subcomponent I.2. Promotion of production-related uses of electricity (US$2 million)**. This subcomponent will finance technical assistance[28] for the diagnostic assessment, design, and implementation of strategies to promote

[28] The plan is to hire a single institution or firm with experience in energy and rural development to implement this component.

production-related uses of electricity, in order to incentivize the use of the infrastructure financed by Subcomponent I.1,[29] and the economic empowerment of women. The diagnostic assessment will identify the areas with the greatest economic potential, prioritizing interventions in areas that will yield high returns, and in areas where other rural development programs have been implemented, such as the Program to Create Rural Agrifood Initiatives.[30] Approximately 1,400 beneficiaries are expected to implement production-related uses of electricity, with an average consumption of 210 kWh/month per beneficiary, and at least 25%[31] of these users are expected to be women.[32] This subcomponent will also finance an impact evaluation (paragraph 3.16).

1.27 **Subcomponent I.3. Preinvestment and preparation of studies and regulations for rural electrification (US$3 million)**. This subcomponent will support the formulation of a National Rural Electrification Plan and will support the VMEEA, the Living with Dignity Electricity Program (PEVD), as well as the municipal and departmental autonomous governments in the identification, preparation, and evaluation of rural electrification programs and projects, within the framework of the areas of competence established in the national constitution. It will also support the formulation of studies and regulations to promote increased electricity coverage.

1.28 **Component II. Increased transmission capacity in rural areas (US$30 million)**. This component will finance the 115 kV Padilla-Monteagudo-Camiri transmission line that will lengthen by 130 km the Sucre-Padilla line (completed and financed by the REP). The transmission line, which has 25 MVA of capacity and three substations, will connect Padilla (in the SIN) and the isolated systems in Muyupampa, Monteagudo and Camiri. Connecting the isolated systems to the SIN will reduce the consumption of natural gas used to generate power by 128 billion cubic feet per year,[33] equivalent to 7,000 metric tons of CO_2.

1.29 **Administration, monitoring, and evaluation (US$5 million).** The remaining loan proceeds (5%) will be used to finance the administrative, monitoring, and audit costs, including the minimum staff required for program execution.

1.30 **Cost and financing.** The total cost of the program is US$100 million, of which US$85 million will be financed by the Bank with resources from the Ordinary Capital, and US$15 million will be financed with resources from the Fund for Special Operations (FSO) (Table 1). The cost categories include the procurement of goods, works, land (paragraph 2.5), consulting, and other services. No local counterpart contribution is planned.

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[29] The methodology proposed in Maximizing the Productive Uses of Electricity to Increase the Impact of Rural Electrification Programs (ESMAP, 2008) will be used.

[30] Loans BO-L1040 and BO-L1219.

[31] The minimum target corresponds to the number of women-led agricultural production units (25.2%) CNA-2013.

[32] Projects that are for productive uses through cooperatives or associations will be headed by a female president or representative.

[33] Consumption by the isolated systems is 428 billion cubic feet per year. When the remote systems are connected to the SIN, the energy will be replaced by electricity with a mix of 70% natural gas and 30% hydroelectric power. An estimated reduction of 128 billion cubic feet per year of natural gas is expected in the first year, with an emissions factor of 0.054717 tCO_2/Mcf.

Table 1. Program Cost (in US$)

	IDB	TOTAL
Component I: Distribution infrastructure to increase rural electricity coverage and promotion of its use for production-related purposes	**65,000,000**	**65,000,000**
I.1. Extension of distribution networks	60,000,000	60,000,000
I.2. Promotion of production-related uses of electricity and impact evaluation	2,000,000	2,000,000
I.3. Preinvestment and preparation of studies and regulations for rural electrification	3,000,000	3,000,000
Component II. Increased transmission capacity in rural areas	**30,000,000**	**30,000,000**
Padilla-Monteagudo-Camiri transmission line	11,000,000	11,000,000
Padilla, Monteagudo, Camiri substations	15,000,000	15,000,000
Social management	300,000	300,000
Compensation for easements	300,000	300,000
Land, substations	300,000	300,000
Design, engineering, and supervision	1,300,000	1,300,000
Customs and warehousing	500,000	500,000
Contingencies	1,300,000	1,300,000
Administration, monitoring, and evaluation	**5,000,000**	**5,000,000**
Departmental autonomous governments	2,000,000	2,000,000
Program execution unit	1,250,000	1,250,000
ENDE	1,250,000	1,250,000
Audit	200,000	200,000
Contingencies	300,000	300,000
TOTAL PROGRAM COST	**100,000,000**	**100,000,000**

C. Key results indicators

1.31 **Expected results.** The indicators included in the results matrix for the program are: (i) the number of new rural connections;[34] (ii) the number of households that implement production-related uses, disaggregated by gender; (iii) electricity consumption by new users; (iv) the use of energy for production-related purposes; (v) the maximum load of the Padilla-Monteagudo-Camiri transmission line; and (vi) CO_2 emissions associated with the consumption of natural gas in the connected isolated systems.[35] Output indicators for each component are: (i) kilometers of distribution lines installed; (ii) implementation of the campaign to promote production-related uses; (iii) number of preinvestment studies conducted; (iv) personnel trained in the preparation of rural electrification projects; and (v) the capacity of the installed transmission systems.

D. Socioeconomic evaluation

1.32 **The socioeconomic evaluation** demonstrates the program's viability. For the extension of rural networks, the evaluation followed the policies of the Office of the Deputy Minister of Public Investment and External Financing, comparing the economic costs and benefits of the intervention, and taking into account shadow prices, with a discount rate of 12%. The socioeconomic internal rate of return (IRR) is over 16% in all projects, with a positive socioeconomic net present value (NPV). For the projects to promote production-related uses, the incremental socioeconomic benefit obtaining from the additional consumption of energy in rural

[34] Connections are an outcome (not an output) since they are not financed by the program.

[35] The reduction of emissions is considered an outcome, since it is contingent on the construction of the line as well as gas consumption in the SIN.

communities was calculated, yielding a socioeconomic IRR of 30% and a positive socioeconomic NPV. For the Padilla-Monteagudo-Camiri project, the cost of energy not supplied in a without-program scenario and the opportunity cost of the gas used to generate the power replaced in the isolated system were evaluated, yielding a socioeconomic IRR of 24% and a positive socioeconomic NPV. A sensitivity analysis was conducted of the main expected costs and benefits, which confirmed the viability of the program under all evaluated scenarios.

