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BRAZIL

CELESC-D ENERGY INFRASTRUCTURE INVESTMENT PROGRAM

(BR-L1491)

LOAN PROPOSAL

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2. Monitoring and Evaluation Plan
3. Environmental and Social Management Report
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5. Gender Strategy
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ABBREVIATIONS

ANEEL	Agência Nacional de Energia Elétrica [National Electric Power Agency]
CEED-D	Companhia Estadual de Distribuição de Energia Elétrica S.A. [electric power distribution company of the State of Rio Grande do Sul]
CELESC-D	Centrais Elétricas de Santa Catarina–Distribuição S.A. [electric power distribution company of the State of Santa Catarina]
DEF	Direcção de Finanças e Relação com Investidores [Office of Finance and Investor Relations]
EBITDA	Earnings before interest, tax, depreciation, and amortization
EID	Equivalent interruption duration per consumer unit
EIF	Equivalent interruption frequency per consumer unit
EIRR	Economic internal rate of return
ESIA	Environmental and social impact assessment
ESMF	Environmental and social management framework
FIESC	Federação das Indústrias de Santa Catarina [Santa Catarina Federation of Industries]
GWh	Gigawatt hour
ICB	International competitive bidding
MVA	Megavolt ampere
MWh	Megawatt hour
NCB	National competitive bidding
NPV	Net present value
NTLs	Non-technical losses
O&M	Operation and maintenance
PCU	Program coordination unit
RS-PRO	Programa de Expansão e Modernização do Sistema Elétrico da Região Metropolitana de Porto Alegre e área de abrangência da CEEE-GT [Expansion and Modernization of the Electric System in the Metropolitan Region of Porto Alegre and Coverage Areas CEEE-Distribution]
SEA	Strategic environmental assessment
TLs	Technical losses

PROGRAM SUMMARY

BRAZIL
CELESC-D ENERGY INFRASTRUCTURE INVESTMENT PROGRAM
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<table>
<tr><th colspan="5">Financial Terms and Conditions</th></tr>
<tr><td colspan="3" rowspan="2">Borrower: Centrais Elétricas de Santa Catarina–Distribuição S.A. (CELESC-D)</td><td colspan="2">Flexible Financing Facility[a]</td></tr>
<tr><td>Amortization period:</td><td>25 years</td></tr>
<tr><td colspan="3">Guarantors: Federative Republic of Brazil (financial obligations) and the State of Santa Catarina (performance obligations)</td><td>Original weighted average life:</td><td>15.25 years[b]</td></tr>
<tr><td colspan="3">Executing agency: CELESC-D</td><td>Disbursement period:</td><td>5 years</td></tr>
<tr><td>Source</td><td>Amount (US$)</td><td>%</td><td>Grace period:</td><td>5.5 years[c]</td></tr>
<tr><td rowspan="2">IDB (Ordinary Capital):</td><td rowspan="2">276,051,000</td><td rowspan="2">73.2</td><td>Inspection and supervision fee:</td><td>[d]</td></tr>
<tr><td>Interest rate:</td><td>LIBOR-based</td></tr>
<tr><td>Local contribution:</td><td>101,229,500</td><td>26.8</td><td>Credit fee:</td><td>[d]</td></tr>
<tr><td>Total:</td><td>377,280,500</td><td>100.0</td><td>Currency:</td><td>United States dollars from the Ordinary Capital</td></tr>
<tr><th colspan="5">Program at a Glance</th></tr>
<tr><td colspan="5">Program objective/description: The program's overall objective is to help boost productivity in the State of Santa Catarina by facilitating a quality supply of electric power. Its specific objectives are to: (i) satisfy the growing demand for electric power by expanding and modernizing CELESC-D's distribution network; (ii) improve the reliability of the power grid; (iii) enhance CELESEC-D's operational efficiency; and (iv) foster greater gender equality at CELESC-D.</td></tr>
<tr><td colspan="5">Special contractual condition precedent to the first disbursement of the loan: Under the terms agreed upon with the Bank, approval and entry into effect of the program Operations Manual, pursuant to the terms agreed upon with the Bank (paragraph 3.4).
Special contractual condition for execution: The condition described in Section III of Annex III, Fiduciary Agreement and Requirements.
Environmental and social contractual conditions for execution: These conditions are described in Section III of the Environmental and Social Management Report.
Special contractual condition: The period for the physical start of program works will be four years.</td></tr>
<tr><td colspan="5">Exceptions to Bank policies: None</td></tr>
<tr><th colspan="5">Strategic Alignment</th></tr>
<tr><td colspan="2">Challenges:[e]</td><td>SI ☐</td><td>PI ☑</td><td>EI ☐</td></tr>
<tr><td colspan="2">Crosscutting themes:[f]</td><td>GD ☑</td><td>CC ☐</td><td>IC ☐</td></tr>
</table>

[a] Under the terms of the Flexible Financing Facility (document FN-655-1), the borrower has the option of requesting changes in the amortization schedule, as well as currency and interest rate conversions. The Bank will take operational and risk management considerations into account when reviewing such requests.

[b] The original weighted average life may be less depending on the date the loan contract is signed.

[c] Under the flexible repayment options of the Flexible Financing Facility, changes to the grace period are permitted provided that they do not entail any extension of the original weighted average life of the loan or the last payment date as documented in the loan contract.

[d] The credit fee and the 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.

[e] SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration).

[f] 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, problems, and rationale

1.1 Located in Brazil's southern region, the State of Santa Catarina covers 99,000 square kilometers and has a population of 6.9 million. It is one of the country's major economic hubs, ranking sixth among the states in terms of gross domestic product (GDP). Electricity coverage in the state is 100% and its economy—based on industry, agroindustry, livestock, tourism, and services—is diverse. The trade and services sector accounts for 62.1% of the state's GDP; the industrial sector for 33.7%; and the agriculture sector for 4.3%.[1]

1.2 Between 2010 and 2014, the state's GDP grew at an average annual rate of 3.3%. During that same period, demand for electricity grew by an average of 5.4% per year. Owing to the economic crisis, however, the state's GDP fell by 5.2% in 2015. Demand for electricity fell 2.5% that year, owing primarily to the country's economic situation and mild summer temperatures that led to a decrease in the use of air-conditioning.[2] The state's GDP shrank by 3.6% in 2016, while demand for electricity grew by 0.9%, particularly in the last two quarters of the year (3.9% and 2.0%).

1.3 In early 2017, the economy of Santa Catarina showed signs of recovery—a trend that is expected to continue.[3] Between January and April, the state's index of economic activity grew by 4.2%.[4] Electricity demand grew 2.8%[5] in the first half of 2017, reaching an all-time high of 4,760 megawatts (MW) in February of that year, exceeding demand in 2016 by 5.4%. The electric power utility serving the State of Santa Catarina, CELESC-D, (paragraph 1.4), projects growth of 2% in the demand for electricity in 2017, with average annual growth of 3.8% thereafter, reaching 28,270 gigawatt hours (GWh) in 2022.[6] This projection coincides with that of the sector's planning agency, Empresa de Pesquisa Energética [Energy Research Corporation] for Brazil (3.6% per year between 2017 and 2021).

1.4 An electricity distribution company authorized under State Law 13,570 of 23 November 2005, CELESC-D was established on 29 September 2006. It is a full subsidiary of the holding group Centrais Elétricas de Santa Catarina (CELESC), established on 9 December 1955 under State Decree 22.[7] The State of Santa Catarina[8] is CELESC's controlling shareholder, with 50.2% of the company's common stock. Accordingly, it has the majority of voting capital and controls the executive board. CELESC-D holds the concession[9] for electricity distribution in 92% of the state's coverage area (264 of the 295 municípios) and

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1 Santa Catarina Federation of Industries (FIESC). Santa Catarina em Dados 2015.

2 The contraction of the economy led to a slowdown in production and trade in the State of Santa Catarina, impacting electricity demand in these sectors by 6.7% and 1.6%, respectively. Residential demand fell by 2.5%, owing to an adjustment in electricity rates and less demand for air-conditioning in 2015. Resultados CELESC 2015.

3 The latest projections of Brazil's central bank point to GDP growth of 0.73% for 2017 and 2.5% for 2018 (October 2017).

4 FIESC. Radar Econômico, 2017.

5 Increase between June 2016 and June 2017. CELESC-D official data.

6 A time series analysis was performed to project demand, Demand was projected by analyzing temporal series, using Forecast-PRO and Elasticity, and a macroeconomic market model developed specifically for CELESC-D.

7 On April 11, 1956, Federal Decree No. 39.015 authorized the operation of CELESC.

8 Supplemental Law 381, of March 7, 2007, which provides the management model and organizational structure for the Public Administration of the State of Santa Catarina.

9 CELESC-D signed a distribution concession contract in 1999 with the National Electric Power Agency (ANEEL). The contract was renewed for 30 years in 2015.

as the município of Rio Negro in the State of Paraná. With 2.8 million customers, it is Brazil's tenth largest distributor in terms of number of users (3.5% of the market) and the seventh largest in terms of electricity demand (4.7% of the country's demand).

1.5 With 7,030 megavolt-amperes (MVA) of capacity, CELESC-D's distribution network includes 150,113 kilometers of medium- and low-voltage distribution lines, 4,598 km of high-voltage distribution lines, 165 substations, and 171,565 service transformers. In 2016, CELESC-D satisfied demand of 22,945 GWh, including open (32%) and captive (68%) markets,[10] with industrial (41%), residential (23%), commercial (17%), and rural and other consumption (19%),[11] and revenues of R$10.4 billion (US$3.2 billion).

