**TC DOCUMENT**

1. **Basic Project Data**

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| * TC Name: | Promotion of energy efficiency and distributed renewable energy generation, with a focus on public sector energy users |
| * TC Number: | RG-T2986 |
| Country/Region: | Argentina, Ecuador, Honduras, México, and Paraguay |
| * Team Leader/Members: | Roberto Gabriel Aiello (INE/ENE) Team Leader; Emilio Sawada (INE/ENE), Jose Antonio Urteaga (INE/ENE); Carlos Echeverria (INE/ENE); Carlos Jacome (INE/ENE); Misa Haratsu; (INE/ENE), Arnaldo Vieira de Carvalho (INE/ENE), Julio Lopez Peña (INE/ENE). Stephanie Suber (INE/ENE), Chris Barton (EXR), Lara Bersano (INE/INE), Margie-Lys Jaime Ramirez (LEG/SGO) |
| * Indicate if: Operational Support, Client Support, or Research & Dissemination. | Client Support |
| * If Operational Support TC, give number and name of Operation Supported by the TC: | N/A |
| * Reference to Request: (IDB docs #) | N/A |
| * Date of TC Abstract: | May 19, 2017 |
| * Beneficiary (countries or entities which are the recipient of the technical assistance): | * Ministry of Energy and Mining, Argentina * Ministry of Electricity and Renewables, Ecuador * Ministry of Energy, Honduras * Ministry of Energy, Mexico * Ministry of Public Works and Communication – Energy Division, Paraguay |
| * Executing Agency and contact name (Organization or entity responsible for executing the TC Program) | The Inter-American Development Bank (IDB), through the Energy Division (INE/ENE) |
| * IDB Funding Requested: | US$1,000,000[[1]](#footnote-1) funded by the Japan Special Fund (JSF) |
| * Local counterpart funding, if any (in kind): | US$125,000 |
| * Disbursement period (which includes execution period): | 36 months |
| * Required start date: | August 1, 2017 |
| * Types of consultants (firm or individual consultants): | Firm and individual contractual |
| * Prepared by Unit: | Energy Division (INE/ENE) |
| * Unit of Disbursement Responsibility: | Energy Division (INE/ENE) |
| * Included in Country Strategy (y/n); | Yes  Argentina -GN-2870-1 (paragraphs: 3.1 and 3.13 c)  Ecuador - GN-2680 (paragraphs: 3.6 and 3.43 v)  Honduras – GN-2796-1 (paragraph 3.14)  Mexico – GN-2749 (paragraph 3.42)  Paraguay - GN-2769 (paragraph 3.15 ii) |
| * TC included in CPD (y/n): | No |
| * Alignment to the Update to the Institutional Strategy 2010-2020: | i) social inclusion and equality and ii) climate change and environmental sustainability; |