II. FINANCING STRUCTURE AND MAIN RISKS

A. Financing instruments

2.1 The operation was designed as a multiple works program, since it includes independent projects, meets the eligibility criteria (paragraph 3.7), and includes a representative sample for evaluation and execution. The infrastructure projects will begin during the first year after the loan contract enters into force, and a there is a five-year disbursement period. The disbursement schedule appears in the following table:

Table 2 – Disbursement Schedule (US$ million)

Year	2017	2018	2019	2020	2021	Total
Component I	3.0	13.1	20.5	19.4	9.0	65
Component II	0.0	13.2	14.5	2.4	0.0	30
Administration, monitoring, and evaluation	0.6	0.9	0.9	1.1	1.5	5
TOTAL	**3.6**	**27.2**	**35.9**	**22.9**	**10.5**	**100**

2.2 **Representative project sample.** Based on the projects submitted by the VMEEA, a representative sample was identified for Component I, with 10 projects totaling US$78 million, for 46,000 beneficiaries in the departments of Cochabamba, Oruro, and Chuquisaca. Because this amount is higher than the amount of Subcomponent I.1, the VMEEA will prioritize the projects in accordance with the eligibility criteria established in the Operating Regulations (paragraph 3.7). The projects are diverse and representative in terms of difficulty and topography and include tropical zones, valleys, mountains, and high plains. All Component II resources are allocated to the Padilla-Monteagudo-Camiri project.

2.3 **Technical evaluation.** The representative sample was analyzed and reviewed to verify its technical, socioeconomic, and environmental viability. The projects were checked to ensure that their respective manuals (MEPER) had the minimum required content, were prepared in accordance with current criteria and technical standards, and included an analysis of alternative technologies, where the connection to the grid is the lowest cost alternative. The budgets and timelines were checked to see if they were reasonable. For Component II, the Padilla-Monteagudo-Camiri project profile,[36] with a US$30 million budget, was reviewed to ensure that it met all technical, socioeconomic, and environmental criteria.

[36] The final designs are expected before the loan approval date.

B. Environmental and social safeguard risks

2.4 The operational policies applicable to the program the Environment and Safeguards Compliance Policy (OP-703) (Directives B.1 to B.7, B.10, B.14, and B.17), the Access to Information Policy (OP-102), the Disaster Risk Management Policy (OP-704), the Involuntary Resettlement Policy (OP-710), and the Indigenous Peoples Policy (OP-765). The program was classified as a category "B" operation under the policy OP-703, since it will have some localized negative environmental and social impacts, mainly related to acquisition of easements for the transmission line, for which mitigation measures have been planned. During the construction phase, expected impacts are related to waste management, noise pollution, and liquid, solid, and gas discharges, which could be managed by implementing measures established in Bolivia's technical environmental standards, international procedures commonly followed in these cases, and the Bank's environmental and social policies.

2.5 With respect to the transmission line, a compensation payment will be made for crop losses, removed trees, damage to wire fencing, gates, irrigation ditches, etc. The compensation process includes reaching an agreement with owners on the affected crops, information on the method used to calculate compensation, an inventory and calculation of affected crops determined in conjunction with the owner, and the drafting of agreements. Compensation payments will be made before the construction work begins on each affected property, and an estimated US$300,000 will be allocated for this purpose, to be financed with proceeds from the loan. The procedure for signing easement contracts and making compensation payments will be established in the Environmental and Social Management Plan (ESMP). In the case of substations, at the borrower's request, the loan will finance the purchase of land where the substations will be constructed, since this purchase is necessary to meet the program objectives. The amount of US$300,000 has been estimated for this purpose. The determination of the value of this land and recording of this value in the property register should follow the procedure established in the Specific Regulations of the System for the Administration of Goods and Services, which should be included in the ESMP. ENDE will demonstrate to the Bank that the price of the land is reasonable, based on market prices.

2.6 **Environmental and social contractual conditions**. In addition to the execution conditions established for that purpose (paragraph 3.11), the disbursement of the funds that will finance each of the projects included in Component II will be subject to the requirement that ENDE submit the following to the Bank: (i) prior to tendering each infrastructure project, an environmental impact study and evidence of having secured the applicable environmental licenses and other permits from the competent environmental authority; (ii) prior to tendering the substation civil engineering works, evidence of having obtained legal title to the land where the projects will be carried out; (iii) prior to tendering the civil works to construct the transmission line foundations, evidence of the signature and entry into force of easement contracts and/or community agreements between ENDE and the owners of the land where the works will be constructed, which demonstrate the release of a minimum of 30% of the length of the respective section; and (iv) prior to beginning the civil engineering works to construct the transmission line foundations, evidence of the signature and entry into force of easement contracts and/or community agreements between ENDE and the owners of the land where

the works will be constructed, which demonstrate the release of the entire length of the respective section.

C. Fiduciary risks

2.7 The program will be implemented under co-execution arrangements by the following entities: (i) the Ministry of Hydrocarbons and Energy (MHE), acting through the program execution unit (PEU) of the VMEEA, which has already been set up for the REP; (ii) the departmental autonomous governments; and (iii) ENDE (paragraph 3.1). An evaluation will be conducted of the institutional capacity of the VMEEA, ENDE, and the three departmental autonomous governments that submitted projects to participate in the program (paragraph 2.2), using the Institutional Capacity Assessment System (ICAS). All of the identified risks were medium or low, leading to the conclusion that the evaluated entities have sufficient capacity to process procurements and disbursements, prepare reports, and conduct program monitoring and evaluation. However, considering that in this program the departmental autonomous governments will execute the projects directly, potential delays in the execution of tenders or increases in the cost of these processes and possible delays or inconsistencies in financial information due to lack of familiarity with IDB systems have been identified as fiduciary risks, while the main risk factor is related to having a permanent detail of trained personnel throughout program execution. The program calls for the following mitigation measures: (i) strengthen and train the fiduciary teams of ENDE and the departmental autonomous governments, including personnel to work exclusively on the program; and (ii) assign technical staff to the PEU who specialize in financial management and procurement and are familiar with IDB policies and procedures, to provide the corresponding technical support and assistance to the departmental autonomous governments (paragraph 3.4).

D. Other project risks

2.8 Another risk to the program is a potential delay in signing the subsidiary loan agreements due to the borrowing capacity of the departmental autonomous governments, which could delay the start of the construction projects. To mitigate this risk, the departmental autonomous governments should start to take the necessary steps as soon as possible, and the VMEEA should do the necessary followup, as the coordinator. In Subcomponent I.1, there is a risk that the networks will not comply with the technical specifications and quality standards specified in the bidding documentation. To mitigate this risk, there are plans for: (i) the preparation of a supervision and inspection manual; (ii) the participation of the operating companies in the project review and approval process; and (iii) training for the units responsible for inspecting the projects.