1.6 In 2016, CELESC joined the federal government's "Programa Pró-Equidade de Gênero e Raça"[12] created to promote a more egalitarian working environment for men and women. In Brazil, the rate of women's participation in the labor force increased from 44.4% to 59.4% between 1990 and 2015. Nonetheless, four out of every ten women still do not participate in the labor market, compared to just two out of every ten men. In Brazil's "electricity, gas, and water" sector, women represent only 18% of the sector's total number of employees (paragraph 1.14). Appreciation for diversity and the elimination of discrimination in the working environment are part of CELESC's policy on social and environmental responsibility.[13] In addition, since 2008 CELESC has been implementing the Jovem Aprendiz [Young Apprentice] program that provides for training youth between the ages of 14 and 16 who come from vulnerable families and are attending school, with the aim of increasing their job market opportunities.

1.7 **Problems.** Current and projected growth in the demand for electricity in the CELESC-D concession area may lead to deterioration in the reliability of electrical service, which would affect the state's productive activity. Consequently, CELESC-D needs to expand and modernize its distribution activities to guarantee the supply of electricity with the required levels of reliability for the projected demand. In addition, investments and strategic actions are needed to improve its management indicators and gender diversity.

1.8 Thirty-nine percent of CELESC-D substations have a maximum load exceeding 90%.[14] This situation could affect up to 76% of substations over the next five years if increased demand is not accompanied by investments. High-load levels reduce the useful life of equipment and increase the likelihood of power failures, while reducing the system's operational flexibility in the event of such failures. Additionally, 8% of the distribution network's transformers, 20% of its lightning arresters, and 10% of its connectors have already reached the end of their useful life. This fact increases the likelihood of outages, while reducing CELESC-D's ability to prevent them.

1.9 Power supply outages adversely impact the productivity of industries and businesses by increasing production costs (whether due to loss of goods, production delays, deterioration of raw materials, overtime, loss of sales or information, or the need for backup generators). The costs associated with outages depend on the productive segment in question and the

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[10] The electricity rates paid by CELESC-D captive-market customers include charges for use of its energy transmission and distribution network. Open-market consumers may contract their source of their energy directly in the market and pay CELESC-D for use of the use of its distribution network.

[11] CELESC-D Resultados 4T2016 (2016 fourth quarter report).

[12] Programa Pró-Equidade de Gênero e Raça – 6ª Edicão, Brazil, 2016.

[13] CELESC Socioenvironmental Responsibility Policy.

[14] Calculation based on the number of substations having at least one transformer with a load exceeding 90% in 2016.

duration of the outage, ranging, on average, between US$50,000 for outages of a few seconds up to US$250,00 for those lasting a hour, and increasing exponentially with outage duration.[15] According to a survey by the Confederação Nacional da Indústria [National Confederation of Industry], 80% of companies in the Brazilian South use electricity as the main input for their production process; 95% of these are impacted by power outages, with 10% experiencing them frequently; and 64% believe such outages are responsible for moderate to heavy damage. The cost to the economy of power outages is much higher than the cost of providing electricity[16] and can be calculated by analyzing the following hourly/daily curves: (i) probability of outage; (ii) demand by sector; (iii) productive activity (for the commercial and industrial sectors); and (iii) time use (for the residential sector).[17] For the State of Santa Catarina, the estimated cost of unscheduled outages is US$1,281 per MWh for the industrial sector, US$1,875 per MWh for the commercial sector, and US$5,719 per MWh for the residential sector.

1.10 **Reliability indicators.** The National Electric Power Agency (ANEEL) evaluates the reliability of the electricity supply annually, using two indicators: (i) equivalent interruption duration (EID) per consumer unit, which indicates the average number of hours per year that a consumer is without electricity service; and (ii) equivalent interruption frequency (EIF) per consumer unit, which indicates the average number of outages per consumer unit during the year. Between 2011 and 2016, CELESC-D made significant investments[18] to expand the capacity of its network and improve the reliability of supply, resulting in a 26% reduction in EID and EIF in its concession area (Table 1).

Table 1 – Historic EID and EIF Levels (2011-2016)

Indicator	Unit	2011	2012	2013	2014	2015	2016	Δ% (2011-2016)
EID	Hours/user/year	17.2	16.5	15.5	15.2	14.7	12.8	-26%
EIF	Outages/user/year	11.8	11.8	10.6	10.5	10.2	8.7	-26%

1.11 The concession contract between CELESC-D and ANEEL, renewed in 2015 for 30 years, establishes maximum limits for the EID and EIF indicators, which are reduced starting in 2016, to promote improved service quality (Table 2). Failure to comply with the maximum limits for two consecutive years could result in loss of the concession. As of 2016, CELESC-D's EID and EIF indicators were below the limits of the concession contract. However, projected growth in electricity demand (paragraph 1.3) will saturate its equipment and network. Consequently, in addition to investments aimed at keeping pace with growth in demand, additional investments will be necessary to maintain and reduce the EID and EIF indicators over the short and medium term.

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[15] Miguel Barreto, "Avaliação do impacto da qualidade de energia elétrica na produção industrial: proposta de metodologia", Producto & Produção, vol. 9, n. 3, pp. 15-25, out. 2008.

[16] The marginal cost of generation in the Brazilian South: US$117 per MWh in (April 2017, Câmara de Comercialização de Energia Elétrica).

[17] Detail on methodology: ANEEL, Avaliação dos Costos relacionados as Interrupções de Energia Elétrica e suas Implicações na Regulação, Relatório 3.a, March 2016.

[18] Average of R$390 million per year between 2011 and 2016, equal to US$151 million per year at the average exchange rate for each year.

Table 2 – EID and EIF Limits (2016-2020) Established by ANEEL

Indicator	Unit	2016	2017	2018	2019	2020
EID	Hours/user/year	14.8	13.8	12.6	11.6	11.3
EIF	Outages/user/year	11.0	10.4	9.8	9.3	8.7

1.12 **Electrical losses.** CELESC-D's rates[19] are subject to a regulatory limit on distribution-related electric power losses of 7.42%, 5.97% of which are technical losses (TLs)[20] and 1.45% nontechnical losses (NTLs).[21] Electrical losses amounted to 8.99% in 2016, up 1.37% over their level in 2015 (TLs of 6.03% and NTLs of 2.96%). This figure is higher than acknowledged in the rate schedule, representing an estimated US$22 million, which CELESC–D covered.[22] The increase in losses (primarily NTLs), was due in part to rate hikes in 2015 and the Brazilian economic crisis, leading to increased fraud, illegal connections to the grid, and meter tampering.[23] CELESC-D has been taking steps to reduce NTLs, including inspection campaigns, regularization of illegal connections, replacement of defective meters, and coordination with municípios on public lighting bills. TLs are nearing technical and regulatory limits. Given their low values at present (6.03%), there are no cost-effective actions for reducing them further.[24]

1.13 **Management systems.** The company's information management systems are nearly 30 years old, outdated, and increasingly at risk of failing. Moreover, this equipment is currently installed in a single room, the Data Center, without any backup.[25] Any failures of this equipment have a direct impact on both EID (in that they manage maintenance operations aimed at addressing any outages in a timely manner) and NTLs (i.e. management of telemetering, fraud identification, and billing). CELESC-D therefore needs to update these systems as well as implement backup systems, to facilitate improvement in its service continuity indicators (EID) and reduce NTLs.

1.14 **Gender.** Women account for 19% of CELESC-D's 3,290 employees; nonetheless, they represent only 3% of all employees in technical positions. This situation prevents the company from taking advantage of the benefits of a more diversified labor force and the positive impacts it can have on women's professional development and on the company's operations and financial performance (Gender Strategy).

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19 The regulatory limit for electrical losses is the acceptable level of such losses that the company can pass along in its rates as a cost of distribution. The company is responsible for any such losses in excess of that limit. In contrast to EIF and EID limits, the electrical losses limit is not a condition of the concession contract. It therefore has no legal implications, but can have a financial impact on the company.

20 TLs refer to power that is lost as electricity is transported from power stations to consumers, the result of the natural warming of transformers and conductors. These losses increase in proportion to the volume of power distributed. While making improvements to the grid can help reduce TLs, they have a physical limit and cannot be completely eliminated.

21 NTLs represent the remaining balance of total losses and are primarily due to the clandestine or illegal use of the service and to administrative and technical errors, including: energy theft, metering errors, billing process errors, and consumer units without metering equipment.

22 CELESC-D electrical losses (8.99%) are well below the 16% estimated average for Brazil

23 Analysis of electricity losses – CELESC-D, 2016.

24 TLs have a minimum physical limit (greater than zero). Consequently, investments made to reduce TLs result in marginally decreasing returns. TLs are already acceptable from a technical standpoint. Hence, the level of investment required to further reduce them would not be offset by the resulting economic returns.

25 Eficiência Operacional, Iniciativa 088-Implantação do Novo data Center da Companhia, CELESC-D.

1.15 **Energy infrastructure investments program.** In this context, CELESC-D has asked the Bank for an investment loan in the amount of US$276.05 million, which will include a counterpart contribution of US$101.23 million. The program is a priority for the company, as reflected in its strategic plan, and represents 60% of planned investments over the next five years.[26] The program will support the expansion and improvement of the distribution network by installing new lines, substations, equipment, and feeder lines, expanding the low voltage network, replacing and installing new meters to satisfy growth in demand, and improving quality indicators. The program also provides for improvements to CELESC-D information management systems and the development of a gender promotion strategy, to include updating the Young Apprentice program implemented by the company. Brazil's federal government prioritized the program via COFIEX Recommendation 05/0118 of 8 November 2016. In addition, the Legislative Assembly of the State of Santa Catarina approved Law 17,274/2017, authorizing a counterguarantee (to be issued by the State of Santa Catarina) for the guarantee (to be issued by the Federative Republic of Brazil) on the borrower's repayment obligations under this operation.