1. **Objective and Justification** 
   1. **Objective**. The general objective of this TC is to strengthen the institutional capacity of 5 countries to promote and implement energy efficiency (EE)[[2]](#footnote-2) projects, with a focus on improving energy use from public sector, including public buildings which may also benefit under this TC from support to promote complementary Distributed Renewable Energy Generation (DREG) investments programs. This will include: (i) providing technical support to design EE programs; (ii) reviewing and strengthening existing EE programs and regulations; (iii) conducting technical assessments of EE and in the case of public buildings, complementary DREG potentials; and (iv) designing and implementing related EE and DREG investment programs targeting public buildings, street lighting and other public sector installations.
   2. **Strategic alignment:** This TC is aligned with the 2010-2020 Institutional Strategy Update (AB-3008). It is strategically aligned with productivity and innovation and it will contribute to the cross-cutting issues of: (i) climate change and environmental sustainability by reducing carbon emissions; and (ii) institutional capacity and the rule of law, by strengthening participating countries capacity to implement EE programs and identify investments and programs. Additionally, this TC will contribute to the Corporate Results Framework 2016-2019 (GN-2727-6) by: (i) reducing carbon emissions; and (ii) by strengthening institutional capacity to identify EE programs and investments in participating countries.
   3. **Background.** The Sustainable Development Goal #7 (SDG7), approved on September 25, 2015 as part of the post-2015 Sustainable Development Agenda, sets universal targets that the 193 UN member states will use in framing their political policies and development agendas from 2016 to 2030, replacing the Millennium Development Goals that ended in 2015. The SDG7 targets three specific poles: access, increased shares of renewable energy, and improved EE.
   4. EE has received significant emphasis under the SDG#7 process. However, in practice, notwithstanding the important benefits that EE can provide for economic growth, and to the transition to a low-carbon economy (e.g., the International Energy Agency (IEA) has identified EE in its models as a larger contributor to lowering emissions than renewables), EE has received relatively less support and attention that notably renewables expansion. The last decade has seen some change in this regard, as more and more governments have adopted policies and programs to encourage more investment in EE; however, many of these efforts remain at relatively early stages of development, and would benefit from continued and refined efforts to policy-making, program design, and implementation experience, which can not only improve the impact of existing programs, but also improve the design of the next generation of similar efforts.
   5. From schools, ministries and other government buildings (schools, hospitals), from water services companies to maintenance vehicles to public lighting, the public sector consumes relevant amounts of energy to provide critical services to citizens. This includes not only electricity for lighting, but also gasoline, diesel, and gas. Improving the efficiency of public sector energy consumption presents an important opportunity to generate economic and social benefits, including fewer energy expenditures, reduced GHG emissions, and improved air quality, liberating resources for investments in social sectors. Improving EE in public sector presents an important advantage for governments: programs can be developed and implemented through the government’s capacity as the owner of the installations, as opposed to having to prompt or otherwise catalyze private sector action and convince other actors to invest in EE and DREG. At the same time, EE in public sector faces important hurdles, including limited upfront capital to finance EE improvements (which are often, but not always, required), as well as institutional and other inefficiencies which can hamper execution of EE programs by public agencies and other institutions (in particular at the sub-national level where capacity limitations are often a significant challenge).
   6. Public buildings specifically represent one of the largest users within the public sector. However, these buildings also provide an important opportunity: coupling energy efficiency investments with decentralized renewable energy generation (i.e., generated by the building itself through, for example, the use of solar panels) can dramatically reduce the building’s need to rely on grid distribution systems. The synergies between EE and DREG investments is discussed further below.
   7. LAC countries present significant opportunities to improve EE. The IDB has been providing technical assistance to its client countries to support their efforts on EE as well as in collaboration with other development partners such as UNDP and ECLAC, as well as Japan International Cooperation Agency (JICA). In particular, a strategic partnership with JICA under the co-financing for Renewable Energy and Energy Efficiency (CORE) mechanism constitutes a unique opportunity for member countries to have access to concessional resources for investments in EE promotion. As a result of these efforts, countries such as Argentina, Ecuador, Honduras, Mexico, and Paraguay -among others[[3]](#footnote-3)- are recognizing the importance of EE and are willing to undertake EE investment programs in key areas, such as public lighting, government buildings, water pumping, and other areas. Such EE promotion requires a significant amount of effort in capacity building and training activities given the weak institutional and technical capacities in the public sector on EE; many LAC countries would benefit from the experiences of other countries with successful EE programs, such as Japan with its extensive and lengthy experience in developing and implementing innovative approaches to EE.
