



Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)

Appraisal Stage | Date Prepared/Updated: 04-Apr-2018 | Report No: PIDISDSA23682



BASIC INFORMATION

A. Basic Project Data

Country Brazil	Project ID P162455	Project Name Financial Instruments for Brazil Energy Efficient Cities - FinBRAZEEC	Parent Project ID (if any)
Region LATIN AMERICA AND CARIBBEAN	Estimated Appraisal Date 09-Apr-2018	Estimated Board Date 29-May-2018	Practice Area (Lead) Energy & Extractives
Financing Instrument Investment Project Financing	Borrower(s) Caixa Economica Federal	Implementing Agency Caixa Economica Federal	

Proposed Development Objective(s)

The Project Development Objective is to unlock private financing for urban energy efficiency projects in Brazil by reducing the credit risk and enhancing the technical quality of Efficient Street Lighting and Industrial Energy Efficiency projects.

Components

Financing Facility for Efficient Street Lighting and Industrial Energy Efficiency
Technical Assistance

Financing (in USD Million)

Financing Source	Amount
Clean Technology Fund	20.00
Energy Sector Management Assistance Program	0.50
Green Climate Fund	195.00
GLOBAL INFRASTRUCTURE FACILITY	5.50
International Bank for Reconstruction and Development	200.00
Borrowing Country's Fin. Intermediary/ies	180.00
Sub-borrower(s)	328.00
LOCAL: BENEFICIARIES	400.00
Total Project Cost	1,329.00

Environmental Assessment Category



F - Financial Intermediary Assessment

Decision

The review did authorize the preparation to continue

Other Decision (as needed)

B. Introduction and Context

Country Context

- 1. After a decade of rapid growth and decreases in income inequality, in 2015 Brazil's economy fell into deep recession.** While external factors triggered the slowdown, an expansionary policy response and rising domestic political uncertainty led to a loss of confidence and a sharp drop in investment. The *Lava-Jato* investigation and the divisive impeachment process drove confidence to record low levels in early 2016, leading to a significant reduction in foreign investment.
- 2. The recession has constrained investment across the economy, and political instability continues to hinder private sector investment.** A slow recovery materialized in 2017 with 1 percent growth and is expected to strengthen moderately in 2018 reaching 1.8 percent. However, private investment is expected to remain weak, in part due to political uncertainties in an election year and continued turmoil associated with new, high-level corruption allegations.
- 3. There are significant needs for long-term financing of infrastructure in Brazil.** Brazil remains below countries of similar income in the stock of physical infrastructure and performs badly in the perception of the quality of infrastructure services. Despite access to infrastructure has increased over the past decade mostly due to privatization programs of the 1990s and the adoption of the public programs to extend coverage in remote areas, road and infrastructure stocks have barely grown since 1990s and generation capacity growth has been very slow compared to countries of similar income per capita.
- 4. Private sector financing for infrastructure in Brazil remains modest.** The inter-bank rate in Brazil (SELIC) exceeds similar rates prevailing in the rest of the world; as a result, banks and pension funds invest massively in Brazilian Treasuries and have negligible participation in financing long-term assets or infrastructure. In addition, commercial banks charge high mark-ups, and real interest rates of commercial loans in Brazil are amongst the highest in the world (e.g., above 20% for corporate loans). Public banks have been the most important financiers of infrastructure and industrial projects in the country in recent decades, offering subsidized funding, typically under a corporate finance approach. These banks have been providing funding indexed to the Long-term Interest Rate (Taxa de Juros de Longo Prazo TJLP)¹, which is far lower than regular rates from commercial banks. The Brazilian National Development Bank's (BNDES) disbursements in infrastructure increased significantly after 2003, going from US\$938 million² to US\$11.2 billion in 2014. In 2014,

¹ The TJLP depends on historical inflation, expected inflation, and country risk premium. The methodology is updated every year by the BNDES. For details, see (in Portuguese):

http://www.bndes.gov.br/SiteBNDES/export/sites/default/bndes_pt/Galerias/Arquivos/produtos/download/tjlp.pdf.



BNDES and Caixa Economica Federal (CEF) together accounted for 62 percent of the total investments in infrastructure in Brazil.

5. **The role of the state banks needs to be reoriented, and the government has recently embarked on significant reforms.** After the onset of the macro-fiscal crisis in 2014, the National Treasury is no longer able provide the same levels of low-cost funding to the public banks, and their disbursements have fallen drastically. To adjust to these constraints, BNDES has implemented new procedures, restricting access to TJLP to specific sectors and requiring co-financing for its investments. Moreover, Congress recently approved a reform the TJLP, replacing it with the TLP³, which is linked to long-term market rates. As the TJLP is gradually phased out BNDES's long-term lending rates will converge towards the market rate on inflation-linked government bonds.

6. **Attracting commercial financing is critical to fulfill Brazil's infrastructure investments needs.** Brazil has extensive domestic capital markets that could be mobilized for long-term infrastructure financing, which would reduce the burden on public coffers and avoid the need to mobilize foreign investment, with the associated foreign exchange risks. The recent fall of interest rates on government bonds is pushing fund managers and private banks to find new alternatives, including infrastructure assets; however, the scope of investments has remained very limited to date, concentrating predominately on refinancing projects. New and innovative approaches are needed to increase private sector investment through a project finance approach.

Sectoral and Institutional Context

7. **Brazil is one of the largest and most developed power markets in Latin America.** With total electricity demand of approximately 616 Terawatt hours (TWh) per year (94 percent of which was supplied by domestic production), Brazil is the largest power market in the region and 8th largest electricity generator in the world with an installed capacity of 156.34 GW. The country has achieved huge gains in energy access in recent decades – access rate reached 99.7 percent in 2017. Roughly 41 percent of demand is driven by the 40 million residential customers, 30 percent by industrial users and 28 percent by commercial consumers. In addition, Brazil has a relatively “clean” electricity matrix, but it is highly dependent on hydrology. Brazil has the third largest hydroelectricity installed capacity in the world⁴, but is facing a growing challenge to meet energy demand and comply with environmental protection requirements. Adapting hydropower to stringent environmental rules in the Amazon region has meant forgoing multi-years reservoirs that would firm up the very variable river flows: out of 20,000MW planned to enter in operation between 2013 and 2018, only one percent (200MW) have reservoirs; the rest are run-off river. Hydro storage capacity fell from 6.3 months to 4.7 months in the last 10 years and may fall further.

