

TC ABSTRACT

I. Basic Project Data

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| ▪ Country/Region: | MEXICO/CID - Isthmus & DR |
| ▪ TC Name: | Energy Transition in State Enterprises in the Energy Sector |
| ▪ TC Number: | ME-T1494 |
| ▪ Team Leader/Members: | URTEAGA DUFOUR, JOSE ANTONIO (INE/ENE) Team Leader; SANCHEZ ALVAREZ, LOURDES FELICIDAD (VPC/FMP); MAURICIO CASTANEDA (VPC/FMP); MIRANDA MONROY, EDNA (CID/CME); IRIGOYEN, JOSE LUIS (INE/ENE); BARRIOS NUNEZ, URIEL (CID/CME); JOSE LUIS ENRIQUEZ (CID/CME); BARRAGAN CRESPO, ENRIQUE IGNACIO (LEG/SGO); NAYELI MAYORGA (INE/ENE); JUAN HERRERA (INE/ENE); JORGE LUIS MALPARTIDA (INE/ENE) |
| ▪ Taxonomy: | Client Support |
| ▪ Number and name of operation supported by the TC: | N/A |
| ▪ Date of TC Abstract: | 06 Jan 2023 |
| ▪ Beneficiary: | Federal Electricity Commission (CFE) |
| ▪ Executing Agency: | INTER-AMERICAN DEVELOPMENT BANK |
| ▪ IDB funding requested: | US\$575,000.00 |
| ▪ Local counterpart funding: | US\$0.00 |
| ▪ Disbursement period: | 24 months |
| ▪ Types of consultants: | Individuals; Firms |
| ▪ Prepared by Unit: | INE/ENE - Energy |
| ▪ Unit of Disbursement Responsibility: | CID/CME - Country Office Mexico |
| ▪ TC included in Country Strategy (y/n): | No |
| ▪ TC included in CPD (y/n): | No |
| ▪ Alignment to the Update to the Institutional Strategy 2020-2023: | Productivity and innovation; Institutional capacity and rule of law; Environmental sustainability |
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II. Objective and Justification

- 2.1 Create a diagnosis, set goals and objectives for just transition in state-owned companies in the energy sector, in particular, the Federal Commission of Electricity (CFE for its name in Spanish) towards the use of clean energy and propose a technical and financial model to push said transition.

Develop an energy efficiency program that together with the use of renewable energy contributes to the sustainable development of the islands of Cozumel, Isla Mujeres, and Holbox in the state of Quintana Roo, and Isla Natividad in the state of Baja California Sur.

- 2.2 In 2020, Mexico's energy consumption reached 7,826.6 petajoules (PJ). 31.5% was used for transformation and for the installations of the electricity sector. In the country's electricity sector and specifically of it, 22% had as destiny the electricity subsector.

CFE is the electricity company of the Mexican state. It carries out activities reserved for the state like the transmission and distribution of electricity. Additionally, it is the main generation company in Mexico. It also includes activities like supply, commercialization of energy, electricity imports, and exports, representing many actors in the Whole Sale Electricity Market, amongst others.

Given the efforts carried out by CFE related to the use of clean energy resources, it requested the IADB technical assistance to support the development of those technologies to increase generation from renewable sources. Regarding the potential for renewable energy and energy efficiency in end users a good example are the islands, where in addition to the benefits already mentioned there is a reduction in investment in underwater transmission lines it will also reduce or eliminate the use of diesel power plants, which are more expensive and highly pollutant. The electricity consumption of the islands of Cozumel, Isla Mujeres, and Holbox in the state of Quintana Roo is 115,000 GWh/yr, part of which is supplied through diesel fuel plants that use 55 million liters per year. Additionally, it is foreseen to also work in "Isla Natividad" in the state of Baja California Sur, which has an electricity consumption of 1.2 GWh/yr. This electricity is provided by 3 diesel plants that use around 40 thousand liters per year.

We will develop an Energy Efficiency Program for the islands mentioned before. The Program will include sub-programs for the main energy consumption sectors; ensuring that energy consumption is impacted and the benefits from energy efficiency are achieved not only in each island but in the whole of the Mexican energy sector. The conviction is that sustainable, low-carbon infrastructure can help Mexico achieve a strong, green, and inclusive economic recovery as well as meet its commitments in its National Determined Contributions (NDC). Electromobility has been at the forefront of several initiatives and even efforts from the three levels of government in Mexico. However, this will have an impact on the National Electric System by substituting fossil fuel sources, which are currently used by different means of transportation, with electricity. This will increase the loads on the different circuits of the general distribution networks and therefore require more generation. Said impact will be reflected in all segments of the electricity sector: generation, transmission, distribution, regionalization, etc. Thus, CFE plays an important role in the viability of the development of sustainable low-carbon infrastructure and in the capitalization of the benefits that it could bring to Mexican families, the country's economy, and the environment.