1.16 **Rationale.** The installation of new distribution lines, substations, and feeder lines is essential to meet the increase in demand. This new infrastructure, based on an appropriate design, will help reduce the frequency and duration of outages by providing additional supply routes in the event of outages,[27] thus increasing service reliability. Since nearly 32% of outages on the CELESC-D network are caused by weather events and/or vegetation, lightning arresters and automatic connectors also need to be installed to prevent and/or reduce the frequency and duration of outages during such events, in addition to maintenance and pruning activities. In addition, 17% of outages are due to failures of existing equipment on the network, some of which have already reached the end of their useful life (paragraph 1.8) and therefore need to be replaced and/or upgraded. The remaining outages are due to third-party activities (16%), programmed shutdowns for maintenance (12%), transmission network failures (3%), and unidentified causes (20%).[28] The company also needs to install new meters to address increases in the number of users (estimated at 3% annually) and upgrade its existing metering systems to reduce NTLs, thereby supplementing actions it has already been implementing in this regard (paragraph 1.12). In addition, the program's investments will help maintain TLs at their current levels.

1.17 **Evidence.** There is an extensive body of literature that establishes a strong link between the quality of the energy infrastructure, competitiveness, and economic growth,[29] while low-quality electricity has negative effects on the productivity, operating costs, and competitiveness of companies.[30] Moreover, extensive empirical literature supports the idea that investments in the electricity sector, such as expanding networks and improving the reliability of electricity service, promote development at both the household and business levels, thus helping support long-term economic growth. Mendes, et al. (2009) show that a 1% increase in electricity investments in Brazil increased total factor productivity by 0.15%,

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26 During this period, CELESC-D will execute the remaining 40% of investments with its own financing.

27 Power Distribution Planning Reference Book, H. Lee Willis, 2004 Edition.

28 There are no interruptions or rationing due to the lack of generation. The Brazilian regulatory framework requires that distributors have 100% of their demand under contract and that contracts are backed by solid generating capacity.

29 IDB, Energy Sector Framework (GN-2830).

30 Serebrisky, Tomás, Sustainable Infrastructure for Competitiveness and Inclusive Growth, IDB, 2014.

with a two-year lag. In evaluating the effects of power supply outages on the productivity of industries in China, Fisher-Vanden, et al. (2015) find that such outages increase companies' unit production costs by about 8%, reducing their competitiveness. The impacts on companies in the producing sector are confirmed by Rud (2012), who finds that access to electricity has a positive impact on manufacturing output in India. Also with respect to India, Allcott (2014) shows that a 1% increase in shortages increases the share of self-generated electricity by 0.57%, which is reflected in a 0.68% decrease in manufacturing revenues. At the aggregate level, service outages in this sector represent a 5% loss in revenues.

1.18 In the specific case of the State of Santa Catarina, electricity is an essential input for the industrial, commercial, and services sectors—the base of its economy. Data from the Santa Catarina Federation of Industries (FIESC)[31] show a close relationship between electricity consumption and industrial production; a 1% increase in the industrial production index results in a 0.38% increase in the demand for electricity. Considering the cost of power supply outages (paragraph 1.9) and EID levels in 2016, the total economic cost of outages in the State of Santa Catarina (considering all sectors) exceeded US$100 million. This figure could increase if investments are not made to meet increased demand. Thus, if the network's distribution capacity is not increased, the development of new industries and businesses, as well as and the connection of new users, could be severely limited.[32]

1.19 Numerous gender studies[33] have shown that gender diversity is linked to improvements in companies' performance. This is because women's management styles tend to be different from those of men, since they focus more on: (i) developing the capacities of their employees; (ii) establishing efficient forms of communication; and (iii) promoting more participatory decision-making processes, among other aspects. This evidence suggests that reducing gender disparities and improving women's participation in the labor market may increase operational efficiencies that ultimately result in greater value for basic services companies. Bearing this in mind, the program will support the implementation of a Gender Strategy for CELESC-D, which is expected to have positive long-term effects on the company's management.

1.20 **Bank experience in the sector and lessons learned.** The Bank has broad knowledge of Brazil's electric utility industry and has financed more than US$1.25 billion in loans and technical cooperation over the last six years, including renewable energy, hydroelectric power plant rehabilitation, transmission, and electrical distribution projects.[34] The experience of executing these loans has contributed knowledge on the Brazilian contractors' market, bidding times, and time frames for the execution of contracts, which has also been applied to the planning of this operation. Specifically, the US$130.56 million loan for the Pró-Energia Program for Electricity Distribution in Rio Grande do Sul (PRO-RS, loan 2700/OC-BR), which is currently being executed by Companhia Estadual de Distribuição de Energia Elétrica (CEEE-D), of the State of Rio Grande do Sul, includes activities that are similar to

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31 O Consumo de energia elétrica na indústria e a produção industrial na economia catarinense, Observatório da Indústria Catarinense, April 2017.

32 CDC Group, "Development Impact Evaluation: What are the Links between Power, Economic Growth and Job Creation?" January 2016.

33 For more information, see the Gender Strategy link.

34 Rehabilitation Program for the "Furnas" and "Luiz Carlos Barreto de Carvalho" Hydroelectric Power Plants (operation BR-L1278); Pró-Energia Program for Electricity Distribution in Rio Grande do Sul (operation BR-L1284); CEEE Generation and Transmission Project (BR-L1303); and Financing Program for Sustainable Energy (operation BR-L1442).

those of this loan, in a state with a similar economy, demographics, and topography to those of the State of Santa Catarina. The PRO-RS program has disbursed 54% of its resources and helped to reduce EID indicators from 21.72 (2010 baseline) to 16.37 in 2016, as well as to reduce EIF indicators from 15.49 to 11.34 during the same period. The lessons learned in executing the PRO-RS program include the importance of the formation and continuity of the program execution unit, as well as the need to train new executing agencies in the Bank's procurement and financial management policies. To prepare for this operation, meetings were held to exchange information between the CEEE-D and CELESC-D. In addition, the Bank approved 27 operations in the electricity transmission and distribution sector since 2007, amounting to US$2.1 billion. These have helped identify good practices, notably: (i) clearly defining eligibility and project prioritization criteria; (ii) preparing loans in close collaboration with the executing agencies; (iii) facilitating the advance preparation of, and agreement on, bidding documents; (iv) continuous monitoring and strengthening of executing agencies to facilitate their understanding of Bank procurement and monitoring procedures; (v) using clear technical specifications that include resilient infrastructure; and (vi) ongoing monitoring of environmental and social management. These aspects have been incorporated into this proposal and will be implemented in the operation.

1.21 **Strategic alignment.** The program is consistent with the Update to the Institutional Strategy 2010-2020 (document AB-3008) and aligned with the development challenge of productivity and innovation by providing infrastructure to facilitate a stable energy supply. The program is also aligned with the crosscutting theme of gender equality and diversity, in that it aims to expand employment opportunities for women in the energy sector. The program will also contribute to the Corporate Results Framework 2016-2019 (document GN-2727-6) through the auxiliary output indicator: (i) electricity transmission and distribution lines installed; and (ii) new households with access to electricity.

1.22 The program is aligned with the priority areas of the Sustainable Infrastructure for Competitiveness and Inclusive Growth. IDB Infrastructure Strategy (document GN-2710-5), by financing the expansion and strengthening of electricity distribution infrastructure that will help meet projected demand. The program is included in the 2017 Operational Program Report (document GN-2884) and aligned with the dialogue area on energy of the IDB Country Strategy with Brazil 2016-2018 (document GN-2850), in that it helps reduce production costs and increase productivity and competitiveness in the State of Santa Catarina, by providing infrastructure for public electricity service (paragraphs 1.9 and 1.18). In addition, the electric utility industry, particularly transmission and distribution, is identified by the Brazilian government as a priority area for external financing.[35] The operation has also added value by supporting CELESC-D's efforts to: (i) develop and implement a gender strategy; (ii) formally implement planning tools and techniques and project monitoring that it is not currently using; and (iii) improve its environmental and social management procedures.

1.23 The program is consistent with the objectives and principles established in the Energy Sector Framework Document (document GN-2830-3) by supporting: (i) economical and

[35] The country's macroeconomic conditions have hampered lending by its national development banks for infrastructure, including the electricity distribution sector, owing to interest rate hikes. This has had a considerable impact on the electricity sector, which requires long-term financing that matches the useful life of the assets to be financed, and interest rates that are in keeping with the return on investments, which is regulated in the distribution sector.

sustainable access to energy, the promotion, expansion, and strengthening of the electrical grid; and (ii) energy security, due to improved quality in electricity service.

1.24 **Consistency with the Public Utilities Policy (GN-2716-6).** The sector's regulatory framework makes the sustainability of electricity service viable over the long term by providing efficient and quality services.[36] The program complies with the objectives, principles, and conditions of economic viability and financial sustainability as established in the Public Utilities Policy. The program's economic viability was confirmed through a cost/benefit analysis acceptable to the Bank (paragraph 2.11). The financial viability analysis (paragraph 2.14) confirmed that the service will generate sufficient revenue, through the rate schedule, to cover the financial commitments as well as the operation and maintenance costs of the works financed by the program.