8. **A crisis hit the energy sector in 2014, demonstrating the vulnerability of the Brazilian energy sector.** A severe drought began in 2012, leading to a considerable increase of the use of costly thermal plants and a spike in the cost of electricity. For example, the spot market price for electricity increased approximately 700 percent from July 2013 – March 2014. While operational costs of the energy system skyrocketed, tariffs were initially maintained at the same level, generating a huge cash shortfall and considerable financial stress on the sector. In contrast to the approach taken to the 2001 energy crisis – in which the government implemented a very successful energy rationing mechanism – no demand-side actions were implemented

³ The TLP use the Government's funding costs as the new index and will allow for a predictable real long term interest rate for firms making investment decisions.

⁴ At the end of 2016 hydroelectricity represented 68 percent of the electricity supply, followed by natural gas (9.1 percent) and biomass (8.3 percent).



during the 2014 power crisis; thus, the crisis was addressed by continuous and costly dispatch of thermal generation. In 2015, a seasonal pass-through was added to the tariff structure to reflect generation cost increases, and the financial losses have progressively been transferred to the customers, resulting in a significant tariff hike.

9. **In order to improve the resilience of the energy sector, Brazil has implemented a number of innovative electricity sector policies over the last years**, including successful renewable energy auctions. The latest Electricity Generation Expansion Plan edition, PDEE 2023, anticipates renewables (including large hydro) will represent 86.1% of the electricity generation matrix by 2023 up from 79.3% in 2013, with wind power accounting for 8.1% and expanding to 20 GW. The country is also currently in the middle of an important electricity reform that includes the privatization of distribution companies and contemplates remuneration for capacity adequacy.

10. **Brazil has also set ambitious goals for the energy sector under its Nationally Determined Contributions (NDCs)** made at COP-21. Brazil has committed to a reduction in national GHG emissions by 37 percent below 2005 levels in 2025 (with intention to reduce its emissions to 43 percent below 2005 levels in 2030). In the energy sector, it seeks to achieve 45% of renewable energy sources in energy mix by 2030, and 10% efficiency gains in the energy sector by 2030 (approx. 105 TWh saved by 2030). To meet its NDC targets for energy efficiency, supply-side reforms are not sufficient, nor would they be cost-effective on their own: demand-side management interventions must play a larger role in managing the Brazilian energy system.

11. **However, demand-side energy efficiency initiatives in Brazil have been limited to date.** Brazil has two primary public financing lines for energy efficiency projects – the National Energy Conservation Program (PROCEL) and the Energy Efficiency Program (PEE). These EE programs have achieved some results in a few target areas, but their budgets are limited and their overall cost-effectiveness is still a point of concern. Regarding the demand of fuels, the only program implemented to date is the National Program for the Rationalization of the Use of Petroleum Products and Gas (CONPET), which depends on approximately US\$3 million in Petrobras resources and focuses on measures like labeling and educational programs in schools.

12. **Given high urbanization rates, urban energy efficiency improvements will be critical for Brazil.** However, the barriers to invest in urban EE are often even higher than typical EE projects, such as higher transaction costs, municipal credit risk, among others. The World Bank team embarked on a strong engagement on energy efficiency with Brazilian cities under the Brazil Energy Efficient Cities (BRAZEEC) project in a first attempt to identify concrete opportunities to reduce energy consumption and GHG emissions in the urban context in Brazil. BRAZEEC (P150942) was a cross-sectoral US\$1.3 million technical support program funded by the ESMAP that examined several EE and GHG reduction opportunities, including street lighting, industrial EE, public buildings, and transport.

13. **Public Street Lighting and Urban Industry have been identified as key sectors for urban energy efficiency investments in Brazil**, given the relative maturity of their business models compared to other sectors, high potential impact, scalability the near-term, and ability to attract private sector financing if risks were properly be mitigated.

14. **The public street lighting sector in Brazil represents a significant portion of energy consumption and can attract private sector investment through PPPs; however, investment in this sector has been slow to take off.** The World Bank estimates that Brazil has more than 18.5 million points of light; public street lighting represents about 3-4 percent of total electricity consumption in Brazil and close to 5 percent of peak



consumption⁵. A number of factors have come together to make public street lighting EE investments in street lighting bankable in Brazil; including decreasing technology costs, tariff increases, and a ring-fenced source of revenue in municipal budgets. Nonetheless, investments in EE public street lighting have been slow to take off, due to *inter alia* constrained municipal balance sheets and strict borrowing limits, municipal credit risk, high interest rates and hedging costs, and low municipal capacity to structure PPPs.

15. **The potential for investments in Industrial Energy Efficiency in Brazil is enormous, but largely untapped.** A study by the American Council for an Energy Efficient Economy analyzed the performance of the 16 largest economies; Brazil was ranked last (#16) on industrial energy efficiency. Studies by the large Brazilian industrial associations (CNI and ABRACE) demonstrate the high potential for industrial EE and GHG emissions reduction in fossil fuel-based thermal processes, showing potential savings range from 8 to 40 percent of current consumption, depending on the sector. More than 150 projects with high-return and short payback periods have already been identified among large industrial energy users. However, industries are not investing in these projects at scale, due to competing priorities for use of space on corporate balance sheets for capital expenditures, lack of dedicated public programs, amongst others.

16. **Analysis of the urban EE investments in the street lighting and industrial sectors revealed a number of important similarities in the barriers to attract private sector financing at scale,** including: (i) lack of off-balance sheet financing mechanisms in the market in order to overcome the high cost of investment and lack of incentives for cities and industries to finance the cost on their own balance sheet; (ii) lack of financing available, due to the limited funding available in public programs and the lack of interest of the private sector to invest without credit enhancement mechanisms; and (iii) high transaction costs associated with investments in these sectors, due to the wide variety of projects, relatively small project size, and lack of capacity to prepare high quality projects. More details regarding the public street lighting and industrial sectors are provided in Annex 1 (Detailed context and project Background), Annex 6 (Technical Annex) and Annex 12 (Market Sounding).

17. **FinBRAZEEC aims to unlock financing for these sectors by combining existing financial products in an innovative way** to catalyze limited recourse finance in Brazil. Working with CEF as a financial intermediary, FinBRAZEEC will leverage public funds, including climate finance, to attract private sector financing to EE investments in these sectors. CEF will blend public and private funds to lend to private sector sponsors of EE investments, and will also offer credit enhancement mechanisms to de-risk the investments, thereby creating a new asset class for EE investments and attracting new private sector investors.