E. Other issues

2.9 **Connections (service connection and meter).** The operating companies will be responsible for financing the individual service connections and meters, pursuant to current regulations, and the cost will be included in the rate[37] (Supreme Decree 27302, which allows the companies to include the cost of connections and meters in their recognized investment plans for the rate). New

[37] A diagnostic assessment of execution of the REP showed that the connection cost is not the principal reason for the lack of connectivity of users, but rather the lack of information and coordination between the main stakeholders. See Technical Annex.

connections will be installed by the operating companies and must meet all requirements set out in current regulations.

2.10 **Sustainability.** In order to ensure the sustainability of the infrastructure built under Subcomponent I.1, the networks will be delivered to the operating companies through operating and maintenance agreements (paragraph 3.7), which should be signed between each one of the departmental autonomous governments and the operating companies and enter into force prior to bidding out each of the respective works. The rate will be the rate set for each company's concession area (paragraph 1.13).[38] The operating companies will review the designs and actively participate in monitoring construction. The transmission projects under Component II will be operated by ENDE, which will receive a usage charge regulated by the AE to cover operating and maintenance costs.

III. Implementation and Management Plan

A. Summary of implementation arrangements

3.1 **Borrower and executing agencies.** The borrower will be the Plurinational State of Bolivia. The executing agencies will be: (i) the Ministry of Hydrocarbons and Energy (MHE), acting through the program execution unit (PEU) of the Office of the Deputy Minister for Electricity and Alternative Energy (VMEEA) to execute the activities planned under Subcomponents I.2 and I.3, provide technical support and assistance to the departmental autonomous governments for the execution of Subcomponent I.1, and perform all monitoring and general coordination of the program (paragraph 3.3); (ii) the National Electricity Company (ENDE), to carry out the activities planned under Component II (paragraph 3.6); and (iii) the departmental autonomous governments, to carry out the activities planned under Subcomponent I.1 (paragraph 3.6).

3.2 **Program Operating Regulations.** The execution of the program will be governed by the provisions set out in the respective loan contract, as well as in the Operating Regulations, which will include: (i) requirements and procedures for the presentation of projects by the departmental autonomous governments; (ii) procedures for the procurement of works, goods, and consulting services; (iii) guidelines for the use of program resources and financial management; (iv) disbursement procedures; and (v) a detailed description of the program activities as well as identification of the functions of each of the executing agencies, and any matters related to program monitoring. The departmental autonomous governments and ENDE will have specific operating regulations, which will be based on the program Operating Regulations and will spell out the specific issues related to execution of the components and subcomponents for which they are responsible.

3.3 Among other functions, the PEU will be responsible for: (i) planning, coordinating, and monitoring the entire program; (ii) evaluating and approving financing requests for the projects included in Subcomponent I.1, verifying the fulfillment of eligibility criteria and the minimum content specified in the Operating Regulations; (iii) providing technical assistance to the departmental autonomous governments for the preparation and presentation of the projects included in Subcomponent I.1,

[38] Under the current regulations, the investment made by the program would not be included in the rate calculation.

including advising on the preparation of bidding documentation and financial management; (iv) commissioning the annual external audit of the program; (v) conducting the impact evaluation; (vi) executing Subcomponents I.2 and I.3, including financial management and procurements; (vii) verifying and coordinating with the departmental autonomous governments and ENDE the prompt fulfillment of the obligations established in the program's subsidiary agreements, which should include the pertinent provisions of the loan contract; and (viii) coordinating the preparation of any supporting documentation needed to properly monitor the program. The PEU at the VMEEA has experience with the execution of operations financed by the Bank.

3.4 **Organization of the PEU-VMEEA.** The PEU that was already created under the first REP will be retained. This unit will be comprised of specialized technical personnel specific to this program, to include at a minimum: (i) a coordinator; (ii) a procurement specialist; (iii) a financial specialist; (iv) two experts who will each inspect the activities of Subcomponent I.2 and Subcomponent I.3; (v) a specialist responsible for the impact evaluation; (vi) a monitoring specialist; and (vii) a specialist in electrical power grids. Based on the risk management analysis (paragraph 2.7), the PEU will also have two specialists to provide technical advisory services to the departmental autonomous governments in procurement and financial management matters. The contracting of any additional staff will require the Bank's prior no objection.

3.5 **As special contractual conditions precedent to the first disbursement of the loan: (i) the PEU has selected the coordinator of the PEU in accordance with the terms previously agreed upon with the Bank; and (ii) the program Operating Regulations, including the Environmental and Social Management Plan (ESMP), have been approved and entered into force, in accordance with the terms and conditions previously agreed upon with the Bank.**

3.6 The departmental autonomous governments will be responsible for execution of all of the activities planned under Subcomponent I.1, while ENDE will be responsible for the activities planned under Component II,[39] including: (i) project preparation; (ii) the preparation of bidding documentation, technical specifications, and delivery thereof to the Bank for its no objection; (iii) the bidding processes, including the publication of calls for bids, the evaluation of bids, and requests for the Bank's no objection; (iv) the procurement and signature of works and supervision contracts; (v) the inspection of contracts, processing of payments, and monitoring and closing of contracts, including the approval and acceptance of products; (vi) compliance with the environmental and social conditions established in the loan contract; (vii) delivery of disbursement requests to the Bank, along with supporting documentation for expenses and the use of funds, and financial reporting; and (viii) preparation of semiannual progress reports.

3.7 **Eligibility criteria.** The departmental autonomous governments will refer to the VMEEA the projects to be financed under Subcomponent I.1, which will be prioritized and approved based on the eligibility criteria set out in the program Operating Regulations and will include, at a minimum, information showing that

[39] In coordination with its subsidiary, ENDE Transmisión.

each project has: (i) the minimum content specified in the MEPER,[40] attached as an annex to the Operating Regulations; (ii) a positive socioeconomic NPV and a negative private NPV;[41] (iii) a per-beneficiary cost of less than US$1,900,[42] in order to maximize outcomes; (iv) an environmental profile; (v) identification of potential production-related uses; (vi) an identified operator, which must be regulated under the current regulations for the electricity sector; (vii) onsite verification of the number of beneficiaries; and (viii) verification of the execution capacity of the respective departmental autonomous government.