1.25 Distribution rates are regulated by ANEEL and include all costs necessary to provide service. Rates are structured in two components: (i) portion A,[37] which are costs not under the distribution company's control, such as the costs of purchasing energy (generation), using the transmission network, sector fees and taxes; and (ii) portion B,[38] which includes distribution costs that are under the distribution company's control, such as network operation and maintenance (O&M) and capital, administration, and depreciation costs. On average, portion B accounts for 17% of the rate. It is revised every four years (rate cycle), and is adjusted for inflation annually.

B. Objectives, components, and cost

1.26 **Objective.** The program's overall objective is to help boost productivity in the State of Santa Catarina by ensuring a quality supply of electric power. Its specific objectives are to: (i) satisfy the growing demand for electric power by expanding and modernizing CELESC-D's distribution network; (ii) improve the reliability of the power grid; (iii) enhance CELESEC-D's operational efficiency; and (iv) foster greater gender equality at CELESC-D. To achieve these objectives, the program will be structured in three components:

1.27 **Component I. Expansion and modernization of the high-voltage distribution system (US$162.44 million).** This component will finance the procurement of the equipment and works needed to expand and modernize CELESC-D's high-voltage distribution system, including: (i) construction of approximately 20 new substations (781 MVA of capacity); (ii) expansion of approximately 30 existing substations (583 MVA of capacity); (iii) construction of roughly 30 high-voltage distribution lines (approximately 342 km); and (iv) replacement of approximately 600 components of equipment at high-voltage substations (e.g. transformers, switches, lightning arresters, and cooling systems). This

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[36] The Brazilian electric utility sector is regulated by ANEEL. The sector comprises the generation, transmission, distribution, and sale of electricity, and includes the participation of private, public, and mixed entities. Electricity distribution is a public utility, governed by concession contracts signed between distribution companies and ANEEL. As a natural monopoly, concession contracts for electricity distribution establish the basic rules for setting rates, quality levels, service losses and reliability, consumer rights, as well as the obligations of and sanctions for each distribution company.

[37] Portion A is fully passed on to consumers. The distributor companies cannot define or select their generation sources and all generation and transmission contracts are awarded and signed by the regulator (ANEEL) through public tenders to the lowest bidder. Since 2015, rate bands are applied and defined monthly in order to pass on to users the additional costs of thermal generation utilized during the dry season.

[38] Portion B is passed on to the consumer to the extent that distribution companies are able to provide proof to ANEEL that they are in compliance with a benchmark company's cost efficiencies, i.e. distribution companies have regulated rates, with incentives for technical quality.

component includes financing for the studies necessary to implement the planned activities, consulting services, and studies; the technical and environmental supervision of works; as well as financing to establish the easement strip and pay the related compensation. It also provides for the purchase of land for substations.

1.28 **Component II. Expansion and modernization of the medium- and low-voltage distribution system (US$180.45 million).** This component will finance the construction of approximately 160 medium-voltage feeders, the upgrading of 330 kilometers of medium- and low-voltage lines,[39] and the installation of approximately 8,000 distribution transformers (593 MVA of capacity). This component also includes the procurement and installation of approximately one million electricity meters (to satisfy the natural increase in users and meter replacement), and the procurement and installation of approximately 2,300 special distribution equipment components (e.g. transformers, lightning arresters, connectors, switches, capacitors, and regulators) that have already reached the end of their useful life. This component will also finance the services necessary to implement the envisaged activities, which include consulting services.

1.29 **Component III. Institutional strengthening (US$14.18 million).** This component will finance: (i) procurement of the hardware and software needed to modernize CELESC-D's management systems and to build a new data center control room; and (ii) the development and implementation of a gender strategy in the Young Apprentice program to foster greater gender equality at CELESC-D. This component will also finance the development of electricity sector training modules, as part of the company's Young Apprentice program, to provide instruction in this area to young men and women.

1.30 **Administration, monitoring, and evaluation (US$3.14 million).** This component will finance the program administration, monitoring, audits, and evaluations.

1.31 **Finance charges (US$17.05 million).** This component will finance the interest payments and fees incumbent on CELESC-D during the program's execution.

Table 3. Program Cost by Component (US$)

Component	IDB Loan	Local Counterpart	Total
Component I. Expansion and modernization of the high-voltage distribution system	133,551,469	28,889,351	162,440,820
Component II. Expansion and modernization of the medium- and low-voltage distribution system	127,322,531	53,134,701	180,457,232
Component III. Institutional strengthening	12,032,250	2,148,688	14,180,938
Administration, monitoring, and evaluation	3,144,750	0	3,144,750
Finance charges	0	17,056,760	17,056,760
Total	**276,051,000**	**101,229,500**	**377,280,500**

* Link to itemized budget by component: Itemized budget by program investment category.

[39] Network upgrading consists of replacing all or part of its equipment or infrastructure with condition issues or that has reached the end of its useful life, including utility posts, insulators, cable, and crossarms. This activity does not provide for new sections of the medium- and low-voltage networks.

C. Key results indicators

1.32 **Expected results.** The program's implementation is expected to increase CELESC-D's capacity to meet projected demand by 2022 (28,270 GWh), reducing the number of overloaded substations by up to 31% and improving service continuity indicators (EID and EIF) up to the regulatory limits established in its concession contract (Table 2). A reduction in electrical losses, especially NTLs, is also expected. In addition, the design and implementation of a gender strategy is expected to improve the company's management activities over the long term. These outcomes will help increase the productivity of the State of Santa Catarina by ensuring that the power supply meets high-quality standards. The program includes a matrix of output and outcome indicators (Annex II).

1.33 **Beneficiaries.** The program will benefit 2.8 million consumers in CELESC-D's concession area of 6.5 million people, by enabling the company to meet future demand for electricity with better quality service indicators, including the industrial sector (accounting for 41% of demand), which will experience fewer power outages and will therefore be able to boost its productivity. The program will also make it possible to incorporate new clients in the concession area (3% per year).[40] Moreover, the design and implementation of a gender strategy for CELESC-D is expected to have positive long-term impacts by helping diversify the sector's labor force; participants in the Young Apprentice program are also expected benefit from this strategy.

II. Financing Structure and Main Risks

A. Financing instruments

2.1 The program will be financed as a multiple-works investment loan in the amount of US$276.05 million from the Bank's Ordinary Capital under the Flexible Financing Facility (document FN-655-1). The borrower's financial obligations will be secured with the sovereign guarantee of the Federative Republic of Brazil, as well as the guarantee of the State of Santa Catarina on the borrower's performance obligations, which include the obligation to provide local counterpart resources. The program provides that CELESC-D will provide a counterpart contribution of US$101.23 million. The time frame for the physical start of the works will be four years and the disbursement period will be five years; both periods begin on the effective date of the loan contract. Table 4 provides the tentative schedule for the disbursement of resources.

Table 4. Projected Disbursements (US$ million)

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
IDB	61.44	63.65	59.43	52.40	39.13	**276.05**
IDB %	22.3%	23.1%	21.5%	19.0%	14.2%	**100%**
Counterpart contribution	20.18	20.99	21.02	20.57	18.47	**101.23**
Counterpart %	19.9%	20.7%	20.8%	20.3%	18.2%	**100%**
TOTAL	**81.62**	**84.64**	**80.45**	**72.97**	**57.60**	**377.28**
TOTAL %	**21.6%**	**22.4%**	**21.3%**	**19.3%**	**15.3%**	**100%**

2.2 The decision was made to use the multiple-works modality, since the works to be financed under the program: (i) are physically similar but independent of one another; (ii) their

[40] Equivalent to approximately 90,000 households per year.

feasibility does not depend on the execution of a specific number of projects; and (iii) are small enough to be bundled in a single program. The representative sample of projects,[41] which amounts to US$193.83 million, is equivalent to 51% of the program total, and eligibility criteria have been established (paragraph 2.10) to finance projects not included in this sample.

B. Environmental and social risks

2.3 Component I of the program will finance approximately 30 new distribution lines, 20 new substations, and the expansion of some 30 substations. The sample projects in Component I include: (i) four distribution lines, three of which will expand the existing right-of-way by 12.5 meters, and one will use the existing right-of-way in its entirety; (ii) six new substations to be built on land purchased by CELESC-D in the 1980s; and (iii) seven substation expansion works to be carried out on land purchased by CELESC-D in the 1980s.

2.4 The program has been classified as Category "B," in accordance with the Environment and Safeguards Compliance Policy (Operational Policy OP-703), since it could have localized adverse environmental and social impacts, for which mitigation measures are available, primarily related to the processes for securing the easement strip for the lines. The level of disaster risk has been established as moderate.

2.5 The most significant potential impacts and risks associated with the distribution lines include: (i) impacts on the means of subsistence of households located in the right-of-way and along access roads, which will be addressed by resettlement action plans; (ii) spontaneous settlement on the easement, which will be addressed by an access control plan; (iii) suppression of native vegetation, including swaths of Atlantic Forest, which will be addressed in a critical natural habitat analysis; and (iv) waste generation, to which end, CELESC-D has improved its related procedures with IDB support. The most significant impacts associated with the new substations involve the suppression of native vegetation—including swaths of Atlantic Forest—and waste generation. These have been minimized as a result of CELESC-D's planning process, by selecting appropriate sites for the installation of substations with the aim of ensuring that any remaining impacts can be easily mitigated during program execution through a critical natural habitat analysis and waste management. Due diligence confirmed that no physical resettlement is required for the program's construction works. With respect to the distribution lines, CELESC-D will compensate the owners of property located in the right-of-way for the use of their land during the construction phase.