18. **FinBRAZEEC is expected to serve as a demonstration effect for leveraging private sector capital for clean energy investments in Brazil.** Once the model is proven, can be replicated in other sectors in Brazil and beyond. Moreover, it will provide an example of how Brazil's now scarce public-sector resources, particularly those of the three public banks, can be used to leverage private sector capital for infrastructure investments. This will enable a sustainable infrastructure financing model with sufficient levels of investment to enable Brazil to meet its clean energy goals set out under its NDC.

⁵ "Lighting Brazilian Cities," Meyer et al. Publication forthcoming early 2018.



C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

The Project Development Objective is to unlock private financing for urban energy efficiency projects in Brazil by reducing the credit risk and enhancing the technical quality of Efficient Street Lighting and Industrial Energy Efficiency projects.

Key Results

The key project-level results indicators are: (a) energy savings, in GWh per year, which will measure improved efficiency of municipalities and industries; (b) greenhouse gas emissions avoided, measured in MTCO_{2e}; and, (c) volume of private finance leveraged for energy efficiency projects, in US\$ millions.

D. Project Description

A. Project Components

19. **The project has two Components: (i) Component 1: An EE Facility⁶ for Efficient Public Street Lighting (ESL) and urban Industrial Energy Efficiency (IEE) subprojects**, comprised of the following elements: (a) a loan syndication among CEF and commercial banks/investors with two windows – one for ESL and one for IEE; (b) a Guarantee Fund managed by CEF; and **(ii) Component 2: Technical assistance component to help increase CEF’s capacity to implement the project**, support the startup costs of the EE Facility, and help develop a pipeline of high quality subprojects, reducing the technical risk of the transactions.

20. **Component 1: EE Facility for ESL and IEE projects**, consisting of a GCF Loan of \$186 million; a \$5 million GCF non-reimbursable grant; a US\$ 20 million CTF contingent recovery grant; a \$180 million contributed by CEF’s own account; and a \$200 million IBRD IPF contingent Loan. Component 1 is structured in two subcomponents:

a. **Subcomponent 1.1: A loan syndication, led by CEF, to provide sub-loans to private companies for ESL and IEE subprojects.** CEF will blend \$180 million from its own account with the \$186 million GCF concessional loan. It will lead a syndication⁷ with domestic private banks to leverage

⁶ The term “EE Facility” is used in this document to refer to the set of financial arrangements, accounts and funds that will allow the provision of loans from CEF and other domestic banks to the private sector sponsors of the EE investments in street lighting and industry, as well as the associated credit enhancement products.

⁷ Market soundings have been conducted with domestic financiers to compare syndication to other options, such as the creation of a fund. Commercial banks confirmed they commonly use syndication to aggregate debt for infrastructure investments, and they feel comfortable with CEF acting as the syndication lead. These banks indicated they would prefer to enter into parallel but separate financial contracts with the sub-projects (borrowers) for their share of debt, giving them full control of their credit due diligence (as opposed to delegating these decisions to a fund manager), and avoiding “comingling risk” present if another entity is responsible for collecting and distributing the payments among the syndicated banks.



approximately \$400 million from private debt. CEF and the syndicated lenders will provide parallel loans to (i) Special Purpose Vehicles (SPVs) established to implement ESL projects, and (ii) ESCOs and other aggregators for IEE investments. The total estimated value of the debt of the EE Facility is \$766 million. It is expected that the sub-projects will be financed with a 70:30 debt to equity ratio, and thus the \$766 of debt will mobilize a total of \$328 million in sponsor equity, for a total value of sub-project investment of \$1,096 million. Additional investments from IFC (in the form of a syndicated loan or mezzanine capital) are possible.

b. The sub-loans will be divided in two separate windows: Window 1 (sub-loan to Efficient Municipal Street Lighting projects, ESL) and Window 2 (sub-loans to Industrial Energy Efficiency projects, IEE), described in more detail in Annex 1.

c. A framework inter-creditor agreement will establish the terms of the relationship between the syndicated lenders, such as the responsibilities of CEF as the syndication lead, the indicative expected debt contribution by each financial institution (as a percentage of the total), the share of concessional funds to be provided by CEF, the terms (within an established range) of each lender depending on the evaluated credit risk, provisions in case of default, arbitration mechanisms, among others. A committee comprised of all syndicated lenders will review projects, and each lender will be allowed to decline their participation in specific sub-loans based on their own credit risk evaluation or any other justified causes. The private banks that decide to enter in a syndication agreement for a specific project will be eligible to apply for credit enhancement products provided by a Guarantee Fund to be set up and managed by CEF (see Subcomponent 1.2).

d. CEF will charge a fee for the management of the concessional funds (GCF and CTF). As the syndicate lead, CEF will also charge a fee and be expected to identify and originate the sub-projects in ESL and IEE, support project structuring, perform a preliminary credit risk assessment⁸ and monitor an evaluate sub-projects performance on an ongoing basis.

e. Subcomponent 1.2: A Guarantee Fund will offer credit risk enhancement products to the commercial lenders and sub-project sponsors. The Guarantee Fund (GF) may offer several credit enhancement products, including:

i. **Payment guarantees for commercial lenders:** will cover payment arrears (i.e., loan payment delays) from the EE Facility borrowers (ESL SPVs, IEE aggregators). This will reduce private banks' exposure to short-term liquidity issues of the sub-projects. If and when the liquidity issues are resolved and the private banks collect the payment in arrears, the GF will be reimbursed for the payment made to the private banks.

ii. **Partial credit risk guarantees for commercial lenders** to cover up to 50% of losses. In the event of sub-project insolvency leading to contract termination, the GF will cover up to half of the value of the remaining loan amount. Corresponding amounts eventually recovered from insolvent projects will be used to reimburse the Guarantee Fund; and,

⁸ CEF may delegate part of those roles to a third-party selected competitively (i.e. fund management, pipeline identification) where the third-party has a competitive advantage.



iii. **Payment guarantees for sub-project sponsors**, to cover payment delays from municipalities to SPVs or from industries to the IEE financial aggregator (ESCOs, others). If and when the liquidity issues are resolved, the GF will be reimbursed for the payment made to the sub-project sponsors.

f. The GF will be a private fund, with a separate legal personality from CEF, and will be regulated by specific guarantee fund statutes⁹. CEF will establish the GF and act as the fund manager¹⁰.

g. **CEF will provide equity and potentially debt to the GF** through legal agreements to be signed between CEF and the GF. The GF will have at least one additional equity investor, as required by Brazilian statutes, likely to be one or more of the commercial banks that will purchase a guarantee. For its contribution to the GF, CEF will have access to CTF contingent recovery grant (\$20 million) and GCF grant (\$5 million) funds, as well as the IBRD contingent loan (\$200 million), as required.

h. The GF will receive an initial capitalization by CEF and the other equity investor(s). After the first disbursement, subsequent disbursements to the Guarantee Fund will be contingent to certain events (such as insufficient level of capitalization due to payouts associated with sub-loan defaults, increased guarantee demand by banks, or both). If the grant funding is fully depleted, CEF can call on the IPF contingent loan to replenish the fund.

i. As described above, if and when defaulted payments from the sub-loans are recovered, the Guarantee Fund will be replenished by the recovered amounts. Thus, the guarantee fund will operate as a revolving fund. The GF will remunerate CEF and the other equity investor(s), in accordance with the legal agreements signed between the GF parties.