   8. EE is one of the most cost-effective and critical Instruments to help meet the growth in energy demand. Improvements in EE have been shown to contribute to enhanced energy security, increased competitiveness, employment generation, higher reliability of energy systems, reduced vulnerability to high and volatile energy prices, and lower contributions to GHG emissions. Broad and timely deployment of EE measures in the coming decades will also help buy time for more technologically-advanced GHG mitigation initiatives that will emerge over the longer-term. The potential for EE is large in LAC and can be implemented in the short- and medium-term, can be realized cost-effectively, and makes use of currently available EE technologies. However, the rate of implementation of EE policies and measures and the deployment of EE technologies and best practices well behind the opportunities that exist for energy savings. Among the barriers that inhibit the scaling up of EE are the absence of effective EE institutions, inadequate regulatory policies, lack of awareness regarding EE activities and their benefits, and the difficulty financing large EE projects. The challenge for policymakers and the international community is to help put in place effective policies, implementation mechanisms, and financing strategies to ramp up the delivery of energy savings, especially on the demand side.
   9. Renewables are the second pole of the SDG#7. Countries are increasingly recognizing that in addition to grid extension, DREG can provide an important, climate-friendly, path to provide electricity. This has received attention with regard to efforts to provide electricity access to remote areas where grid extension can be particularly costly (and thereby also supporting the first goal of SDG#7 - relating to universal energy access). However, even for closer locations, stand-alone RE generators can provide an important clean, reliable and cost-effective source of electricity even for users on the grid. This is true for the large number of public buildings (even those located in grid-connected urban and peri-urban sectors) that can reduce their electricity costs, and the demands on the grid, through these DREG sources. Reducing the demand on the grid -- including in peak hours when the sun shines brightly but demand for electricity rises with business activity and an increasing the demand for air conditioning – can help improve electricity reliability (e.g., by reducing the possibility of power shortages), and reduce the need to burn fossil fuels to generate electricity (a benefit which, for example, Germany has seen as a result of its large-scale expansion of smaller PV and other distributed RE systems). This is an area – and a potential opportunity – which to date has received less attention in the LAC region than in some other regions despite its great benefits resulting from recent technology improvements there is room for the LAC region to catalyze further investments in DREG to support not only the renewables goal of the SGD#7, but also through, inter alia, the positive impact on the delivery of electricity, the sound and sustainable economic and social development of LAC countries.
   10. **Sector context:** A study currently under preparation by SEforALL Hub partners provides some insights into the current status of EE programs in LAC, including on the following 5 countries: Argentina, Ecuador, Honduras, Mexico, and Paraguay which are the expected countries of focus under this TC and where the Bank has an active dialogue on promoting EE through the SEforALL initiative, including through TC RG-T2608, and which have expressed interest in identifying specific EE interventions through studies and related technical assistance.:
       * + Argentina has increased its efforts to expand EE activity. The Government recently created the Under-secretariat for Savings and EE within the Ministry of Energy and Mining, and the Argentine Fund for EE (FAEE). The Government is also currently drafting an EE Law, and a National EE Plan as well as related implementing regulations. The Government is also working on the design and monitoring implementation modalities for EE indicators. Programs under implementation, being strengthened or under development target a variety of sub-sectors, including the residential (lighting, household appliances), industrial (energy management, boilers, motors), and public sectors (public lighting and buildings).
         + Ecuador has made progress in EE regulations between 2014 and 2016 thanks to the implementation of the National Energy Agenda 2016-2040 and the Electricity Master Plan 2013-2022, aimed at implementing policies and programs focused on energy consumption. About 20 technical regulations have been implemented on appliances, lighting, heating and air conditioning. The country has an Efficient Appliances Replacement Program (RENOVA) and has prepared a National EE Plan (PLANEE) for the period 2017-2035, to be updated every 3 years, and which will be complemented by technical regulations for industry, transportation and residential and commercial buildings. A comprehensive energy information system is being designed for 2020 in order to establish EE indicators for monitoring and verification of the PLANEE.