2.6 In accordance with Bank policy, an environmental and social impact assessment (ESIA) have been conducted and published for each project in the sample. In accordance with Operational Policy OP-703 (Directive B.6), CELESC-D has prepared a strategic environmental assessment (SEA) and environmental and social management framework (ESMF) for the program to ensure that each project complies with Bank policies. In addition, it has held public consultations on each project in the sample. The implementation of CELESC-D's own procedures and the guidelines of the ESMF will ensure compliance with Bank policies during program execution.

[41] The sample included 32% of the amount of each type of work in Component I, in addition to 100% of the technical specifications for the equipment included in Components I, II, and III.

C. Fiduciary risks

2.7 CELESC-D will use its organizational structure and fiduciary management systems to execute the program. During the preparation of the operation, an institutional capacity assessment and fiduciary analysis of CELESC-D were performed using the Institutional Capacity Assessment System (ICAS), which found a satisfactory level of development and a low level of risk for program execution. With a view to facilitating program execution, a program coordinating unit (PCU) will be in place to strengthen the appropriate organizational and fiduciary structure (paragraph 3.1). It will be established and operate within the company, staffed by company personnel. A risk assessment workshop was held as part of the loan preparation process, which identified a medium level risk for procurement management, owing to CELESC's lack of experience in the execution of Bank-financed projects and the need to provide its staff with training in the Bank's procurement and financial management policies. To mitigate this risk, a launch workshop and periodic training sessions are planned. These will be held once the loan contract is signed, in addition to information-sharing meetings with the executing agencies of other energy loans in Brazil (loans 2700/OC-BR and 2813/OC-BR).

2.8 **Other risks.** The potential inability of the State of Santa Catarina to meet its economic growth prospects was identified as a medium risk, which could in turn affect the demand for electricity and CELESC-D's cash flow. The Bank will periodically monitor the state's macroeconomic situation, in coordination with the country economist, to identify in a timely manner the need for program adjustments. Annual audits of the company's financial position will also be conducted (paragraph 3.8).

D. Technical, economic, and financial viability

2.9 **Technical viability.** The projects to be implemented under the program were identified in accordance with a planning process based on technical and economic criteria established by ANEEL. These projects are part of CELESC-D's five-year works plan. Once completed, the projects will form part of the asset base covered by the rate. An independent technical evaluation was conducted on the sample of projects and equipment specifications in Components I, II, and III, confirming that they: (i) were complete and included the information necessary to be tendered; (ii) made it possible to prepare a competitive bidding process (not restrictive); (iii) reflected the latest technological advances in this area; (iv) included budgets based on market prices and a reasonable works schedule for their implementation; and (v) with respect to the specifications for civil works, that their designs included climate-change and disaster risk criteria.

2.10 **Eligibility criteria.** In addition to the projects of the representative sample, the program could finance other projects and activities, provided that they comply with the following technical and environmental and social eligibility criteria: From the technical standpoint: projects will: (i) be included in the five-year works plan and meet ANEEL planning criteria; (ii) have an updated budget; and (iii) contribute to achieving the program's targets for reducing EIF and EID and reducing losses and/or increasing the system's distribution capacity. From the environmental and social standpoint, projects will be classified as category "B" operations in accordance with the Bank's criteria. In the case of distribution line and substation works, these will: (i) not be built on indigenous lands or legally demarcated or declared Quilombo communities, or environmental protection/conservation areas; (ii) not involve involuntary resettlement; (iii) have identified the necessary compensation arrangements for establishing an easement strip, as necessary; (iv) have secured environmental authorization in accordance with applicable environmental legislation; and

(v) have completed an ESIA as required by the program Operations Manual. CELESC-D will submit each ESIA to the Bank for its no objection prior to commencing the civil works of distribution line and substation projects.

2.11 **Economic viability.** The program's economic viability was confirmed using the cost/benefit analysis methodology, comparing scenarios with and without the program. Two scenarios were considered without the program: (i) Scenario A, which limits growth in demand in order to maintain the reliability indicators; and (ii) Scenario B, which does not limit growth in demand, resulting in deterioration of the reliability indicators and increased electrical losses. A comparison of the "with program" scenario with the two "without program" scenarios provides an idea of the range of the program's economic benefits. Consideration was given to the following: (i) investment costs; (ii) O&M costs; (iii) the benefits derived from the increase in the supply of electric power, due to the improved transmission capacity of lines, substations, and networks; and (iv) the benefits derived from the increase in service reliability, since the new lines, substations, and protection and control systems result in fewer outages.

2.12 The calculation of net benefits due to increased electricity consumption was based on consumers' willingness to pay for electric power as a result of the program, less supply costs. The calculation of net benefits attributable to improvements in service reliability was based on comparing the electric power associated with the reduction in outages to the ANEEL's estimated cost to the State of Santa Catarina of unscheduled shutdowns (paragraph 1.9). The estimated reduction in electric power not supplied due to improved service reliability was based on CELESC-D projections of EID and EIF, taking into account the regulatory limits up to 2020 (and thereafter applying the rate schedule limits up to 2022). The benefits from reducing NTLs, associated with an increase in company revenue and government tax collection, do not result in additional economic benefits, since, in the absence of the program, consumers would receive these benefits. Although the program will have an impact on TLs, primarily by preventing an increase in such losses, this benefit was not included in the analysis since it is difficult to quantify (see the Program Economic Evaluation report for details).

2.13 The program's economic evaluation shows a 21.3% economic internal rate of return (EIRR) and a net present value (NPV) of benefits amounting to U$186 million (discounted at 12%); and, under Scenario B, an EIRR of 14.7% and NPV of US$54 million. The sensitivity of the results to changes in the main parameters used (willingness to pay, reliability, costs, growth in demand, and execution period) shows that the risk associated with a significant negative impact on the EIRR and NPV is very low. In the comparison with Scenario B, the EIRR would be 12% only in the case of reductions of more than 20% in the cost of power not supplied.

2.14 **Financial viability and sustainability.** A review of CELESC-D's historical financial position was conducted for the 2014-2016 period, as well as its financial projections for the program execution period, and for the loan amortization period (2017-2045). As of December 2016, CELESC-D reported EBITDA[42] of US$64 million (R$211 million), which would increase to US$472 million (R$1.512 billion) by 2030. With respect to comparator companies, CELESC-D has a low level of borrowing. The financial projections indicate that the company has a sustainable financial position, that it has the ability to repay the Bank's loan, and that it is able to provide the counterpart contribution. To examine the soundness of the projected

[42] Earnings before interest, tax, depreciation, and amortization (EBITDA).

financial position, three rather extreme sensitivity scenarios were evaluated for the entire period of analysis (2017-2045): (i) a 20% increase in operating costs; (ii) a 20% reduction in the energy consumption growth rate; and (iii) maintaining NTLs at their current level. This sensitivity analysis confirmed that the company has the ability to repay its loan with the Bank. The scenarios assume an inflexible regulatory regime, i.e. rate adjustments that would occur in situations of reduced demand are not considered in order to maintain the concession's financial balance, which is a priority of Brazil's regulatory framework.

2.15 **Concession contract.** Renewed by CELESC-D in 2015, the concession contract requires annual compliance with financial indicators to ensure the company's sustainability, as well as the above-mentioned technical indicators. These indicators aim to ensure that: (i) EBITDA will be positive in 2017; (ii) EBITDA will be able to cover the minimum investments required for electricity service in 2018; (iii) the ratio of short-term debt to net earnings generated after making the minimum investments will be less than 9.71 in 2019 (i.e. the company's earnings will be sufficient to repay its debt over a period of less than 10 years after making the minimum service investments); and (iv) this ratio will be less than 7 in 2020 (i.e. the company's earnings will be sufficient to repay its debts over a period of less than seven years, after making the minimum service investments). The financial evaluation confirmed that the risk of noncompliance with these financial indicators is low. Accordingly, the main mitigating measures are: a reduction in personnel costs and NTLs, which the company is currently implementing; and the regulatory framework, which prioritizes company financial sustainability. The program will also support compliance with these financial conditions by financing works that are guaranteed to generate earnings, whether through increasing energy sales or reducing fines, in compliance with the conditions of the technical indicators.

III. Implementation and Management Plan

A. Summary of implementation arrangements

3.1 **Execution mechanism and implementation arrangements.** CELESC-D will be the borrower and the executing agency for the program. The Federative Republic of Brazil will be the guarantor of the borrower's financial obligations under the loan contract, to be signed between CELESC-D and the Bank. The State of Santa Catarina will be the guarantor of the borrower's performance obligations, including the obligation to provide the local counterpart contribution. CELESC-D will be responsible for the program's execution, administration, monitoring, and evaluation. To ensure proper compliance with the administrative, fiduciary, procurement, financial, accounting, and social and environmental provisions of the loan contract, a PCU will be established within the structure of CELESC-D. The PCU will consist of a general coordinator and five sector coordinators (i.e. technical, environment and social, procurement and planning, economic/financial, and accounting). The formation of the PCU and the appointment of its key staff will be included as part of the program Operations Manual and implemented prior to signing the loan contract.