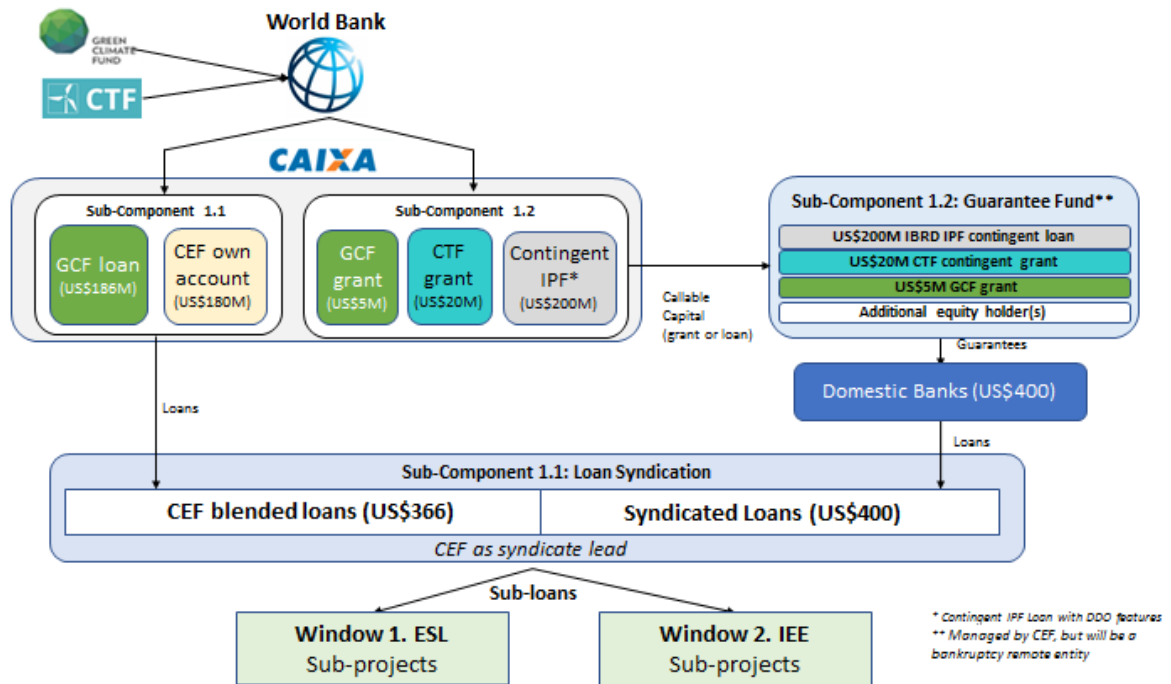
21. The structure of the EE facility, including the loan syndication and the GF, is shown in Figure 1 below:

⁹ This approach was selected compared to CEF offering guarantees directly because the capital allocation requirements for offering via a Guarantee Fund will be less burdensome to CEF.

¹⁰ CEF has managed several guarantee funds and the governance rules and statutes of those funds could be used as reference to structure FinBRAZEEC guarantee fund.



Figure 1: Indicative FinBRAZEEC structure: Component 1



22. **Component 2: Technical Assistance** consisting of GCF US\$ 4 million Recipient Executed Loan, approximately US\$5 million GIF recipient executed loans, US\$1 million Bank executed Loans provided by GIF and ESMAP, and potentially funds provided by TCAF. The technical assistance component of this project will support essential technical research, capacity building for the departments of CEF involved, and early operational costs. In the case of IEE, these funds will be used to support technical studies and operational costs during the initial labor- and investment- intensive months of operation, before revenues are sufficient to support these functions. In the case of street lighting, the technical assistance funding will be used to support cities’ preparation of high-quality PPP sub-projects.

a. **The non-reimbursable US\$4 million GCF grant will be used to support the remaining work required to successfully implement the facility and ensure a strong pipeline of projects from both sectors.** This will include the costs associated with structuring and operationalizing the facility, confirming the portfolio of projects for the IEE window, structuring the off-balance sheet vehicle for IEE investments, finalizing the toolkit for public street lighting PPPs and additional market studies. A detailed procurement plan and procurement strategy for the technical assistance funded with recipient executed GCF funds are included in Annex 9 and 10.

b. **Bank executed funds.** To date, the team has already secured US\$0.2 million from ESMAP and US\$0.5 million from the Global Infrastructure Facility (GIF) in the form of Bank executed trust funds. Energy Sector Management Assistance Program (ESMAP) funds are already being used to



support technical work that is informing the design/structure of the facility. The GIF resources already secured are in the form of a project definition grant (PDA), with the objective of identifying cities that are strong candidates to structure a PPP for public street lighting, with the ultimate objective of becoming the initial pipeline of projects requesting financing from the FinBRAZEEC EE facility. More specifically, GIF resources are being used to support work co-led by the World Bank and CEF to (i) conduct pre-feasibility studies on a short-list of cities interested in pursuing a PPP to modernize their public street lighting systems, and (ii) complete the first stage of preparing a toolkit for PPP street lighting in Brazil. Ultimately, this work will identify approximately 10 cities from the current long-list that are strong candidates to move to the full feasibility / PPP structuring phase. More details about the cities being evaluated and the screening methodology are included in Annex 11

c. **Additional financing from GIF may be forthcoming (estimated at \$5 million) via the GIF’s Project Preparation and Structuring window resources (PPSA)**, resources that are reimbursable upon successful PPP signature. These funds will cover the upfront costs of PPP structuring, including feasibility studies, transaction advisory services and procurement. These funds could be implemented by CEF in coordination with the World Bank and potentially IFC. This reimbursable grant provided by GIF is expected to be reimbursed through the success fees charged upon financial closure of the PPP. The details of how the PPSA will be structured are still being discussed with GIF, CEF and IFC.