         + Honduras has limited legislation and regulations on EE but is expanding its action in this area. In 2014, an Executive Decree was issued which included energy saving measures. EE programs have been implemented, for example, through private banks and financial institutions and industry. There are EE initiatives supported by international cooperation such as energy savings by GEF, clean energy by GIZ and standards and labeling by USAID. In addition, an EE law, the Rational and Efficient Energy Use Law, is currently under discussion at Congress. Once the law is adopted, implementing EE programs and regulations will need to be developed.
         + Mexico in the last two years has passed several law reforms directly related to EE, notably the General Law on Climate Change (amended in 2016) and the Energy Transition Law (2015). The country is preparing related implementing regulations and an EE roadmap. The National Commission for the Efficient Use of Energy (CONUEE) is a pioneer in the region in promoting EE. Its actions include establishing an information system with EE indicators and implementing several energy efficient standards and EE programs, including a program that targets public buildings and facilities at national and municipal levels. Mexico has also looked at the prospects to use public schools to use solar energy. Notwithstanding these important actions by Mexico in these areas, there remains a large untapped potential to improve the EE of public sector, including buildings where complementary DREG investments could strengthen the electricity network and provide other benefits. The Bank is currently preparing an investment project for introducing EE measures in public buildings which complements these efforts.
         + Paraguay has recently taken several notable actions to promote EE, including: (a) implementing regulations on EE in electrical installations, (b) a labeling program, and (c) the creation of an agency within the Ministry of Public Works and Communications to promote EE. Moreover, a Framework Law for the Rational and Efficient Use of Energy is under preparation. Other EE programs are being designed, for example, targeting public buildings, promoting EE training and appliance labeling. The country is also as developing a database on EE indicators.
   11. In all 5 countries, the public sector is a relevant consumer of energy, through government ministries, school, hospitals and other public buildings, as well as public water works companies and other public sector service providers. According to the International Energy Agency (IEA), the commercial and public service sector represents on average 25% of the total electricity consumption in Latin American countries. Although governments have taken some steps to improve the EE in their installations (in part as noted above, as well as other additional programs), most public sector installations in these countries have not yet benefited from EE improvements.
2. **Description of Activities and Outputs**
   1. **Component 1: Support for institutional strengthening and technical assessments to promote EE and DREG*.***  This component will support beneficiaries by providing technical assistance to: (i) review and/or update legal, regulatory, and institutional frameworks relating to EE, (ii) undertake technical assessments of EE potentials in selected public sector installations[[4]](#footnote-4); and (iii) develop EE programs and initiatives that target public sector.
   2. This component will also support, with respect to public buildings, the development of programs to explore the feasibility, the design and implementation of DREG to complement EE investments. Example of activities to be financed under this component include: (i) walk-through and investment grade audits; and (ii) technical plans in public buildings for introducing EE technology and/or DREG, baseline studies for public lighting, and technical specifications.
   3. This component will also support beneficiaries by providing technical assistance for designing EE investment programs based on the information generated under this Component 1. Moreover, it will also assist public sector agencies and other entities (e.g. utilities) to design practical implementation modalities that respond to their particular institutional context. Such programs will consider cost-recovery mechanisms to allow the program fully or partially recover investment costs through energy savings generated by implementing EE measures. When designing investment programs, high efficiency quality equipment will be assessed based on life-cycle cost-benefit analysis in order to maximize the impact of the Program.
   4. **Component 2: Dissemination, Capacity Building, and project management.** This component will support capacity building, relevant dissemination activities, and project management. As a result of this TC, beneficiaries are expected to have a more robust understanding of the potential of EE and how to design and implement EE actions for public sector entities and their installations, as well as for opportunities to combine EE and DREG investments to generate synergies. Activities to be supported include: (i) Webinars, online media and on-the-job training on EE; and (ii) dissemination of activities in workshops and regional events organized by the IDB and/or governments in participating countries[[5]](#footnote-5). This component will also support workshops to promote cross-sharing of experience, including public and private sectors.
   5. Annex I contains a detailed proposed result matrix for the described components.
3. **Budget**
   1. An indicative budget by component is presented in the following table. The source of funding is the Japan Special Fund. For a more detail budget see [Indicative Budget](https://idbg.sharepoint.com/teams/EZ-RG-TCP/RG-T2986/_layouts/15/DocIdRedir.aspx?ID=EZSHARE-145793516-11).