III. Description of Activities and Outputs

- 3.1 **Component I: Proposal for a framework to promote the process of the energy transition for the state-owned company, CFE.** Have a roadmap to promote CFE's actions to achieve greater EE and RE in the transformation processes at its generation plants, as well as in the distribution and transmission of electricity. The planned activities are (i) analysis of information on the generation, transmission, and distribution infrastructure; (ii) identification of the infrastructure, both new and in operation, that would be integrated into the framework; (iii) integration of the Framework, and (iv) preparation of the roadmap.
- 3.2 **Component II: Strategy to strengthen the drive for energy efficiency in the main consumer sectors of the CFE.** Proposing a strategy to reinforce the actions implemented up to now, including new projects and programs and/or improvements to existing ones. The main activities are (i) identification of the main consumption sectors; (ii) diagnosis, prospective analysis of the energy sector and energy efficiency measures; (iii) preparation of the strategy, and (iv) preparation of the road map.
- 3.3 **Component III: Energy Efficiency Programmers for the islands of Cozumel, Isla Mujeres, Holbox and Isla Natividad.** Design of the program and the activities prior to and after its design. The activities considered are: (i) identify best practices implemented on islands related to sustainable development; (ii) analysis of opportunity areas; (iii) design EE programs; (iv) road map, including financing sources and technical, logistical, and financial models; and (v) dissemination plan.

- 3.4 **Component IV: Zero emissions transport plan for the islands of Cozumel, Isla Mujeres, and Holbox.** Plan to move towards a zero-emission transport on the four islands, for which the following activities are contemplated: (i) diagnosis of mobility on each of the islands; (ii) identification and evaluation for the substitution of transportation based on fossil fuels by electric vehicles; (iii) political, legal, and financial strategy; and (iv) a roadmap.
- 3.5 **Component V: Institutional and capacity strengthening.** Workshops and working groups with institutions and authorities at the federal, state, and municipal levels, as well as the different agents of the private sector involved in promoting energy efficiency and electromobility. The activities to be carried out include (i) program of workshops; and (ii) support and monitoring.

IV. Budget

Indicative Budget

| Activity/Component | IDB/Fund Funding | Counterpart Funding | Total Funding |
|--|-----------------------|---------------------|-----------------------|
| Component I: Proposal for a framework to promote the process of the energy transition for the state-owned company, CFE. | US\$100,000.00 | US\$0.00 | US\$100,000.00 |
| Component II: Strategy to strengthen the drive for energy efficiency in the main consumer sectors of the CFE. | US\$50,000.00 | US\$0.00 | US\$50,000.00 |
| Component III: Energy Efficiency Programmers for the islands of Cozumel, Isla Mujeres, Holbox, and Isla Natividad. | US\$250,000.00 | US\$0.00 | US\$250,000.00 |
| Component IV: Zero emissions transport plan for the islands of Cozumel, Isla Mujeres, and Holbox. | US\$125,000.00 | US\$0.00 | US\$125,000.00 |
| Component V: Institutional and capacity strengthening. | US\$50,000.00 | US\$0.00 | US\$50,000.00 |
| Total | US\$575,000.00 | US\$0.00 | US\$575,000.00 |

V. Executing Agency and Execution Structure

- 5.1 Inter-American Development Bank Group
- 5.2 The Ministry of Finance and Public Credit (SHCP for its name in Spanish) of Mexico has agreed that the IADB execute the TCs in the country, in this case, the executing agency will be the Energy Division (INE/ENE), to facilitate institutional coordination, as well as the adequate development of the studies to be carried out, in accordance with the guidelines of the TC Operational Guide (GN-2629-1). Execution will include:

(i) hiring consulting firms and/or individual consultants; (ii) recurring meetings with each beneficiary government agency to achieve their participation and involvement in all stages of the activities, from the preparation and feedback of the terms of reference to the review and follow-up of the deliverables; and (iii) administrative and technical monitoring of all contracts made by the IADB.

A Program Committee will be formed and will be made up of representatives of the CFE, CONUEE, and IADB, and in the case of results at the state and island level, the local authorities of the energy and environmental sector and other agencies involved, which will be in charge of: (i) confirming objectives, scope, and expected results of the program; (ii) validate the Terms of Reference for each of the scheduled studies, considering, in the case of consulting firms, gender equality in the integration of specialist teams; and (iii) validate the results of the studies carried out. Procurement. The Bank will contract individual consultants, consulting firms in accordance with the Bank's current procurement policies and procedures: (i) individual consultants will be contracted in accordance with the guidelines established in AM-650; (ii) the process for hiring consulting firms will follow the Bank's Policy for the Selection and Hiring of Consulting Firms.

VI. Project Risks and Issues

- 6.1 The greatest risk for the execution of this TC is the coordination of the different beneficiaries and institutions involved in the project, such as the various areas within the CFE, and when applicable, with the federal, state, municipal, and local authorities of the islands. To mitigate this risk, the Bank will act as the executing agency for this TC, promoting the necessary dialogue and spaces for cooperation, as well as strengthening the involvement of the beneficiaries, through the creation of a follow-up working group, which will meet periodically to review progress, make of agreements, and promote coordination between the parties.

VII. Environmental and Social Classification

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