3.8 **Organization of the departmental autonomous governments.** Each departmental autonomous government should have at least the following specialized technical staff working exclusively on the program: (i) a coordinator; (ii) a monitoring specialist; (iii) a procurement specialist; (iv) an administrative specialist; and (v) a works inspector. This staff will be financed with the loan proceeds. The Bank will verify that the departmental autonomous governments that submitted projects to the VMEEA have sufficient capacity to perform all the fiduciary duties required for execution of the program. In order for other departmental autonomous governments to be eligible to participate in the program, the Bank will conduct a capacity assessment in accordance with Bank policies and procedures (paragraph 3.7).

3.9 **Organization of ENDE.** In addition to its own employees, ENDE should have, at a minimum, the following specialized technical staff working exclusively on the program: (i) a coordinator; (ii) a monitoring specialist; (iii) a procurement specialist; (iv) a financial specialist; and (v) two electrical engineers specializing in transmission lines and substations. This staff may be financed with resources from Component III.

3.10 As special contractual execution conditions for Subcomponent I.1, the PEU has provided the following to the Bank, in accordance with the terms and conditions previously agreed upon with it: (i) prior to the disbursement of resources to each departmental autonomous government participating in the program, evidence of: (a) the signature and entry into force of an inter-governmental agreement between the MHE and the respective departmental autonomous government, for coordination of the activities planned under Subcomponent I.1, as well as a subsidiary agreement between the Ministry of Economy and Public Finance (MEFP), the Ministry of Planning and Development (MPD), and the respective departmental autonomous government, for the purpose of transferring the loan proceeds to the departmental autonomous government for execution and coordination of the activities planned under Subcomponent I.1; and (b) the contracting of the minimum specialized technical staff, and the approval and entry into force of the specific operating regulations for the respective departmental autonomous government; and (ii) prior to the tendering of each infrastructure project under Subcomponent I.1, evidence of the signature and entry into force of a contract between the departmental autonomous government and the respective

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[40] This includes a description of the beneficiary population, a demand projection, analysis of alternatives, project engineering, budget and timeline, economic, financial, and environmental evaluation, and identification of the operator.

[41] A private NPV<0 and a socioeconomic NPV>0 means that the project would not be attractive to a private entity but has economic benefits for society, which is why it is recommended that it be implemented with public investment.

[42] This value has been set based on the project sample and will be updated in the Operating Regulations.

operating company, for the monitoring, operation, and maintenance of the projects included in Subcomponent I.1.

3.11 In addition to the execution conditions stipulated to mitigate the social and environmental impacts (paragraph 2.6), as special contractual execution conditions precedent to disbursement of the funds allocated for Component II activities, the PEU will provide evidence to the Bank, in accordance with the terms and conditions previously agreed upon with the Bank, of: (i) the signature and entry into force of an inter-agency agreement between the MHE and ENDE, for coordination of the activities planned under Component II, and a subsidiary agreement between the MEFP, the MPD, and ENDE, for purposes of transferring the loan proceeds to ENDE, for execution of the activities planned under Component II; and (ii) the hiring of the minimum specialized technical staff, and the approval and entry into force of the specific operating regulations for ENDE.

3.12 **Procurement.** Procurements will be carried out in accordance with the Bank's procurement policies as set out in documents GN-2349-9 and GN-2350-9. The procurement plan will be managed through the Procurement Plan Execution System (www.iniciativasepa.org). Prior review will be required for procurements of works in amounts above US$3,000,000, goods and nonconsulting services in amounts above US$200,000, and consulting firms in amounts above US$100,000. The reviews will be performed annually.

3.13 **Financial supervision**. Disbursement requests and processing and the substantiation of expenses to the Bank will be directly handled by the executing agencies. Disbursements will be subject to ex post review. The executing agencies will receive training in the management and financial reporting of any investments they make.

3.14 **Audit.** During the program disbursement period, annual audited financial statements will be submitted to the Bank within 120 days after the end of the respective fiscal year. The audit will be conducted by an independent firm of auditors acceptable to the Bank, which will be selected in accordance with Bank policies and procedures. The scope of the audit and other related aspects will be determined in accordance with the Guide to Financial Management for Projects Financed by the IDB (operational policy OP-273-6) and the Guidelines for Financial Reports and External Audits. Audit costs will be financed from program resources, and the VMEEA will be responsible for commissioning the program audit.

B. Summary of arrangements for monitoring results

3.15 Monitoring measures include administrative missions, semiannual progress reports, and annual external audits. The VMEEA will be responsible for the overall monitoring of the program based on the results matrix, in direct relationship to the programmed targets. The VMEEA will also be responsible for preparing the semiannual reports, with input provided by the executing agencies, and will submit them in March and September of each year. It will also organize joint meetings with the executing agencies and the Bank to review progress. The Bank, through the sector specialist, will supervise execution of the program. Details on these activities can be found at the link monitoring and evaluation.

3.16 The VMEEA will deliver a midterm report to the Bank within 60 days after the date on which 50% of the loan proceeds have been disbursed, and a final evaluation report within 60 days after the date on which 90% of the loan proceeds have been

disbursed. Terms of reference for these reports will require the prior no objection of the Bank. Among other information, these reports will cover: (i) progress towards fulfillment of the targets in the results matrix; (ii) the degree of fulfillment of the environmental requirements and specifications for the works, as established in the project environmental management plans and following the guidelines of the ESMP for the program; (iii) the degree of fulfillment of the obligations set out in the loan contract; (iv) the effectiveness of the monitoring and evaluation system; and (v) the lessons learned. A project completion report will be prepared upon completion of the program to assess whether the program objectives were achieved and to extract lessons learned for future projects.

3.17 **Evaluation**. An ex post cost-benefit evaluation will be conducted, using real data on: (i) the cost of the infrastructure financed by the program, obtained from the executing agencies; and (ii) electricity savings and consumption. In addition, an impact evaluation of Component I will be prepared, with: (i) quasi-experimental difference-in-differences methodologies to assess the impact of the installed electricity networks; and (ii) experimental methodologies to evaluate the promotion of production-related uses of electricity, through the randomization of the targeted groups until the intervention has ended. There is currently no empirical evidence of the benefits of production-related uses of energy in Bolivia, so the impact evaluation is innovative and will generate knowledge that can be applied to similar operations in Bolivia and other countries in the region. This evaluation will be financed by the program (Monitoring and Evaluation).