23. A summary of the financing sources and uses for FinBRAZEEC can be found in Table 1 below.

Table 1: Summary of sources and uses of funds

Project Components	Project cost	GCF Loans and grants	IBRD IPF Loan	CTF contingent Grant	CEF own account	GIF PPSA	Bank Executed (ESMAP, GIF)	Commercial Lenders
Component 1: EE Financing Facility	991	191	200	20	180	0	0	400
<i>Subcomponent 1.1. Financial Syndication to provide sub-loan*s</i>	766	186			180			400
<i>Subcomponent 1.2. Guarantee Fund</i>	225	5	200	20				
Component 2: Technical Assistance	10	4	0			5	1	0
Equity	328							328
Total Project Costs	1329	195	200	20	180	5	1	728
Front End Fees	0	0	0	0	0	0	0	0
Total Financing Required	1329	195	200	20	180	5	1	728

** This is the expected amount of debt that the facility is expected to raise. This is conservative given the high perceived risk.*

24. **Management of credit risk.** The first line of defense in mitigating risk of the facility will be to ensure a strong pipeline of high-quality sub-projects that will borrow from the facility, as well as strong capacity of CEF to conduct the due diligence of these projects.



25. **In addition, the EE Facility will require that certain risk-mitigation structures be in place for the sub-projects.** In the case of public street lighting, the lending agreements will include requirements for the borrowers to implement mechanisms to reduce the risk of payment defaults, for example through the implementation of Debt Service Reserve Accounts (DSRAs), Letters of Credit (LoCs), step-in rights to the concession, recourse to the project equity, among others. In the case of industrial EE, loans are more exposed to credit risk from industrial companies, since there is not a cash flow based on ex-post energy savings that can be ring fenced (the role played by COSIP in public street lighting). Lending agreements between CEF and industries (directly or through an intermediary fund) will include a very thorough due diligence and some traditional credit enhancement mechanisms at sub-project level such as letters of credit and the ability to remove the equipment from the customer's premises.

26. **Management of Foreign exchange (FX) risk.** The EE Facility will make loans denominated in BRL. The CEF and private lender loans will be denominated in BRL. However, the contingent IBRD loan and the GCF loan, as well as the contingent grants provided by GIF and CTF are denominated in US\$. To limit the FX risk associated with the IBRD and GCF loans, CEF has the option to request the World Bank to perform a currency swap on its behalf upon disbursement of these loans. The IBRD will execute a swap transaction with a financial market counterparty. The BRL swap market is liquid at shorter and medium-term maturities (up to 10 years); beyond 10 years, a conversion can be performed on a case-by-case basis. In case a full-maturity conversion is not possible or is too expensive, a partial maturity conversion can be performed.

27. **The General Conditions for IBRD Investment Project Financing allow for interest rate and currency conversions of IBRD loans¹¹.** Currency conversions are available both in major hard currencies and selected local currencies with more liquid swap markets (currently approved for 14 local currencies including BRL). At the time of disbursement from the contingent IBRD loan, the borrower can submit a request for conversion form, and IBRD loan amounts will be converted from USD to BRL at prevailing market rates (IBRD executes the swap with a market counterpart and passes resources on to borrower). Given that these conversion options are stipulated in the General Conditions and the loan agreement, no additional legal documentation is necessary.¹²

28. **To further mitigate FX risk, hedging non-IBRD resources (GCF, CTF and GIF funds) is also available through a non-IBRD hedge.** The cross-currency swap will be documented outside of the loan agreement and therefore is subject to signing a Master Derivatives Agreement (MDA). Signing a sub-national MDA requires a counter-guarantee from the central government. Similar to an IBRD conversion, IBRD will execute the swap with a market counterpart and pass on the resources to the borrower, stating the new BRL interest rate. Conversion of IBRD resources has no implication for the country exposure limit, while a non-IBRD hedge does, equivalent to the higher of 10% of notional or the actual MTM.¹³

29. **Market Sounding.** In close coordination with CEF, the Bank team has conducted a series of market sounding activities to confirm the relevance and adjust the design of the financing structure and the de-risking mechanism as well as to validate and adjust the business models proposed for ESL and IEE. The audience consulted included commercial banks (Santander, CEF, Bradesco, Itau-Unibanco, BTG-Pactual), investors (BNDESPAR, Vinci Partners), public development financial institutions (BNDES, CEF, Banco do Brasil,

¹¹ <http://treasury.worldbank.org/bdm/htm/documents/GeneralConditionsIBRDIPF2017.pdf>

¹² *Conversion guidelines, fees and forms. Transaction fee of 0.06%.*

http://treasury.worldbank.org/bdm/htm/Loan_Conversion_Options.html

¹³ *Hedging guidelines, fees and forms. Transaction fee of 0.02%.*

http://treasury.worldbank.org/bdm/htm/hedging_products.html



Desenvolve-SP), rating agencies (Moody's), fiscal and legal advisers (Tozzini Freire, Machado Meyer), LED manufacturers and potential SL concessionaires (Philips, GE, several DISCOs), municipalities and associations of municipalities (FNP, 15+ municipalities), ESCOs and EE experts (ABESCO, MGM, Brasilip, LIGHT Esco, CPFL Energia, BH Efficientia, CEPEL etc.), industries and class representatives (ABRACE, CNI, CSN, Vallourec) and central government entities (Private Public Investment Secretary, Ministry of Mines and Energy, EPE, ANEEL, Ministry of Finance, Ministries of Planning, Ministry of Industry and Commerce, National Designated Authority for the GCF). The Bank team also liaised regularly with the local IFC team. These consultations consisted in one-to-one discussions and two events focusing on street lighting, including a conference attended by more than 200 participants in São Paulo and a joint event with the Frente Nacional dos Prefeitos (FNP), and one workshop on IEE co-organized with CNI and ABRACE. One more conference on IEE co-organized with CEF, ABRACE, CNI, Santander and BNDES will take place in early March 2018.

30. **Regarding the financial structure**, the market sounding confirmed the market preference for a syndication of banks, led by CEF over a centralization of sub-loans and helped identified the main elements that will need to be agreed upon under an inter-creditors agreement. Regarding the de-risking mechanism, the market response and the analysis of CEF capital position confirmed the need for CEF to establishing a “bankruptcy remote” guarantee fund, which will offer guarantee products to commercial lenders to cover both insolvency of sub-project (confirming the need for a coverage around 50%) and liquidity risk. All commercial banks consulted expressed their interest in participating and further work with WB and CEF to precise the terms and impact on competitiveness of sub-loans.