3.2 The PCU will be responsible for the program's technical, administrative, and operational management, including: (i) coordinating the procurement of works, goods, and services; (ii) requesting loan disbursements; (iii) preparing annual work plans, the procurement plan, and others; (iv) submitting program management reports; (v) monitoring the supervision and inspection of works and service contracts; and (vi) acting as the interlocuter with the Bank. The PCU will use CELESC-D's existing bidding committee, which will be responsible for executing all procurement and contracting procedures during the program disbursement

period. Prior to the start of the program, the members of the bidding committee will receive Bank training in its procurement policies, procedures, and current documents in this regard.

3.3 **Operation and maintenance.** CELESC-D will: (i) ensure that the program's works and equipment are adequately maintained, in accordance with generally accepted technical standards; and (ii) submit to the Bank an annual maintenance report on the status of program works and equipment, to be presented in the first quarter of each calendar year and over a period of five years following the completion of the program's first works project.

3.4 **Program Operations Manual.** The execution of the program will be governed by the provisions established in the loan contract and in the program Operations Manual. The latter will include: (i) eligibility criteria and procedures for the submission of projects; (ii) procedures for the contracting of works, goods, and consulting services; (iii) guidelines for the use of program resources and program financial management; (iv) disbursement procedures; (v) a detailed description of the program's activities, as well as aspects associated with program tracking and monitoring; (vi) the structure of the PCU, identification of the functions of key personnel, and the coordination mechanisms and links with other CELESC-D divisions; and (vii) a section on the environmental and social management framework. **The approval and entry into effect of the program Operations Manual, under the terms agreed upon with the Bank, will be a contractual condition precedent for the first disbursement of loan proceeds.**

3.5 **Procurement policies.** The procurement of goods, works, and services, as well as the selection of consultants financed by the Bank will be carried out in accordance with the Polices for the Procurement of Works and Goods Financed by the IDB (document GN-2349-9) and the Policies for the Selection and Contracting of Consultants Financed by the IDB (document GN-2350-9), respectively. The Procurement Plan includes details on program procurement. The procurement agreements and fiduciary requirements are included in Annex III.

3.6 **Retroactive financing.** In accordance with the Bank's Policy on Recognition of Expenditures, Retroactive Financing, and Advance Procurement (document GN-2259-1/Operational Policy OP-507), the Bank may use the loan proceeds to retroactively finance up to US$27,605,100 (10% of the proposed loan amount), and recognize and charge to the local counterpart contribution up to US$10,122,950 (10% of the estimated local counterpart contribution amount) for eligible expenses incurred by the borrower prior to the loan approval date for the procurement of equipment for Components I, II, and III, labor; services and compensation related to easement strips for installing this equipment; and land for the substations, provided that requirements substantially similar to those established in the loan contract have been met. Such expenditures must have been incurred on or after 6 February 2017 (program profile approval date), but will in no case include expenditures incurred more than 18 months prior to the date the loan was approved by the Bank's Board of Executive Directors.

3.7 **Purchase of land.** The program will finance the purchase of land for substations under Component I. The purchase of land will comply with the eligibility criteria and requirements set forth in the applicable Bank policies (i.e. Modernization of Policies and Practices that Restrict the Use of Resources in Investment Loans. Final version (document GN-2331-5) and the Guidelines for the Eligibility of Expenditures in Investment Loans. Proposed amendment (documents GN-2331-11 and CC-6004-2)), namely: (i) the land in question is part of the program, it is necessary for the construction of the substations and to achieve the program's development objectives; (ii) the land will be used productively in the program

context; (iii) the value of the input can be established at reasonable market prices to the Bank's satisfaction; and (iv) the compensation paid for the purchase of land takes into account the owner's loss of goods and production, in compliance with the Policy on Involuntary Resettlement (Operational Policy OP-710).

3.8 **Audit.** During the program disbursement period, CELESC-D will submit the annual audited financial statements to the Bank within 120 days following the close of the respective fiscal year. The audit will be conducted by an independent firm of auditors acceptable to the Bank, to be selected in accordance with the Bank's policies and procedures. The determination as to scope and other related aspects will be governed in accordance with the Financial Management Policy for IDB-financed Projects (document OP-273-6) and the Guide for the Preparation of Financial Statements and External Audits. The audit costs will be financed with the proceeds of the Bank's loan, and CELESC-D, through the PCU, will be responsible for contracting the program audit.

B. Summary of results monitoring arrangements

3.9 The monitoring arrangements include administrative missions, semiannual progress reports, and annual external audits. CELESC-D, through the PCU, will carry out the overall monitoring of the program, based on the targets established in the results matrix (Annex II) and using the Annual Work Plan, which will be updated annually. The Multiyear Execution Plan will detail the progress made in the activities and include the execution schedule for the remaining years in the loan disbursement period. CELESC-D, through the PCU, will be responsible for preparing semiannual reports and submitting them in March and September of each year, in addition to organizing meetings with the Bank to analyze the program's progress. The Bank, through the sector specialist, will supervise program execution. The details of the monitoring arrangements are presented in the Monitoring and Evaluation Plan link.

3.10 **Evaluation.** CELESC-D will present a midterm evaluation report to the Bank 60 days after the date on which 50% of the loan proceeds have been disbursed, if required by the Bank, and a final evaluation report 90 days after the date on which 90% of the loan proceeds have been disbursed. The terms of reference for the consultants who will prepare those reports will require the prior no objection of the Bank. These reports will include: (i) progress made in fulfilling the targets of the results matrix; (ii) the works' degree of compliance with the environmental requirements and specifications, as established in the projects' environmental management plans and according to the guidelines of the program's ESMF; (iii) the degree of compliance with the obligations established in the loan contract; (iv) the effectiveness of the monitoring and evaluation system; and (v) lessons learned. Upon completion of the program, a project completion report will be prepared to evaluate whether the program's objectives were met and to extract lessons that can be applied to future projects.

3.11 **Ex post evaluation.** CELESC-D will perform an ex post cost/benefit analysis with up-to-date data on: (i) the costs of infrastructure financed by the program; (ii) electricity consumption and demand projections; and (iii) EIF, EID, and electrical losses. This evaluation will be submitted to the Bank within 90 days after the date of the last disbursement.

Development Effectiveness Matrix		
Summary		
I. Corporate and Country Priorities		
1. IDB Development Objectives	**Yes**	
Development Challenges & Cross-cutting Themes	**-Productivity and Innovation -Gender Equality and Diversity**	
Country Development Results Indicators	**-Households with new or improved access to electricity supply (#)* -Electricity transmission and distribution lines installed or upgraded (km)***	
2. Country Development Objectives	**Yes**	
Country Strategy Results Matrix		
Country Program Results Matrix	**GN-2884**	**The intervention is included in the 2017 Operational Program.**
Relevance of this project to country development challenges (If not aligned to country strategy or country program)		
II. Development Outcomes - Evaluability	**Evaluable**	
3. Evidence-based Assessment & Solution	**9.1**	
3.1 Program Diagnosis	**3.0**	
3.2 Proposed Interventions or Solutions	**3.6**	
3.3 Results Matrix Quality	**2.5**	
4. Ex ante Economic Analysis	**10.0**	
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	**7.0**	
5.1 Monitoring Mechanisms	**2.0**	
5.2 Evaluation Plan	**5.0**	
III. Risks & Mitigation Monitoring Matrix		
Overall risks rate = magnitude of risks*likelihood	**Low**	
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, Accounting and Reporting, External Control, Internal Audit. Procurement: parison.**
Non-Fiduciary	**Yes**	**Monitoring and Evaluation National System.**
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		

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

New electric distribution lines and substations are essential to attend the growing demand for electricity of Santa Catarina State. Moreover, an adequate infrastructure would allow Celesc-D, the region's electricity distribution enterprise, to fulfill the maximum limits to its reliability indicators, which are conditions to its concession and which would result in lower service interruptions to final users; and to maintain electric loses at a level that can be covered by the electricity tariff.

The operation BR-L1491 aims at contributing to Celesc-D distribution network's expansion plan for the next five years, with the purpose of attending the growing demand and improving electric service reliability and Celesc-D's management efficiency. Likewise, the program aims at setting the base for a future higher female participation in the electric sector through the implementation of a gender strategy for the firm.

The vertical logic has been correctly identified, by quantifying and explaining the main determinants of the general and specific problems. The results matrix reflects the diagnosis and accounts for the outputs and expected outcomes of the proposed intervention. However, some outputs do not reach the SMART category.

The economic analysis follows cost-benefit method. It considers the expected benefits and the investment costs of Celesc-D's expansion program for the next five years, comparing them with two scenarios without program: one where interruptions indicators do not increase but additional demand is not attended; and another one where additional demand is attended at the expense of higher interruptions. By applying a 12% Social Discount Rate, the cost-benefit analysis displays a positive Net Present Value.

The monitoring and evaluation plan is adequate and consistent with the intervention. It correctly identifies the phases, responsibilities, budget and timelines. The ex post evaluation of results proposes an ex post cost benefit analysis which will validate the economic benefits due to higher consumption, and lower loses and interruptions.

Finally, the overall risk for this project has been valued as low. The medium risks identified in the risk matrix are: (i) unfulfillment of economic growth expectations for Brazil and Santa Catarina State; (ii) delays in loan's contract approval and signing; (iii) Environmental and Social Safeguards unfulfillment; and (iv) lack of experience or familiarity with Bank's procurement policy. All medium risks include mitigation measures.