**Indicative Budget[[6]](#footnote-6)**

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| --- | --- | --- | --- | --- |
| **Activity/Component** | **Description** | **IDB/Japan Special Fund** | **Counterpart Funding[[7]](#footnote-7)** | **Total Funding** |
| Component 1 | Support for institutional strengthening and technical assessments to promote EE and DREG | US$750,000.00 | US$100,000.00 | US$850,000,.00 |
| Component 2 | Dissemination, Capacity Building, and project management | US$250,000.00 | US$25,000.00 | US$275,000.00 |
| **Total** | | **US$1,000,000.00** | **US$125,000.00** | **US$1,125,000.00** |

1. Executing Agency and Execution Structure
   1. Given the Regional nature of this TC, the Executing Agency will be the Inter-American Development Bank through the Energy Division (ENE) in order to minimize the execution time. Country Office Specialists in the beneficiary countries are part of the team and will be actively involved in the activities carried out by this TC. The Bank will contract individual consultants, consulting firms and non-consulting services in accordance with the Bank’s current procurement policies and procedures. The TC will follow IDB governing policies and procedures that are applicable for the contracting consultants and consulting firms.
   2. Project Monitoring will be carried through the following mechanisms: technical meetings with counterparts, IDB and consultants, joint review meetings with Donors Representatives in beneficiary countries will be organized.
   3. The Bank will prepare progress reports annually, which will contain at least: the status of the financial progress, the progress and results achieved, report on the activities carried out, lessons learned and best practices identified, any other information to meet the requirements agreed with donor.
   4. Each of the beneficiary countries must submit a request letter to the Bank’s satisfaction prior to the disbursement of the TC resources and initiation of activities in the corresponding country. Such request letters will be duly recorded by the Bank.
2. **Project Risks and Issues** 
   1. The major risk for this TC is the coordination risk since the project has multiple beneficiaries. This risk is mitigated by having the TC be executed by the Bank within IDB’s Energy Division.
   2. Other risks considered include: implementation of EE programs may be hampered by budget constraints in governments and/or political changes during the proposed implementation period of this TC.
   3. Activities will be coordinated with beneficiary entities as identified by ENE Country Specialists who will act as the local focal point and have a direct dialogue with the beneficiaries. Through the implementation of this TC activities, especially capacity building and institutional strengthening, sustainability of such programs and activities on EE ix expected.
3. **Environmental and Social Classification** 
   1. There are no envisioned environmental or social risks associated with the Program. This TC has been classified category “C” according to the [Safeguard Policy Filter Report (SPF)](https://idbg.sharepoint.com/teams/EZ-RG-TCP/RG-T2986/_layouts/15/DocIdRedir.aspx?ID=EZSHARE-833056223-2) and the [Safeguard Screening Report (SSF)](https://idbg.sharepoint.com/teams/EZ-RG-TCP/RG-T2986/_layouts/15/DocIdRedir.aspx?ID=EZSHARE-833056223-3).
   2. While this TC will not finance infrastructure investments, the studies and technical reports may lead to future investments in power infrastructure. The proposed TC recommends undertaking consultation and to consider guidelines of the Bank’s safeguards policies.

**Required Annexes:**

* Annex I: [Country Request Letters](https://idbg.sharepoint.com/teams/EZ-RG-TCP/RG-T2986/_layouts/15/DocIdRedir.aspx?ID=EZSHARE-145793516-9)
* Annex II: [Results Matrix](https://idbg.sharepoint.com/teams/EZ-RG-TCP/RG-T2986/_layouts/15/DocIdRedir.aspx?ID=EZSHARE-145793516-8)
* Annex III: [Procurement Plan](https://idbg.sharepoint.com/teams/EZ-RG-TCP/RG-T2986/_layouts/15/DocIdRedir.aspx?ID=EZSHARE-145793516-10)
* Annex IV: [Terms of Reference for activities/components to be procured](https://idbg.sharepoint.com/teams/EZ-RG-TCP/RG-T2986/_layouts/15/DocIdRedir.aspx?ID=EZSHARE-145793516-7)

1. An indicative allocation of up to USD 150,000 will be considered for each country. [↑](#footnote-ref-1)
2. Efficient energy use is the goal to reduce the amount of energy required to provide products and services.  For example, [insulating a home](https://en.wikipedia.org/wiki/Building_insulation) allows a building to use less heating and cooling energy to achieve a comfortable temperature. [LED lights](https://en.wikipedia.org/wiki/LED_lights) or natural [skylights](https://en.wikipedia.org/wiki/Skylight_(window)) reduce the amount of energy required to achieve the same or even better level of lighting than when using [incandescent light bulbs](https://en.wikipedia.org/wiki/Incandescent_light_bulbs). Improvements in energy efficiency are generally achieved by adopting a more efficient technology or production process. [↑](#footnote-ref-2)
3. As of June 2017, the Energy Division under SEforALL’s initiative of EE promotion is providing supports and/or in policy dialogues with countries such as Argentina, Barbados, Brazil, Colombia, Ecuador, El Salvador, Honduras, Jamaica, Mexico, Panama, Paraguay, regional (SICA, CARICOM) among others. [↑](#footnote-ref-3)
4. Such public installations will be selected in accordance to government priorities. [↑](#footnote-ref-4)
5. Identified relevant regional events include Mexico’s Strategic Dialogue for the Future of   
   Energy in September 2017, the 2nd Sustainable Energy Week for Latin America and the Caribbean in Argentina in December 2017, and IDB’s Energy Network Regional Policy Dialogue (high-level meeting organized every year by ENE), among other regional events that may be supported. [↑](#footnote-ref-5)
6. The following expenditures will not be financed by this TC: (i) activities currently funded by other donors; (ii) land acquisition; (iii) government employees’ salaries and travel costs; (iv) Bank staff salaries and travel costs; (v) training from non-beneficiary countries; (vi) study tours; and (vii) the Bank’s administrative costs. [↑](#footnote-ref-6)
7. This represents an in-kind contribution equivalent to USD 25,000.00 by each country. [↑](#footnote-ref-7)