

TC ABSTRACT

I. Basic Project Data

▪ Country/Region:	Dominican Republic/CID - Isthmus & DR
▪ TC Name:	Institutional Strengthening for the Implementation of the Energy Efficiency Program of the Dominican Republic
▪ TC Number:	DR-T1167
▪ Team Leader/Members:	Baldivieso, Héctor (INE/ENE) Team Leader; Alatorre, Claudio (CSD/CCS) Alternate Team Leader; Johnson, Odile; Suber, Stephanie; Aoki, Issei; Márquez, Fidel (INE/ENE); Roque, Jan Carlo (CID/CDR)
▪ Taxonomy:	Operational Support
▪ Number and name of operation supported by the TC:	Implementation of the Energy Efficiency (EE) Program of the Dominican Republic - DR-L1122
▪ Date of TC Abstract:	09 Dec 2020
▪ Beneficiary:	Government of the Dominican Republic
▪ Executing Agency:	Corporación Dominicana de Empresas Eléctricas Estatales
▪ IDB funding requested:	US\$465,000.00
▪ Local counterpart funding:	US\$0.00
▪ Disbursement period:	24 months
▪ Types of consultants:	Firms; Individuals
▪ Prepared by Unit:	INE/ENE - Energy
▪ Unit of Disbursement Responsibility:	INE/ENE - Energy
▪ TC included in Country Strategy (y/n):	No
▪ TC included in CPD (y/n):	No
▪ Alignment to the Update to the Institutional Strategy 2010-2020:	Productivity and innovation; Institutional capacity and rule of law; Environmental sustainability

II. Objective and Justification

- 2.1 The overall objective of this TC is to support the Government of the Dominican Republic (GDR) in implementing the energy efficiency (EE) program. In order to achieve this objective, the TC will support the preparation of detailed technical design and preparation of bidding documents for street lighting technology upgrades and efficiency improvement in priority areas to support citizen security and tourism.
- 2.2 The Dominican Republic (DR) is highly dependent on fossil fuels for power generation with 2018 reporting 46.2% liquid fuels; 26.6% natural gas; and 12.1% coal, while the remaining generation mix included 10.5% hydroelectric; and 4.6% other non-conventional renewables (wind, biomass, solar).
- 2.3 In 2018, the public sector (national and municipal governments) consumed 1,336 GWh, representing 13.1% of the total supplied by the Electricity Distribution Companies (EDEs, the Spanish acronym) to their customers. With regards to energy consumption in street lighting, it is calculated at 238.3 GWh/year equivalent to 2.5% of DR's total electricity consumption and representing a bill of US\$38.1 million in 2017. High pressure sodium or mercury vapor lamps predominate on public roads; being obsolete and with high power consumption.
- 2.4 The electricity sector, one of the largest recipients of the GDR, covers the operating deficit of administration of the EDEs. In 2016 and 2017, the deficit of the EDEs was US\$551 and US\$774 million respectively (including investment costs), and in 2018 the deficit rose to US\$1,026 million. The variation in value of the deficit is mainly due to the fluctuation of fuel prices used in generation. However, there are factors that continually influence the deficit, and those are: (i) high level of distribution losses, reaching 28.4% in

2018, through inefficiencies in measuring and billing mechanisms as well as network obsolescence; (ii) high operating costs of the EDEs, when compared to similar utilities in the region; (iii) non-optimum cost of new generation due to lack of competitive processes; and (iv) low implementation of EE measures at the national level.

- 2.5 In 2010, to face the challenges in the electricity sector, the GDR established the National Energy Efficiency Plan (PNEE), which seeks to reduce costs and achieve energy savings. Among its multiple scope, the PNEE contemplates the management of energy demand in government institutions and training in energy saving and EE. With this program, the government seeks to improve energy performance under the PNEE framework. EE actions proposed in public facilities will be catalyzed for actions in the private sector, through the creation of markets for goods and services in EE.
- 2.6 The National Energy Commission (CNE) and the Dominican Corporation of State Electrical Companies (CDEEE), under the PNEE framework and with the support of the Japan International Cooperation Agency (JICA), prepared in 2014 the Roadmap to the EE, characterizing power consumption of the public sector and identifying the largest consumers, as well as the critical areas of intervention that would help to reduce consumption. The measures of EE in air conditioning systems, water-pumping, and street lighting were highlighted as those with higher potential for energy savings. Accordingly, the GDR requested an investment loan to the Bank (DR-L1122) and JICA in the amount of US\$75 million for the implementation of an EE Program that was approved under the Co-financing for Renewable Energy and Energy Efficiency (CORE) mechanism, which was agreed between JICA and the Bank with an aim of promoting and extending support toward renewable energy and EE through investment in quality infrastructure.

III. Description of Activities and Outputs

- 3.1 **Component I: Public lighting efficiency improvement.** Technical design and preparation of technical tender doc. to replace approx. 190,500 street lighting lamps and new monitoring systems for consumption management. Now, lamps are 85.2% high-pressure sodium or mercury vapor lamps (power rating of 150-250 W); and 14.8% in technologies like 40-100 W fluorescent, 200 W incandescent, etc. LED lamps (lead & mercury free) will be installed, providing up to 54% of energy savings, lower maintenance cost and service life 3-4 times that of the replaced lamps.
- 3.2 **Component II: Public lighting grid upgrade.** Technical design and preparation of technical bidding documents for the upgrading of street lighting grid infrastructure to current regulatory standards for approximately 52,200 street lighting lamps. For the upgrading, LED lamps (lead and mercury free) will be used, along with new monitoring systems for energy consumption management, and the required street lighting infrastructure – new poles, cabling and accessories – for regulatory compliance.
- 3.3 **Component III: Monitoring and administration costs.** Consulting services for: (i) technical monitoring and supervision of the design activities under the project; and (ii) project financial audit.

IV. Budget

Indicative Budget

Activity/Component	IDB/Fund Funding	Counterpart Funding	Total Funding
Public lighting efficiency improvement	US\$290,000.00	US\$0.00	US\$290,000.00
Public lighting grid upgrade	US\$145,000.00	US\$0.00	US\$145,000.00
Monitoring and administration costs	US\$30,000.00	US\$0.00	US\$30,000.00
Total	US\$465,000.00	US\$0.00	US\$465,000.00

V. Executing Agency and Execution Structure

- 5.1 CDEEE will execute the Project through the Project Execution Unit (UEP) and will coordinate technical support with the three EDEs. The UEP has and will maintain during project execution the following personnel: (i) a General Coordinator; (ii) a Technical Coordinator; (iii) an Environmental and Social Coordinator; and (iv) Procurement and Financial Specialists.
- 5.2 The UEP is responsible for Project execution, including resource administration, administration of procurement processes, overall supervision, quality acceptance of products delivered, and the preparation and submittal to the Bank of technical and financial reports, and disbursement requests with the associated supporting documentation.

VI. Project Risks and Issues

- 6.1 Given the COVID-19 situation and the transportation restrictions for consultants, delays could be expected during the implementation, however, the work plan will be maximizing the use of virtual coordination and monitoring to mitigate the risk of delays.

VII. Environmental and Social Classification

- 7.1 The ESG classification for this operation is "undefined".