Development Effectiveness Matrix			
Summary			
I. Strategic Alignment			
1. IDB Strategic Development Objectives	**Aligned**		
Development Challenges & Cross-cutting Themes	**-Social Inclusion and Equality -Productivity and Innovation -Gender Equality and Diversity -Climate Change and Environmental Sustainability**		
Regional Context Indicators			
Country Development Results Indicators	**-Reduction of emissions with support of IDBG financing (annual million tons CO2 e)**		
2. Country Strategy Development Objectives	**Aligned**		
Country Strategy Results Matrix	**GN-2843**	**Improve the provision of public goods and services of quality**	
Country Program Results Matrix	**GN-2849**	**The intervention is included in the 2016 Operational Program.**	
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**
	9.7		**10**
3. Evidence-based Assessment & Solution	**9.6**	**33.33%**	**10**
3.1 Program Diagnosis	**3.0**		
3.2 Proposed Interventions or Solutions	**3.6**		
3.3 Results Matrix Quality	**3.0**		
4. Ex ante Economic Analysis	**10.0**	**33.33%**	**10**
4.1 The program has an ERR/NPV, a Cost-Effectiveness Analysis or a General Economic Analysis	**4.0**		
4.2 Identified and Quantified Benefits	**1.5**		
4.3 Identified and Quantified Costs	**1.5**		
4.4 Reasonable Assumptions	**1.5**		
4.5 Sensitivity Analysis	**1.5**		
5. Monitoring and Evaluation	**9.5**	**33.33%**	**10**
5.1 Monitoring Mechanisms	**2.0**		
5.2 Evaluation Plan	**7.5**		
III. Risks & Mitigation Monitoring Matrix			
Overall risks rate = magnitude of risks*likelihood	**Medium**		
Identified risks have been rated for magnitude and likelihood	**Yes**		
Mitigation measures have been identified for major risks	**Yes**		
Mitigation measures have indicators for tracking their implementation	**Yes**		
Environmental & social risk classification	**B**		
IV. IDB´s Role - Additionality			
The project relies on the use of country systems			
Fiduciary (VPC/FMP Criteria)	**Yes**	**Financial Management: Budget, Treasury, Accounting and Reporting. Procurement: Information System.**	
Non-Fiduciary			
The IDB's involvement promotes additional 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			
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	**Yes**	**An impact evaluation will be conducted based on a quasi-experimental methodology (difference in difference), in order to asses the effect of rural electrification access on quality of life and poverty. A randomization will assess the effects of productive uses of electricity with an emphasis on gender.**	

Note: (*) Indicates contribution to the corresponding CRF´s Country Development Results Indicator.

Bolivia, between 2000 and 2014, has presented a sustained economic growth of 4.2% annually. This growth and the implementation of social policies has generated an increase in income, a reduction in poverty, and a better income distribution. While poverty has been reduced, the gap between urban and rural areas is still significant, the link between this phenomenon and the lack of access to electricity is widely acknowledged. The diagnosis is consistent with the Bank's strategy with the country and identifies the gap in infrastructure and basic public services as the main cause of this difference. The following elements are identified as determinants: investment costs, the low density and high dispersion of rural populations, its distance to the electricity grid; and the low consumption of electricity in rural areas that limits the income rate. Other determinants include the limited extension of the system of transmission and sub-transmission, low technical capacity for project development and the lack of programs to promote productive uses of energy, as well as the promotion of women´s participation in better-payed economic activities.

The logic of the intervention is appropriate and aims to: i) increase electricity coverage and promote access to reliable, efficient and sustainable energy in rural areas; ii) increase the consumption of electricity in productive uses in rural areas, promoting women's participation; and iii) reduce emissions associated with fossil fuel use in isolated systems of the project area through its connection to the Transmission System with increased load capacity. The results matrix is well formulated.

The economic analysis presents a cost-benefit assesment in three scenarios: i) rural electrification; ii) productive uses of energy; and iii) transmission systems. The assumptions and analysis are clearly established. In the case of component I, the expected economic benefits are related to savings in the consumption of traditional energy, the increase in consumer welfare through additional energy consumption, income from productive uses, among others. Component II identifies benefits from reducing gas consumption in isolated systems due to energy generation. The sensitivity analysis for each scenario demonstrates the robustness of the results.

The monitoring scheme of the operation is properly presented based the use of project management tools. The evaluation proposes a cost-benefit analysis ex post, and an impact evaluation to measure the effects of the benefits of rural electrification access and to productive uses of electricity in rural areas.

The assessment of the overall risk of the operation is medium. The highest impact risk, with low probability of occurrence, is a delay in bidding processes or increased investment costs. All risks include mitigation measures.

RESULTS MATRIX

Objective:	The general objective is to increase access to electricity in rural areas of the Plurinational State of Bolivia, making public and social services available to the population and helping to reduce poverty levels. The specific objectives are to increase: (i) electricity coverage in rural areas; (ii) the consumption of electricity for production-related uses in rural areas, with a gender focus; and (iii) electricity transmission capacity, in order to meet demand in the area where coverage will be expanded under the program and reduce CO_2 emissions associated with the use of fossil fuels in isolated systems.

OUTCOMES

Outcomes	Unit of measurement	Baseline		Targets		Means of verification	Observations
		Value	Year	Value	Year		
O1: To increase electricity coverage and promote access to reliable, efficient, and sustainable electricity in rural areas							
Number of beneficiary households connected to electricity service	# Households	0	**2015**	28,000	**2022**	Semiannual reports of distribution companies.	The project sample estimated 35,000 connections. It is estimated that 80% will be connected by 2022 (28,000), with 20% in the following years. This target should be updated once the final project portfolio is defined.
Energy billed to the program beneficiaries (kWh/month)	kWh/month	0	**2015**	28	**2022**	Surveys (impact evaluation)	

Outcomes	Unit of measurement	Baseline		Targets		Means of verification	Observations
		Value	Year	Value	Year		
O2: To increase electricity consumption for production-related uses in the targeted rural areas							
Beneficiaries that use electricity for production-related purposes	# of beneficiaries	0	**2016**	1,400	**2022**	Surveys (impact evaluation)	
Disaggregation							
Women who use electricity for production-related purposes.	# of beneficiaries	0	**2016**	350	**2022**		
Men who use electricity for production-related purposes.	# of beneficiaries	0	**2016**	1,050	**2022**		
Annual energy billed for production-related uses	kWh/month per user	0	**2015**	210 kWh/ month	**2022**	Surveys (impact evaluation)	

Outcomes	Unit of measurement	Baseline		Targets		Means of verification	Observations
		Value	Year	Value	Year		
O3: To increase electricity transmission capacity in order to meet demand in the area where coverage will be expanded under the program, and reduce CO_2 emissions associated with the use of fossil fuels in isolated systems.							
Maximum load of the Padilla-Monteagudo-Camiri transmission line	MVA	0	**2015**	25	**2023**	ENDE reports	Maximum instantaneous load recorded on the line over a one-year period.
Emissions associated with the consumption of gas in the Monteagudo, Muyupampa, and Camiri systems	Tons of CO_2 per year	23,400	**2015**	16,400	**2022**	Calculation based on the energy consumption of isolated systems	A factor of 0.054717 metric tons CO_2/Mcf will be used (Source: Environmental Protection Agency – EPA)