31. **With regard the PPP-based business model for LED-based street lighting modernization**, the consultation of multiple stakeholders confirmed its technical and economic feasibility and help define the legal and contractual arrangements required to optimize the distribution of risks and thus the bankability of projects. These consultations are now moving to city-specific pre-feasibility studies conducted together with CEF with GIF financial support.

Regarding the off-balance sheet business model for aggregating IEE sub-projects, the market sounding confirmed the interest of industries for such off-balance solution to overcoming the debt capacity issue that prevent these projects to materialize. Industries confirmed the existence of hundreds of already identified sub-projects. Several banks and potential operators also confirmed their interest in financing and investing in such off-balance vehicle and different structures were discussed to comply with the new accountancy regulation (IFRS16), optimizing the allocation of risks and ensuring the bankability of the IEE Sub-projects aggregator. The consulted stakeholders highlighted the need for further refining the legal, regulatory and fiscal features of the proposed mechanism and for obtaining endorsement of reputed auditors in view of the new IFRS16 norm on operational leasing to be adopted by large industries in the coming years. More detailed information can be found in Annex 12 of this project appraisal document.

E. Implementation

Institutional and Implementation Arrangements

32. **The implementing agency CEF, as a financial intermediary, has the main function of catalyzing public and private investment in ESL and IEE.** CEF is a financial institution constituted by Decree-Law 759/1969,



in the form of a public company and linked to the Ministry of Finance. As part of the national financial system, it assists in the execution of the federal government's credit policy, and is subject to rules and decisions of the federal government competent bodies. CEF implements its main banking activities through the collection and application of resources in commercial, foreign exchange, real estate and rural operations, in the provision of banking services, including the administration of investment funds and portfolios, as well as to implement social public programs. In addition to the intermediation of securities, debit and credit cards, insurance, private pension, capitalization and administration of consortia through equity interests in CEF Seguridade and CEF Participações S/A (CEFPAR).

33. **Overall responsibility for the EE facility lies with CEF.** CEF will be responsible for identifying, appraising, analyzing credit risks, approving, and investing (or providing credit enhancements) to a pipeline of EE sub-projects in the industrial and public street lighting sectors. CEF may delegate part of those roles to a third-party selected competitively (i.e. Fund management, pipeline identification) where the third-party has a competitive advantage. CEF will select an independent external auditor to conduct the annual project audit; this will be financed from the ta component. The CEF has the main responsibility for signing the contract and coordinating the auditor's work.

34. **CEF will have full responsibility for the EE lending process and approvals, following the agreed om, and will bear the associated credit risks.** CEF will form a project implementation unit (PIU) with dedicated teams supported by technical, environmental and social and procurement experts. The project implementation unit will implement the lending and IBRD contingent loan disbursement activities and act as CEF focal point to interact with the world bank and other stakeholders as needed.

35. **CEF will supervise/monitor all loans to ensure they are implemented per Brazilian and World Bank requirements and provide periodic reports,** including fiduciary and safeguards reports to the ministry of finance and the bank. Independent auditors will be selected to conduct annual project audit on the performance of CEF.

36. **To accommodate the readiness of sub-projects, the Project may be implemented in a phased approach.** The ESL sub-projects are expected to be implemented earlier than the IEE subproject.

37. **To implement the project, a detailed Operations Manual will be developed before the project effectiveness,** that will set out the principles, operational policies and procedures, financial management procedures, implementation of performance standards (Environmental and Social Management System), reporting, monitoring and supervision of sub-projects. The OM will be incorporated into the project agreements between the World Bank and CEF and will also include a Business and Implementation Plan for planning and implementing the Project. The OM will define the detailed eligibility criteria for subprojects, for example, the minimum energy savings to be achieved, and exclusions linked to world bank safeguards, such as exclusion of World Bank Category A sub-projects exclusion of projects with potential impact in international waterways. The Operations Manual will also focus on standardizing certain transaction documents in creating processing efficiencies and allow for speedier scale-up. The Operations Manual will have specific procedures for ESL and IEE sub-projects to accommodate the timing.

38. A key role for CEF will be to select sub-projects and beneficiaries based on pre-defined eligibility criteria and conduct detailed due diligence on technical, economic, environmental, financial feasibility and other project related assessments.

39. The project will be implemented over **fifteen** years, with an option to be extended if demand is higher.



Key arrangements at sub-project level

40. **In the case of street lighting, the concessionaire will be fully responsible for the design, procurement, installation, and maintenance of the system.** The municipality will monitor quality and make a monthly payment based on deemed savings and adjusted for the quality of service rendered. A key tripartite contractual agreement involving the utility, the municipality and the concessionaire should be signed. This operational agreement should specify the conditions for the delivery of electricity, including some basic technical specifications that may have an impact on the physical integrity of the equipment and the quality of lighting services provided by the concessionaire. The granting authority will monitor performance periodically and will adjust the required revenue as per the terms and conditions set forth in the concession agreement.

41. **In the case of industrial energy efficiency, the facility will be responsible for approving the project design.** The facility and the host company should agree on who will be responsible for the installation, operation and maintenance of the system. Typically, the installation will be carried out (or at least monitored) by plant engineers, the operation of the equipment by the host company, and maintenance will likely be outsourced to a third party mutually agreed between the host company and the EE facility.

42. **In the case of street lighting, the concession contracts set forth all terms and conditions which include the design, replacement, expansion and maintenance of the street lighting system.** Construction (i.e. replacement, expansion) will take place over a long period (e.g. 3-5 years). No additional contracts are necessary during this period. The concessionaire may, at its own discretion, buy insurance to backstop equipment failures not covered by the manufacturer's guarantee.

43. **In the case of industrial energy efficiency,** operation and maintenance contracts should be signed following the completion of the installation in the host company.

44. **Key contractual arrangements/ agreements.** The following contractual arrangements are expected to be required for the Project:

- a. Funded Activity Agreement (FAA) between GCF and IBRD: Providing for the \$186 million and the \$4 million grant for the start-up costs for the EE Facility and TA activities; and the \$5 million non-reimbursable grant for the capitalization of the EE Guarantee Fund, and all in accordance with the Accreditation Master Agreement (AMA) between the World Bank and GCF. The GCF loan will be in the form of a trust agreement, for the World Bank to provide the GCF Proceeds in the form of loan and grant to the Executing Entity (CEF).
- b. GCF Grant Agreement between IBRD and CEF: Providing for the downstream transfer of the funds to the CEF for the US\$ 9 million non-reimbursable grant that will contribute to Subcomponent 1.2 and Component 2 of the FinBRAZEEC project.
- c. GCF Loan Agreement between IBRD and CEF: Providing for the downstream transfer of the funds to the CEF for the US\$ 186 million loan that will contribute to Subcomponent 1.1 of the FinBRAZEEC project.