RESULTS MATRIX

Program Objective:	The program's overall objective is to help boost the productivity in the State of Santa Catarina by facilitating a quality supply of electric power. Its specific objectives are to: (i) satisfy the growing demand for electric power by expanding and modernizing CELESC-D's distribution network; (ii) improve the reliability of the power grid; (iii) enhance CELESEC-D's operational efficiency; and (iv) foster greater gender equality at CELESC-D.

EXPECTED RESULTS

Indicators	Unit of measurement	Baseline	Baseline year	2018	2019	2020	2021	2022	Final target	Means of verification	Comments
OUTCOME #1: CELESC-D has capacity to meet the projected demand for electricity, having expanded and modernized its distribution network.											
R1.1 Demand for electricity met by CELESC-D	GWh/year	22,945	2016	24,459	25,427	26,408	27,318	28,274	28,274	CELESC-D report	Includes total demand met by CELESC in its concession area (captive market and open market). Does not include losses
R1.2 Substations with loads higher than 90%	%	39%	2016	31%	34%	31%	33%	31%	31%	CELESC-D report	Substations with a transformer with a load exceeding 90% during the period
R1.3 New households connected to the network	# of households	2,200,000	2016	90,000	90,000	90,000	90,000	90,000	2,650,000	CELESC-D report	New residential users connected by CELESC-D

Indicators	Unit of Measurement	Baseline	Baseline year	2018	2019	2020	2021	2022	Final target	Means of verification	Comments
OUTCOME #2: CELESC-D has improved the quality of the electric power supply and management indicators, reducing the duration and frequency of outages and NTLs.											
R2.1 Equivalent interruption duration (EID) per consumer unit	hours/user/ year	12.83	2016	12.58	11.56	11.30	10.33	10.33	10.33	CELESC-D report; calculation based on ANEEL methodology (PRODIST modules 7 and 8)	
R2.2 Equivalent interruption frequency (EIF) per consumer unit	outages/user/ year	8.69	2016	8.69	8.69	8.65	8.06	8.06	8.06		
R2.3 Total electrical losses	% of demand	8.99%	2016	8.20%	7.77%	7.59%	7.49%	7.49%	7.49%		

OUTPUTS

Outputs	Unit of Measurement	Baseline	Baseline year	2018	2019	2020	2021	2022	Final target	Means of verification	Comments
Component I: Expansion and modernization of the high-voltage distribution system											
1.1 Installed capacity of new electrical substations	MVA	0	2016	89	333	120	173	66	781	Electrical substation monthly progress and commissioning report	
1.2 Capacity of existing electrical substations expanded	MVA	0	2016	138	124	105	83	133	583		
1.3 New kilometers of distribution lines installed	km	0	2016	31	109	87	47	68	342	Monthly progress and commissioning report on distribution lines	
1.4 Equipment installed for renovation and replacement of electrical substations	Equipment installed	0	2016	121	121	121	118	119	600	Electrical substation commissioning report	Power transformers, lightning arresters, high-voltage switches, and oil cooling systems, among others

Outputs	Unit of Measurement	Baseline	Baseline year	2018	2019	2020	2021	2022	Final target	Means of verification	Comments
Component II: Expansion and modernization of the medium- and low-voltage distribution system											
2.1 Transformation capacity of the medium-voltage distribution network expanded	MVA	0	2016	285	205	103	0	0	593	CELESC-D monthly progress report	
2.2 New feeders installed	Feeder	0	2016	50	55	55	0	0	160		
2.3 Kilometers of the distribution network improved	km of network	0	2016	110	110	110	0	0	330		
2.4 Electricity meters installed	Meter installed	0	2016	181,953	190,537	199,550	209,010	218,950	1,000,000		
2.5 Distribution equipment replaced	Equipment installed	0	2016	780	600	522	398	0	2,300		Switches (3F, 1F), voltage regulators, capacitor banks, and key fuse connectors

Component III: Institutional strengthening											
Outputs	**Unit of measurement**	**Baseline**	**Baseline year**	**2018**	**2019**	**2020**	**2021**	**2022**	**Final target**	**Means of verification**	**Comments**
3.1 Updated computer system	Data center updated	0	2016	0	1	0	0	0	1	Monthly progress report of CELESC-D	Includes the construction of a room for the Data Center, and updating of equipment.
3.2 Computer equipment (desktops) purchased and installed	Equipment installed	0	2016	1200	0	0	0	0	1200		
3.3 Computer equipment (laptops) purchased and installed	Equipment installed	0	2016	100	0	0	0	0	100		
3.4 CELESC gender strategy designed and implemented	Strategy	0	2016	0	0	0	0	1	1	Strategy implemented	Pro-gender
3.5 Electricity sector training modules developed and implemented in the Young Apprentice program	Modules	0	2016	0	0	1	0	1	2	Modules implemented	

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Country:	Brazil
Project number:	BR-L1491
Name:	CELESC-D Energy Infrastructure Investment Program
Executing agency:	Centrais Elétricas de Santa Catarina–Distribuição S.A. (CELESC-D)
Fiduciary team:	Carlos Carpizo, Financial Management Senior Associate; and Edwin Tachlian-Degras, Procurement Senior Associate (FMP/CBR)

I. EXECUTIVE SUMMARY

1.1 The fiduciary management of CELESC-D was evaluated through meetings between the Bank's fiduciary team and staff of the company's administrative-financial and procurement areas. The analysis was supplemented with the findings of the institutional capacity assessment.

1.2 The assessment found that CELESC-D has qualified personnel and the requisite institutional capacity to carry out the program's activities, and that the operational risk for the program is low. A risk assessment workshop was held as part of the loan preparation process, which identified a medium level risk for procurement management and the need to provide CELESC-D staff with training in the Bank's procurement and financial management policies. To mitigate this risk, a program coordination unit (PCU) will be created, a launch workshop will be planned, and periodic training workshops will be conducted once the loan contract is signed.

II. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY

A. Organizational and functional structure

2.1 The executing agency will be CELESC-D, a wholly owned subsidiary of holding company CELESC S.A. CELESC-D will be responsible for the program's execution, through a PCU to be established under the Office of Finance and Investor Relations (DEF), and will be supported by CELESC-D human, material, and technical resources.

2.2 CELESC is comprised of the following: (i) a board of directors, a deliberative decision-making body; (ii) an executive council, responsible for the strategic management and administration of the company's businesses, including all operational and management controls; and (iii) an audit committee, responsible for enforcing the provisions of Corporations Act.

2.3 Pursuant to Article 37(XXI) of Brazil's Constitution, CELESC-D, a mixed-economy corporation, is subject to the public procurement system (Law 8,666/93).

2.4 The Bureau of Planning and Internal Control is responsible for planning business development activities, analyzing the results of the company and its affiliates against the management contract and its assumptions, preparing analytical reports for the chief executive officer and the board, and for coordinating internal control activities.

2.5 CELESC-D has a code of ethics that establishes guidelines for personal and professional conduct in the company's relations with its shareholders, clients, employees, suppliers, competitors, and with government, the community, and society.

2.6 External control is exercised by an independent audit firm selected by the company's audit committee through a bidding process. The Audit Court of the State of Santa Catarina and the Federal Government Audit Court are also empowered to perform audits of CELESC-D.

B. Evaluation of fiduciary risk and mitigating actions

2.7 The level of institutional risk identified for CELESC-D is low. The company has the requisite institutional capacity to carry out the program's activities.

2.8 A medium level risk was identified for the program, based on CELESC-D's limited experience with and knowledge of IDB policies, standards, and procedures. To mitigate this risk, in addition to establishing the PCU, a training plan will be implemented for the CELESC-D team in charge of program management and execution, and coordination meetings facilitated with other Bank executing agencies.

III. CONSIDERATIONS FOR THE SPECIAL CONDITIONS OF THE LOAN CONTRACT

3.1 With a view to streamlining negotiation of the loan contract, the following agreements and requirements will be included in the special conditions:

a. **Special contractual condition for execution:** within six (6) months of the effective date of the loan contract, the borrower will submit evidence of the implementation of the program's financial management and accounting system, in accordance with Bank requirements.

- **Rationale:** In keeping with the provisions of OP-273-6, the implementation of the program's financial management and accounting system is essential for purposes of budgeting, documenting, accounting, and making payments, as well as for documenting expenses on a reliable and timely basis. Compliance with this condition aims to mitigate the risk of delays in program execution due to errors or inconsistencies in the financial reports.

b. **Management of disbursements:** The executing agency will submit the program's financial planning documentation in accordance with the guidelines agreed upon between the Bank and the country. For new advances, at least 80% of the total amount of resources disbursed as advances of funds must have been justified.

c. **Exchange rate:** For purposes of the provisions of Article 4.10 of the General Conditions Standards of the loan contract, the parties agree that the applicable

exchange rate will be the one indicated in subsection (b)(i) of that article. For purposes of determining the equivalent amount of expenditures incurred in local currency and charged to the local contribution, the agreed exchange rate will be that which is in effect on the first business day of the month in which CELESC-D or any other individual or legal entity authorized to incur expenses, makes the respective payments to the contractor, provider, or beneficiary. For purposes of determining the equivalent amount of the reimbursement of expenditures charged to the loan, the agreed exchange rate will be that which is in effect on the first business day of the month in which the reimbursement request is presented.

d. **Financial supervision:** It is recommended that an independent audit firm perform the external audit of the program. That firm should be eligible in the view of the Bank in accordance with current financial management policies and guidelines.

IV. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

4.1 The fiduciary agreements and requirements for procurement establish the provisions that apply to the execution of all program procurement.