OUTPUTS

Outputs	Estimated cost (US$)	Unit of measurement	Baseline (2016)	Year						Means of verification
				1	2	3	4	5	Target	
Component I. Distribution infrastructure to increase rural electricity coverage and promotion of its use for production-related purposes										
Subcomponent I.1. Extension of distribution networks										
Distribution lines installed and operating	60,000,000	Km	0	0	0	520	1,560	3,120	5,200[1]	Execution reports from the autonomous governments
Subcomponent I.2. Promotion of production-related uses of electricity										
Campaign to promote production-related uses of electricity in rural areas, with a gender focus[2]	1,500,000	Campaign	0	0	0	0	0	1	1	Status reports from the VMEEA
Subcomponent I.3. Preinvestment and preparation of studies and regulations for rural electrification[3]										
National Rural Electrification Plan completed and approved by the VMEEA	1,500,000	Plan	0	0	0	0	1	0	1	Report on approval
Departmental rural electrification programs completed and approved	1,400,000	Programs	0	0	0	0	1	2	3	Report on approvals
VMEEA and government staff trained in the use of the Rural Electrification Project Preparation Manual (MEPER)	100,000	# of persons	0	10	15	15	15	15	70	Training workshop reports
Component II. Increased transmission capacity in rural areas										
Capacity of the transmission systems constructed, installed, and in operation	30,000,000	MVA	0	0	0	25	0	0	25	Project completion reports

[1] The target should be updated once the final project portfolio is defined.

[2] This campaign will include a diagnostic assessment, promotion, training, and information on the production-related uses of electricity under the program. A gender perspective will be integrated to ensure that the campaigns benefit both male and female users.

[3] This will include the projects and activities to be implemented to achieve the target of universal access to electricity by 2025, set out in the National Development Plan.

Outputs	Estimated cost (US$)	Unit of measurement	Baseline (2016)	Year						Means of verification
				1	2	3	4	5	Target	
Milestones										
Supply, assembly, and construction of the Padilla-Monteagudo-Camiri transmission line	11,000,000	Km	0	0	0	100	0	0	100	Final acceptance certificates
Expansion of the Padilla substation	3,500,000	Substation expanded	0	0	0	1	0	0	1	
Supply, assembly, and construction of the Monteagudo substation	7,000,000	Substation installed	0	0	0	1	0	0	1	
Supply, assembly, and construction of the Camiri substation	4,500,000	Substation installed	0	0	0	1	0	0	1	

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Country: Plurinational State of Bolivia

Project No./Name: BO-L1117 –Rural Electrification Program II (REP II)

Executing agency: Office of the Deputy Minister of Electricity and Alternative Energy (VMEEA); National Electricity Company (ENDE); departmental autonomous governments

Prepared by: Carolina Escudero (PRM) and Abel Cuba (FM)

I. EXECUTIVE SUMMARY

1.1 The program Operating Regulations will establish the guidelines and procedures to be followed for the satisfactory and efficient execution of the program.

1.2 The Bank will strengthen the respective agencies of the departmental autonomous governments in order to build the fiduciary capacity needed to implement Subcomponent I.1, in accordance with Bank procedures.

1.3 As a condition precedent to execution, the executing agencies will appoint staff who will be trained in the fiduciary management of the program.

1.4 Each time a procurement modality is used for the first time, it will be subject to ex ante review. Subsequently, the ex post review method will be used for procurements for amounts under 10% of the threshold for international bidding processes. All other procurements will be reviewed ex ante. Reviews will be semiannual.

1.5 The supervision of disbursements will be performed ex post, based on the executing agencies' use of country systems that ensure that accounting is integrated with the budget, based on resource management in the consolidated account of the Treasury or the consolidated account of each departmental autonomous government. At the same time, for Bank reporting purposes, the executing agencies, with the exception of ENDE, will use the Integrated Management System for IDB Projects (SIAP-BID), which can produce Bank-compliant financial reports in terms of classification, accumulation, and entries recorded by investment category.

1.6 To process disbursements, the executing agencies will use the e-Disbursement system, which enable them to prepare, approve, and deliver disbursement requests to the Bank electronically.

1.7 The Bolivian government and the Bank have drafted an agreement to adopt the partial use of the Basic Standards of the Goods and Services Administration System (NB-SABS) for future Bank-financed operations. This program may apply that agreement once it enters into force.

II. FIDUCIARY CONTEXT OF THE EXECUTING AGENCIES

2.1 Law 1178, on Government Administration and Control, regulates administration and control systems for government funds related to public planning and investment systems. The systems regulated by this law are planning (programming of operations, administrative organization, and budget), execution (cash and public credit, integrated government accounting, personnel management and administration of goods and services), and government control (internal and external control). The Office of the Comptroller General (CGE) regularly trains public servants in the use and management of these systems.

2.2 Although these fiduciary systems contribute to the transparent and complete execution of public resources, there are areas that should continue to be improved:

a. **Budget**. There is no multiyear budget system, which forces government agencies to post their budgets every year, repeatedly recording resources, modifications, and internal and external transfers. The contribution of local counterpart funds is delayed because of quarterly programming and the administrative formalities involved in their approval.

b. **Government accounting**. The Public Management System (SIGEP), which must be used by public sector agencies, does not have a reporting module for international cooperation purposes, which recognizes investment categories and produces reports that meet the Bank's monitoring and financial evaluation requirements, nor does it have a dual currency account.

c. ENDE has developed its own system (ENDSIS) that meets the company's specific information needs as well as the Bank's requirements with respect to the classification, accumulation, and dual currency accounting by investment category.

d. **Government control**. The CGE is the governing body, but it does not have sufficient capacity to review programs financed by international cooperation funds on an ongoing and timely basis. According to the Public Expenditure and Financial Accounting report, CGE reviews are largely limited to conducting special audits and issuing circumstantial reports aimed at establishing responsibilities by public function, conducting basic follow-up on previous reports, and performing reviews of government agencies that do not have much continuity.

e. **Administration of goods and services (procurements)**. The use of the local regulation NB-SABS is not acceptable to the Bank. Furthermore, an analysis of the use of this regulation, the processes and procedures, and the human resources and systems involved in its use by each of the executing agencies produces uneven results. Therefore, the fiduciary context at the executing agencies in terms of procurement is acceptable but should be improved, particularly in the departmental autonomous governments.