- d. CTF contingent Grant Agreement between IBRD and CEF: Providing for the downstream transfer of the funds to the CEF for the US\$20 million contingent grant that will contribute to Subcomponent 1.2 of the FinBRAZEEC project. The agreement should specify the conditions for disbursement and reimbursement.
- e. Implementation agreement between the CEF and the GoB: sets out the responsibilities and obligations of the government and the CEF in respect of the Project.
- f. IBRD IPF contingent loan (with deferred disbursement features) agreement between the World Bank the CEF as IPF loan beneficiary: defines the terms and conditions of the IBRD loan offered, including covered risks, amount and terms, disbursement conditions and payout procedures.
- g. If approved, the GIF contingent grant agreement between the World Bank and CEF to support Component 2, as explained in the roject description. The GIF funds will be reimbursed by the awarded SPVs upon financial closure of the ESL PPPs.
- h. Sub-loan agreements between CEF and street lighting SPVs, and between CEF and the ESCOS, aggregators, and companies for IEE): defines the terms and conditions of the sub-loans, and the reporting conditions by the borrowers with respect to CEF (an acceptance of conditions agreement will be defined in order to ensure adequate reporting to CEF that ultimately will allow the World Bank to obtain information to monitor the project indicators.
- i. If required, a subsidiary agreement between CEF and the Guarantee fund to be created an managed by CEF to establish the responsibilities of CEF as shareholder and management agent. In addition, the Fund governance rules should be determined and set prior to project effectiveness.

F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

The activities of the project will be located in Brazilian medium-size and large cities. These cities vary widely in terms administrative capacity for solving environmental and social problems and face, to a greater or lesser extent, a series of environmental challenges related to the low capacity for urban planning and management of the social and environmental impacts of disorderly growth. A major issue faced by the urban population in Brazil - and especially, the low-income families - refer to poor mobility and high rates of crime and violence. Improved street lighting - using more efficient devices - is supposed to contribute to enhance mobility and public safety as well as to reduce GHGs emissions, consequently, improving cities' environmental quality.



G. Environmental and Social Safeguards Specialists on the Team

Alberto Coelho Gomes Costa, Social Safeguards Specialist

Marcio Cerqueira Batitucci, Environmental Safeguards Specialist

SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	<p>World Bank’s Investment Project Financing may be used (a) to provide Bank Loans to eligible financial intermediaries to be used by them for loans and/or as equity in, final borrowers/beneficiaries for specific sub-projects; or (b) to provide Bank Guarantees to mobilize debt financing for eligible financial intermediaries to be used by them for loans and/or guarantees to, and/or as equity in, final borrowers/beneficiaries, for specific sub-projects. The Bank requires an assurance that Financial Intermediaries acting as on-lenders in Financial Intermediary Loans are viable institutions, having: (i) adequate profitability, capital, and portfolio quality, as confirmed by financial statements prepared and audited in accordance with accounting and auditing principles acceptable to the Bank; (ii) acceptable levels of loan collections; (iii) appropriate capacity, including staffing, for carrying out subproject appraisal (including environmental assessment) and for supervising subproject implementation; (iv) capacity to mobilize domestic resources; (v) adequate managerial autonomy and commercially oriented governance (particularly relevant when state-owned or state-controlled Financial Intermediaries are involved); and, (vi) appropriate prudential policies, administrative structure, and business procedures.</p> <p>When using the Borrower’s Systems to address environmental and social safeguard issues, the World Bank is responsible for appraising and supervising projects that use these systems, including supervision of the Financial Intermediary’s implementation practices, track record, and</p>



capacity, in a manner proportional to potential impacts and risks. The Bank can also explore with the Financial Intermediary the feasibility of establishing alternative monitoring arrangements for overseeing the implementation of the Project. Meanwhile, the Financial Intermediary is responsible for achieving and maintaining equivalence with the World Bank’s environmental and social safeguard policies as well as acceptable implementation practices, track record and capacity. The provisions required to achieve and maintain equivalence and acceptability with regards to environmental and social safeguard issues become part of the contractual obligations to the Bank and subject to Bank’s normal contractual remedies.

This Project's Development Objective is to unlock financing for low-carbon, energy efficiency sub-projects in Brazilian cities by improving their preparation, credit risk and assessment, in particular in the areas of public street lighting and urban industry. Additional sectors are considered for future development, namely public buildings and water and sanitation services.

The OP/BP 4.01, mandatory policy applies to all projects and is specifically related to the assessment of the State Owned Bank (Caixa) capacity.

Natural Habitats OP/BP 4.04	Yes	Since additional sectors are considered for future development, namely public buildings and water and sanitation services, and considering that locations and field conditions are not yet completely clear, this policy has been triggered.
Forests OP/BP 4.36	No	The Project will be executed in the urban areas. Therefore, no impacts on forests are expected.
Pest Management OP 4.09	Yes	Pest Management issues may be affected by any excavation and/or repair activities in the public street lighting and water and sanitation sectors, which justify further consideration. This policy is triggered preventively. The basic aim is to ensure that the use of pest control chemicals meet the risk standards established by the World Health Organization (Recommended Classification of Pesticides by Hazard and Guidelines to Classification [Geneva: WHO 1994-95]) which recommend the use of integrated management techniques.



Physical Cultural Resources OP/BP 4.11	Yes	Since additional sectors are considered for future development, namely public building and water sanitation services, and considering that locations and field conditions are not yet completely clear, the triggering of this policy was defined during appraisal - possible excavation and/or repair activities in the public street lighting and water and sanitation sectors justify that inclusion.
Indigenous Peoples OP/BP 4.10	No	The Project will be executed in urban areas in large cities. No interferences with indigenous peoples and lands are expected. In Brazil, Indigenous Peoples living in cities tend to be overspread all over many neighborhoods. A few exceptions are found in the Sao Paulo metropolitan area and in the city of Manaus.
Involuntary Resettlement OP/BP 4.12	No	Considering the Project's initial focus on street lightening and urban industrial sectors, no land acquisition would be initially required. However, it is under consideration the inclusion of activities related with energy efficiency in the water and sanitation sectors and the team needs to have more information during project preparation about the scope and nature of these activities before deciding on triggering or not this policy.
Safety of Dams OP/BP 4.37	No	Not applicable.
Projects on International Waterways OP/BP 7.50	No	Not applicable. None of the Project activities are expected to have any impacts on international waterways.
Projects in Disputed Areas OP/BP 7.60	No	Not applicable, because the activities financed by the Project are not located in disputed areas.

KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

A preliminary environmental and social diagnosis carried by the World Bank has identified the risks, benefits and general social and environmental impacts of project activities. The Project is not expected to have significant irreversible adverse impacts and risks. The outcomes of Project implementation indicate no negative impacts on environmental quality, environmental management or owners of rural properties.

All activities supported by the Project are expected to be classified as B an C (World Bank's classification), FI-2 and FI-3 (IFC's classification), Category B and C (The Equator Principles' classification), and a medium-level intermediation-I2 (Green Climate Fund's classification).



The following safeguards were triggered during appraisal: Environmental Assessment OP/BP 4.01, Natural Habitats (OP / BP 4.04), Integrated Pest Management (OP 4.09), and Physical and Cultural heritage (OP / BP 4.11).

The main risks identified refer to the works that will be needed to carry out the replacement of light bulbs in public street lighting and their final disposal. Temporary impacts on commercial activities due to works related to the replacement of lamp bulbs in street lighting activities could be considered, but they will be minor because they would be site-specific and of short duration. The assessment of risks and impacts concluded that the Brazilian regulatory framework on both solid waste management and workers health and safety is robust and fully aligned with ESHGs and environmental good practices.

Improving energy efficiency in industrial processes, street lighting and other areas where it can be deployed will bring significant benefits to urban centers and for the effort of adapting to climate change, that impacts more severely the Brazilian cities.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area: Evidences show that improvements in street lighting may also be beneficial to address major social challenges faced by Brazilian cities in areas related with public security, such as deterrence of gender-based violence, safe access to evening schools and increase women's participation in the job market.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.
Not applicable.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

The World Bank team carried-out an assessment of the Environmental and Social Risks Management System of the main financial intermediary (Caixa Economica Federal - Caixa) and evaluated its institutional capacity to deal with the social and environmental risks potentially related to Project activities. Caixa is a signatory of the Equator Principles since 2012, analyzing credit and finance applications in accordance with international risk assessment criteria, in line with federal government guidance and in compliance with relevant regulatory frameworks. CAIXA's environmental and social responsibility policy and risk management require their clients to comply with (i) the relevant and robust Brazilian social and environmental legislation (including licensing process), (ii) the Equator Principles, (iii) IFC's Performance Standards and (iv) World Bank Group's Environmental Health and Safety Guidelines.

Since financed subprojects will not be identified and selected until project implementation, Environmental and social issues of the subprojects will be addressed through the sub-loan environmental and social eligibility assessments. The environmental review process will be carried out in accordance with both Brazilian legislation and World Bank OP 4.01 requirements. To conduct the environmental assessment (including environmental due diligence) procedures, Caixa prepared an Environmental and Social Management Framework (ESMF). Caixa will include the requisites set in the ESMF as part of the sub-loan agreements and will be responsible for monitoring and ensuring the satisfactory performance of final borrowers to comply with the ESMF. The ESMF includes a checklist to ensure that social and environmental risks and impacts are screened prior to financing. The ESMF also ensures that all subprojects that (i) may be classified as an environmental category A subproject, or (ii) involve involuntary land acquisition that would trigger OP 4.12 will, or (iii) have an impact on international waters are not eligible for financing and will be screened out.

Potential disruption of business activities due to works related to the replacement of lamp bulbs in street lighting activities will be dealt with in the ESMF.

The Bank will conduct relevant training and capacity building for the PMU and FI to screen subprojects and to monitor the final borrowers to successfully screen subprojects. The Bank will conduct prior review for an initial set of subprojects and from then after conduct supervision spot-checks for a number of subprojects.



5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

The project's key beneficiaries are: urban dwellers who will benefit from improvements in public street lighting, which will contribute to mobility and public safety; the industry sector, where energy efficiency will reduce costs and enhance productivity; energy efficiency processes will also be beneficial to the overall society because of its positive impacts on the reduction GHGs emissions.

The ESMF prepared by Caixa is publically available in Caixa's website since January 18th, 2018. Interested parties can provide feedback and propose additional measures to manage environmental and social risks.

The creation and operation of a Grievance Redress Mechanism is required by the Energy Efficiency Facility (EEF) from all the contractors funded with Project resources. The EEF shall maintain a channel of communication to receive, record and redress grievances that cannot be resolved on site. Finally, communities and citizens who are adversely affected by World Bank-supported projects can submit complaints and requests for information to the Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed so that issues directly related to the project can be addressed. After submitting complaints to the World Bank and giving the Bank an opportunity to respond, any communities and citizens who feel adversely affected as a result of non-compliance with corporate policies and procedures can also apply to the World Bank Inspection Panel.

B. Disclosure Requirements

Environmental Assessment/Audit/Management Plan/Other

Date of receipt by the Bank 19-Jan-2018	Date of submission for disclosure 26-Jan-2018	For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors
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"In country" Disclosure

Brazil
26-Jan-2018

Comments
Disclosed by CEF

Pest Management Plan

Was the document disclosed prior to appraisal? No	Date of receipt by the Bank	Date of submission for disclosure
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"In country" Disclosure



If the project triggers the Pest Management and/or Physical Cultural Resources policies, the respective issues are to be addressed and disclosed as part of the Environmental Assessment/Audit/or EMP.

If in-country disclosure of any of the above documents is not expected, please explain why:

In country disclosure of documents is expected

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)

OP/BP/GP 4.01 - Environment Assessment

Does the project require a stand-alone EA (including EMP) report?

No

OP/BP 4.04 - Natural Habitats

Would the project result in any significant conversion or degradation of critical natural habitats?

No

If the project would result in significant conversion or degradation of other (non-critical) natural habitats, does the project include mitigation measures acceptable to the Bank?

NA

OP 4.09 - Pest Management

Does the EA adequately address the pest management issues?

Yes

Is a separate PMP required?

No

If yes, has the PMP been reviewed and approved by a safeguards specialist or PM? Are PMP requirements included in project design? If yes, does the project team include a Pest Management Specialist?

NA

OP/BP 4.11 - Physical Cultural Resources

Does the EA include adequate measures related to cultural property?

Yes

Does the credit/loan incorporate mechanisms to mitigate the potential adverse impacts on cultural property?

Yes



The World Bank Policy on Disclosure of Information

Have relevant safeguard policies documents been sent to the World Bank for disclosure?

Yes

Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?

Yes

All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?

Yes

Have costs related to safeguard policy measures been included in the project cost?

Yes

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?

Yes

Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?

Yes

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APPROVAL

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