A. Execution of procurement

a. **Procurement of works, goods, and nonconsulting services.** Contracts for works, goods, and nonconsulting services[1] under the program subject to international competitive bidding (ICB) will be carried out using standard bidding documents issued by the Bank. Bids subject to national competitive bidding (NCB) will be executed using the national bidding documents agreed upon with the Bank [or satisfactory to the Bank]. The Bank's sector specialist is responsible for reviewing the technical specifications for procurement during the preparation of selection processes.

b. **Selection and contracting of consultants.** Consulting services contracts under the program will be executed using the standard request for proposals issued by or agreed upon with the Bank. The Bank's sector specialist is responsible for reviewing the terms of reference for consulting services contracts.

c. **Use of the country procurement system.** The Bank of Brazil's e-reverse auction system will be used for the procurement of goods and simple services up to the shopping threshold for simple goods (i.e. up to US$5 million). Any system or subsystem that is approved subsequently will apply to the operation.

d. Contracts for amounts equal to or above those indicated will be governed by the Bank's policies (document GN-2349-9).

e. Section I of the Bank's policies (document GN-2349-9) will continue to apply to all contracts, regardless of their amount or type.

[1] Policies for the Procurement of Goods and Works Financed by the Inter-American Development Bank (document GN-2349-9). Per paragraph 1.1, nonconsulting services are treated as goods.

f. The operation's procurement plan, and its updates, will stipulate which contracts are to be executed using country systems.[2]

B. Other

4.2 **Retroactive financing.** In accordance with the Bank's Policy on Recognition of Expenditures, Retroactive Financing, and Advance Procurement (document GN-2259-1/Operational Policy OP-507), the Bank may use the loan proceeds to retroactively finance up to US$27,605,100 (10% of the proposed loan amount), and recognize and charge to the local counterpart contribution up to US$10,122,950 (10% of the estimated local counterpart contribution amount) for eligible expenses incurred by the borrower prior to the loan approval date for the procurement of equipment for Components I, II, and III, labor; services and compensation related to easement strips for installing this equipment; and land for the substations, provided that requirements substantially similar to those established in the loan contract have been met. Such expenditures must have been incurred on or after 6 February 2017 (program profile approval date), but will in no case include expenditures incurred more than 18 months prior to the date the loan was approved by the Bank's Board of Executive Directors.

4.3 **Purchase of land.** The program will finance the purchase of land for substations under Component I. The purchase of land will comply with the eligibility criteria and requirements set forth in the applicable Bank policies (i.e. Modernization of Policies and Practices that Restrict the Use of Resources in Investment Loans. Final version (document GN-2331-5) and the Guidelines for the Eligibility of Expenditures in Investment Loans. Proposed amendment (documents GN-2331-11 and CC-6004-2)), namely: (i) the land in question is part of the program, it is necessary for the construction of the substations, and to achieve the program's development objectives; (ii) the land will be used productively in the program context; (iii) the value of the input can be established at reasonable market prices to the Bank's satisfaction; and (iv) the compensation paid for the purchase of land takes into account the owner's loss of goods and production, in compliance with the Policy on Involuntary Resettlement (Operational Policy OP-710).

Thresholds for ICB and International Shortlists (US$)

Method	ICB works	ICB goods and nonconsulting services	International shortlist for consulting services
Threshold	≥ US$25,000,000	≥ US$5,000,000	≥ US$1,000,000

[2] If the Bank validates another system or subsystem, it will apply to the operation, in accordance with the provisions of the loan contract.

C. Major procurement processes

Activity	Selection method[3]	Estimated date of announcement/invitation	Estimated amount (US$)
Goods			
Transformers for NSE-G2, AMP-G2, and maintenance/renovation	ICB	October 2018	14,954,334
Distribution line cables for Groups 2 and 3 and distribution networks	ICB	July 2018	10,924,203
Transformers for NSE-G3, AMP-G3, and substit.	ICB	February 2020	10,848,513
Works			
Installation of new substations Group 2	NCB	August 2018	14,077,829
Installation of Distribution Lines Group 2	NCB	June 2018	13,404,159
Nonconsulting services			
Installation of electricity meters	Country system	August 2021	1,726,875
Firms			
Engineering designs for the installation of distribution lines (Groups 1, 2, and 3)	Quality-and cost-based selection	September 2018	3,646,800
Activities associated with implementation of the gender and diversity strategy	Quality-based selection	March 2018	2,812,500

* Click here for the 18-month procurement plan.

D. Procurement supervision

4.4 The ex post supervision method for procurement will be used, except for cases in which ex ante supervision is justified. The first process under each type of procurement will be supervised by the Bank. Thereafter, supervision will be ex post up to the following limits.

Threshold for ex post review		
Works	**Goods**	**Consulting Services**
US$25,000,000	US$5,000,000	US$1,000,000

Note: The thresholds established for ex post review are applied based on the fiduciary capacity for execution by the executing agency, and may be modified by the Bank to the extent such capacity changes.

[3] For procurement processes carried out under the country system, this fact should be indicated in the "selection method" column.

4.5 Ex post reviews will be conducted annually. Ex post review reports will include at least one physical inspection visit,[4] based on a selection from the procurement processes subject to ex post review.

4.6 When procurement is carried out under the country system, supervision will also be performed under that system.[5]

E. Records and files

4.7 CELESC-D, through the PCU, will be responsible for keeping the program's files and records in an appropriate physical space. For the preparation and filing of program reports, the agreed upon formats or procedures described in the program Operations Manual will be used.

V. FINANCIAL MANAGEMENT

A. Programming and budget

5.1 CELESC-D is responsible for formulating and programming the program's annual budget through the DEF, which is responsible for the management of the company's financial resources, and for the provision, control, and administration of the financial resources needed to achieve the objectives established in its strategic plan. No problems affecting the program's execution are anticipated with respect to budgetary management, the local counterpart contribution, or system delays.

B. Accounting and information systems

5.2 The financial administration system used by CELESC-D is SAP [Supplier Relationship Management]. Through this system, the DEF manages all procedures related to the company's bidding, procurement, and payment processes. The system operates as the basis for maintaining accounts in the company and for preparing financial statements. It is also used to generate different administrative, financial, and procurement reports.

5.3 Currently, the SAP information system does not automatically generate the records and reports required by the Bank. CELESC-D is in the process of analyzing the system's functionalities with respect to these reports. Within six months after the loan contract is signed, the company plans to make necessary adjustments to the SAP that will enable it to perform the program's accounting and automatically generate the respective financial reports.

5.4 Accounting transactions are recorded in the contract currency (U.S. dollar), on a cash basis and in accordance with the International Financial Reporting Standards. The required financial reports are: (i) the Financial Execution Plan up to 180 days following the request for an advance of funds; (ii) the program's annual audited

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[4] The inspection verifies the existence of the procurement, leaving the verification of quality and compliance with specifications to the sector specialist.

[5] See Guidelines for Financial Management of IDB-financed Projects (document OP-273-6) Annex I, Application of the Principles and Requirements of Financial Management, requirement 4, Financial Supervision.

financial statements, as stipulated in Article 7.03(a) of the General Conditions of the Loan Contract; and (iii) other reports as required by the fiduciary specialists.

C. Disbursements and cash flow

5.5 The program's resources will be disbursed to an account designated by CELESC-D, to be used exclusively for program execution.

D. Internal control and internal audit

5.6 The Bureau of Planning and Internal Control is responsible for internal audit activities and for reporting its findings to the company's chief executive officer and board or executive directors. The internal control procedures are considered robust and adequate for supervising program execution.

E. External control and reports

5.7 CELESC is subject to the financial disclosure requirements established for companies listed on Brazil's stock exchange. Accordingly, each year CELESC-D submits financial reports audited by an independent audit firm, which are part of the CELESC Group's consolidated financial statements. CELESC-D's audited financial statements and quarterly financial results are available on its website.

5.8 Under the current constitutional framework, the Audit Court of the State of Santa Catarina and the Federal Government Audit Court are also empowered to perform audits of CELESC-D.

5.9 In this context, it is recommended that an independent audit firm conduct the external audit of the program. That firm should be eligible in the view of the Bank in accordance with current financial management policies and guidelines.

F. Financial supervision plan[6]

5.10 The initial financial supervision plan arose from the evaluations of risk and fiduciary capacity conducted on the basis of the on-site and desk reviews envisaged for the program, including the scope of operational, financial and accounting, compliance and legal actions, and the frequency thereof and the party responsible for them.

5.11 In addition to the reports required for processing disbursements and annual audits, a financial plan will be required for the program's financial supervision.

G. Execution mechanism

5.12 The details on program execution are found in the Proposal for Operation Development and the draft program Operations Manual.

H. Other financial management agreements and requirements

5.13 Not applicable.

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[6] See Guidelines for Financial Management of IDB-financed Projects (document OP-273-6) Annex I, Application of the Principles and Requirements of Financial Management, requirement 4, Financial Supervision.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/17

Brazil. Loan ____/OC-BR to Centrais Elétricas de Santa Catarina – Distribuição (Celesc-D)
CELESC-D Energy Infrastructure Investment Program

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 Centrais Elétricas de Santa Catarina – Distribuição (Celesc-D), as Borrower, and with the Federative Republic of Brazil and the State of Santa Catarina, as Guarantors, for the purpose of granting the former a financing to cooperate in the execution of the CELESC-D Energy Infrastructure Investment Program. Such financing will be for an amount of up to US$276,051,000 from the Ordinary Capital resources 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 ___ _____ 2017)

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