III. FIDUCIARY RISK EVALUATION AND MITIGATION MEASURES

3.1 The financial management and procurement capacity of the executing agencies, primarily the departmental autonomous governments, requires support through strengthening and training activities.

3.2 The project risk management exercise shows a medium risk in the following key areas: delays in the execution of bidding processes or an increase in their cost; delays or inconsistencies in financial information, and outputs that do not meet the quality requirements identified in the technical specifications:

a. **Public procurements**. The departmental autonomous governments are not familiar with the Bank's procurement policies and have no similar experiences in operations financed by the Bank. Staff turnover negatively affects the transfer and perpetuation of knowledge. Ensuring that legal divisions understand Bank policies and procedures may add time to the procedures since there may be confusion with the enforcement of national rules and regulations. This situation may impede the flow of procurements during the program.

b. **Public financial management**. Under the SIGEP, the accounting of programs financed by external sources is recorded using the chart of accounts approved by the Ministry of Economy and Public Finance (MEFP), defining budget entries by expense category and using the accrual basis, a different accounting practice than what is typically requested by the Bank (cash basis). There is no reporting module that meets the Bank's requirements in terms of financial reporting related to the management and execution of resources and presentation of periodic financial statements for the program.

3.3 The departmental autonomous governments do not have staff with sufficient experience and knowledge in financial management, based on the Bank's policies.

3.4 To mitigate these risks, the following actions are required:

Action	Responsible Entity
Hire support staff for monitoring, financial management, and procurement, conduct midterm evaluations	VMEEA/ENDE/ departmental autonomous governments
Sign interagency agreements	ENDE/departmental autonomous governments
Install and implement the SIAP-BID, SEPA (procurement plan execution system), and e-Disbursement systems	IDB
Prepare the financial plan	VMEEA/ENDE/departmental autonomous governments
Provide training focused on fiduciary management	IDB
Perform financial audit of the program based on standards acceptable to the Bank	VMEEA/ENDE
Use standard procurement documents approved by the Bank	IDB/VMEEA/ENDE/ departmental autonomous governments

3.5 Considerations for the special conditions of contracts:

a. Special contractual conditions precedent to the first disbursement of the loan proceeds:

i. The program execution unit (PEU) has selected the coordinator of the PEU in accordance with the terms previously agreed upon with the Bank;

ii. The program Operating Regulations, including the Environmental and Social Management Plan (ESMP), have been approved and have entered into force, in accordance with the terms and conditions previously agreed upon with the Bank.

b. Special contractual conditions for execution:

i. For Subcomponent I.1, prior to the disbursement of resources to each departmental autonomous government participating in the program, the PEU will provide to the Bank, in accordance with the terms and conditions previously agreed upon with it, evidence of having hired the minimum specialized technical staff, and evidence of the approval and entry into force of the specific operating regulations for each departmental autonomous government;

ii. Prior to the disbursement of resources allocated for the execution of the activities in Component II, the PEU will provide to the Bank, in accordance with the terms and conditions previously agreed upon with it, evidence of having hired the minimum specialized technical staff, and evidence of the approval and entry into force of the specific operating regulations for ENDE.

c. The exchange rate will be the rate used to convert funds disbursed in U.S. dollars to local currency (Bolivia). For purposes of reimbursing expenses from the loan and recognizing expenses against the local counterpart, the exchange rate used will be the rate in effect on the date the request is submitted to the Bank; or the exchange rate in effect in Bolivia on the effective date of payment of the expense in local currency.

d. Financial statements and other audited reports

i. During the program disbursement period, annual audited financial statements will be submitted to the Bank within 120 days after the end of the respective fiscal year. The audit will be conducted by an independent firm of auditors acceptable to the Bank, which will be selected in accordance with Bank policies and procedures. The scope of the audit and other related aspects will be determined in accordance with the Guide to Financial Management for Projects Financed by the IDB (operational policy OP-273-6) and the Guidelines for Financial Reports and External Audits. Audit costs will be financed from program resources, and the VMEEA will be responsible for commissioning the program audit.

IV. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

4.1 Procurements will be carried out in accordance with the policies set out in documents GN-2349-9 and GN-2350-9, and no exceptions are anticipated.

4.2 Contracts for works, goods, and nonconsulting services subject to international competitive bidding (ICB) will be executed using the Bank’s standard bidding documents. Procurements subject to national public bidding (NCB) will be executed using national bidding documents agreed upon with the Bank (or satisfactory to the Bank if not agreed upon previously).

4.3 In the case of shopping, the model documents prepared by the Bank in Bolivia will be used. Any amendments to these documents will require the Bank's no objection.

4.4 **Selection and contracting of consultants**. Consultants will be selected and contracted using the standard request for proposals issued by the Bank or agreed upon with it.

a. **Selection of consulting firms**: The program will use the standard request for proposals issued by the Bank;

b. **The shortlist of consulting firms** may be comprised entirely (100%) of Bolivian firms[1] for contracts with a value of less than US$200,000.

c. **Selection of individual consultants**: Individual consultants will be selected based on their qualifications for the work, based on a comparison of at least three candidates. If the executing agency sees fit, it may, on an exceptional basis, use the national government procurement system (SICOES) to publicize its requests;

d. The Bank's sector specialist will be responsible for reviewing the terms of reference for the contracting of consulting assignments. The specialist may have external support to assist the executing agencies during the evaluation of bids, in view of the nature and technical complexity of the planned procurements.

4.5 **Recurrent expenditures:** These are operating and maintenance costs necessary for program operation and cover, inter alia, expenses relating to: the leasing of office space, utilities, radio, press, or television communication, translations, bank charges, office supplies, advertising, and photocopies, which will be financed by the program as part of the annual budget approved by the Bank and included in the procurement plan. Recurrent expenditures will be approved by the Bank, and the manner in which they will be executed will be described in the program Operating Regulations. They will be procured pursuant to local law (Supreme Decree 181/2009), in accordance with the procedures for small amounts and the ANPE procurement modality, which will be applied based on the amount of each contract. The Bank may refuse to finance these expenses if it finds that the use of these procedures would violate the fundamental principles of competition, efficiency, and affordability, or if the minimum procedures agreed upon by the Bank and the executing agencies are not followed for their execution.

4.6 The budget for covering recurrent or operating expenses will not be used to finance the salaries of public servants.

4.7 **Advance procurement/retroactive financing:** No retroactive procurements are anticipated.

4.8 **Authorized direct contracting:** No direct contracting is anticipated.

[1] This does not preclude the participation of foreign firms.

Table of Thresholds (US$)

Works			Goods[2]			Consulting Services	
International competitive bidding	National competitive bidding	Shopping	International competitive bidding	National competitive bidding	Shopping	International competitive bidding	**Short list 100% national**
>3,000,000	<3,000,000 >250,000	<250,000	>250,000	<250,000 >50,000	<50,000	>200,000	**<200,000**

4.9 Procurement supervision. The following supervision plan will be followed for the management of procurement processes:

Thresholds for ex post review (US$)

Works	Goods	Consulting services	Individual consultant
<3,000,000	**<250,000**	**<200,000**	**<50,000**

4.10 Each time a procurement method is used for the first time, it will be subject to ex ante review. Subsequently, the rule indicated in the table above will be used.

V. FINANCIAL MANAGEMENT

5.1 **Programming and budget.** The program will be executed by the departmental autonomous governments, ENDE, and the VMEEA.

5.2 The preparation and registration of the annual budget will follow the regulations established by the MEFP and will be done through the SIGEP.

5.3 **Departmental autonomous governments**. The departmental secretariats are set up as administrative offices, which gives them independence in defining the programmatic structure used to execute the projects included in Subcomponent I.1, register their budgets, and make any necessary modifications. They will be responsible for budget events.

5.4 **ENDE.** Component II will be executed by ENDE. An administrative office will be set up in the budget programming structure for ENDE, which will independently define the inclusion of the program budget and projects in Component II and any necessary modifications. ENDE will be responsible for budget events.

5.5 **VMEEA.** The PEU for the VMEEA is set up as an administrative office of the MHE, which gives it independence in defining the programmatic structure used to execute the projects included in Subcomponents I.2 and I.3, register its budgets, and make any necessary modifications. The PEU will be responsible for budget events.

5.6 **Accounting and information systems**. The SIGEP will be used, which generates a single record for each different accounting events and generates automatic double entry records through income and expense conversion matrixes: budget records (budget execution), equity records (assets, liabilities, net worth, and earnings), and cash records (cash transfers).

[2] Includes nonconsulting services.

5.7 SIGEP uses the accrual basis of accounting. International accounting standards and government standards are used in parallel, due to the fact that execution will be through the SIGEP, which is governed by the latter standards. To this end, the SIAP-BID must be used as an auxiliary accounting module to generate accounting records for Bank-financed programs, in order to present financial execution based on investment categories and in the loan currency, and submit the reports and financial statements required by the Bank. SIGEP and SIAP-BID data should be reconciled on an ongoing basis.

5.8 ENDE uses the ENDESIS system, which was already used in the execution of REP-I as a replacement for SIAP-BID.

5.9 The financial statements required for the program, which are initially subject to review based on future risk analyses and institutional capacity assessments, are:

a. A cash flow statement, which recognizes funds provided by the Bank and the local counterpart or other source, outlays of funds charged to the approved budget, and cash balances as of the cutoff date.

b. A cumulative investment statement, based on the investment categories in the program's approved budget, amounts accumulated as of the end of the previous fiscal year, execution of the respective fiscal year and cumulative amounts, and available budget balances. This statement must be consistent with the cash flow statement.

c. Explanatory notes, which disclose the accounting policies adopted and other information deemed relevant to the user of the financial report.

d. The program's management report, which discloses that expenses covered by Bank funds were paid in accordance with the purposes specified in the loan contract. In addition, appropriate internal control measures were designed to mitigate the risks identified in resource management, and these measures have been effective over the reported period.

5.10 **Disbursements**. The program's cash flow system will use the country's treasury system, which is based on the use of the consolidated account of the Treasury and the consolidated accounts of the departmental autonomous governments, in which the respective independent accounts must be opened, one in U.S. dollars to receive disbursements from the Bank, and the other in bolivianos to make payments to vendors.

5.11 The disbursement methods to be used are: (i) advances based on previous commitments (contracts), (ii) direct payments for the procurement of certain goods, and (iii) reimbursement of payments, subject to approval with the Bank. The disbursement supervision method will be ex post, and reviews of original supporting documentation for payments will be conducted during periodic visits within a maximum period of six months.

5.12 The exchange rate to be used for conversion of the amounts used in local currency to the currency of the loan contract will be the rate in effect on the date the resources are deposited in the account in bolivianos, and each batch of transfers should be checked to prevent the occurrence of recurring exchange differences.

5.13 **Internal control and internal audit**. Each executing agency has an internal audit office with a mandate to ensure that the internal control system is being used

throughout the agency, and that resources are used for the purposes for which they were provided, in full compliance with budgets, loan contracts, grants, etc.

5.14 When the program enters into force, a visit to the internal audit offices will be scheduled in order to agree on the periodic reviews to be conducted on the relevance and effectiveness of the program's internal control system. The internal audit offices will be invited to training events on Bank procurement and financial management procedures.

5.15 **External control and reporting**. The control system is governed by the CGE, which at this time lacks the capacity to perform audits of the type and nature required by the Bank.

5.16 The Bank has a short list of audit firms that meet its requirements in terms of methodology, structure, capacity, and technical experience. To contract the audit firm for the program, the executing agency should propose a short list, subject to the Bank's no objection. The audit firm will be hired in accordance with the provisions of document AF-200, and the process should be completed before the end of each fiscal year so that the preliminary reviews can be conducted.

5.17 **Financial supervision plan**. This plan includes: (i) financial inspection visits, and (ii) ex post review visits. There will be other types of monitoring such as working meetings, targeted workshops, etc. The Project Team Leader will provide ongoing support.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-__/16

Bolivia. Loan ____/BL-BO to the Plurinational State of Bolivia
Rural Electrification Program II

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Plurinational State of Bolivia, as Borrower, for the purpose of granting it a financing to cooperate in the execution of a rural electrification program II. Such financing will be for the amount of up to US$85,000,000 from the resources of the Single Currency Facility of the Bank's Ordinary Capital, corresponds to a parallel loan within the framework of the multilateral debt relief and concessional finance reform of the Bank, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on _____ 2016)

LEG/SGO/CAN/IDBDOCS#40396735
BO-L1117

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-__/16

Bolivia. Loan ____/BL-BO to the Plurinational State of Bolivia
Rural Electrification Program II

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Plurinational State of Bolivia, as Borrower, for the purpose of granting it a financing to cooperate in the execution of a rural electrification program II. Such financing will be for the amount of up to US$15,000,000 from the resources of the Bank's Fund for Special Operations, corresponds to a parallel loan within the framework of the multilateral debt relief and concessional finance reform of the Bank, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on _____ 2016)

BO-L1117
LEG/SGO/CAN/IDBDOCS#40396789