

## TC Document

### I. Basic Information for TC

▪ Country/Region:	HONDURAS
▪ TC Name:	Support for Acceleration of Energy Resilience
▪ TC Number:	HO-T1484
▪ Team Leader/Members:	Jacome Montenegro, Carlos Alberto (INE/ENE) Team Leader; Aiello, Roberto Gabriel (INE/ENE) Alternate Team Leader; Contin Steinemann, Christian Alberto (VPC/FMP); Aguiluz Boquin, Alejandro Enrique (CID/CHO); Yamada, Naoko (INE/ENE); Alvarez Gonzalez Oscar Andres (INE/ENE); Landazuri-Levey, Maria C. (LEG/SGO); Lozano Flores, Raul Enrique (VPC/FMP)
▪ Taxonomy:	Client Support
▪ Operation Supported by the TC:	N/A
▪ Date of TC Abstract authorization:	24 Jun 2025.
▪ Beneficiary:	National Electric Power Company (ENEE)
▪ Executing Agency and contact name:	Inter-American Development Bank
▪ Donors providing funding:	Japan Special Fund(JSF) / Japan Enhanced Initiative for Quality Infrastructure, Resilience against Disaster and Health (JEI)
▪ IDB Funding Requested:	US\$600,000.00
▪ Local counterpart funding, if any:	US\$0
▪ Disbursement period (which includes Execution period):	36 months
▪ Required start date:	November 01, 2025
▪ Types of consultants:	Firms
▪ Prepared by Unit:	INE/ENE-Energy
▪ Unit of Disbursement Responsibility:	CID/CHO-Country Office Honduras
▪ TC included in Country Strategy (y/n):	Yes
▪ TC included in CPD (y/n):	No
▪ Alignment to the IDB Group Institutional Strategy: Transformation for Scale and Impact (CA-631):	Sustainable, resilient, and inclusive infrastructure; Institutional capacity, rule of law, and citizen security; Public sector policy and management

### II. Objectives and Justification of the TC

- 2.1 **Objective.** The objective of this Technical Cooperation (TC) is to support Energy Sector Institutions in Honduras to develop a strategy for energy resilience, strengthening the institutional capacities for effective disaster prevention and response in the sector.
- 2.2 Honduras is highly susceptible to climate change because of its frequent exposure to climate-related threats like storms, hurricanes, floods, and droughts, which impact the security of the country's energy supply. The Intergovernmental Panel on Climate Change (IPCC) predicts that the frequency of extreme climate events will increase, a trend already observed in Central America over the last four years, during which three hurricanes affected the Caribbean coast of Honduras.<sup>1</sup>
- 2.3 Between 1970 and 2019, Honduras suffered at least 81 climate events of moderate and extreme impact, including droughts, earthquakes, floods, tropical storms, and

<sup>1</sup> World Bank Group. 2023. [Honduras Country Climate and Development Report](#). CCDR Series.

hurricanes,<sup>2</sup> generating average annual economic losses of 1.4% of the country's Gross Domestic Product (GDP). In 2025, the Global Climate Risk Index ranked Honduras as the third most affected country in the world by extreme weather events from 1993 to 2022, affecting critical sectors such as transportation and energy.<sup>3</sup> In 1998, Honduras suffered the worst disaster in its history, Hurricane Mitch, causing damage and losses equivalent to 80% of GDP<sup>4</sup> and increasing poverty by 8% nationally.<sup>5</sup> In 2020, tropical storm Eta and hurricane Iota affected approximately 3.9 million people in Honduras, representing more than 40% of the country's population. These extreme climate events resulted in extensive damage to energy infrastructure, with a total estimated cost of US\$4.4 million for the electricity sector alone, with the greatest impact on the transmission (US\$1.9 million) and distribution (US\$2 million) systems. These disruptions severely impacted access to essential services such as drinking water, sanitation, and healthcare facilities.<sup>6</sup>

- 2.4 In response, the government has taken steps to improve energy resilience, such as incentivizing renewable energy and promoting energy diversification. The installed capacity of Non-Conventional Renewable Energy (NCRE) in Honduras has grown from 7.8% in 2007 to 31.6% in 2024, all of which is privately owned, placing Honduras among the top 10 countries with the greatest share of variable renewable energy (VRE).<sup>7</sup> As of 2024, electricity demand (11,098.6 GWh) was supplied by 54% renewable sources (34.3% hydroelectric, 9% solar-photovoltaic, 6% wind, 2.5% biomass, and 2.2% geothermal), while 45.5% came from thermal generation and 1.4% from imports via the Regional Electricity Market (MER) through the Electrical Interconnection System for the Countries of Central America (SIEPAC). In 2025, the government also approved the IDB Loan "BIDCLIMA: Decarbonization of the National Electric Power Company (ENEE) and Support for Financial Sustainability" ([5955/BL-HO, 5954/SX-HO](#)), which aims to support the decarbonization and climate resilience of the electricity generation matrix, improve the financial sustainability of the electricity sector, and strengthen the capacities to allow the consideration of debt emissions in green capital markets to meet climate commitments. With this loan, IDB finances resilience power plants for power generation. Additionally, Honduras also executed the Remote Area Rural Electrification Program ([GRT/SX-17123-HO](#)), which built resilient microgrids on Guanaja Island and in Brus Laguna that successfully withstood the passage of natural disasters. Despite these efforts, there remains a lack of comprehensive disaster preparedness planning for the energy sector and financial instruments for preventive response and supporting rapid electrical service restoration.
- 2.5 **Strategic Alignment.** The TC is aligned with the IDB Group's Institutional Strategy: Transformation for Greater Scale and Impact (CA-631) and the objectives: (i) address Climate Change (CC); and (ii) bolster sustainable regional growth with the development of a low carbon, resilient electricity sector. It is aligned with the operational focus areas: (i) biodiversity, natural capital and climate action;

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<sup>2</sup> [Evaluation of the effects and impacts of Tropical Storm Eta and Hurricane Iota in Honduras](#). Inter-American Development Bank (IDB)/Economic Commission for Latin America and the Caribbean (ECLAC). Technical Note No. IDB-TN-2168, p. 82, 2021.

<sup>3</sup> Global Climate Risk Index, 2025. [Climate Risk Index 2025](#).

<sup>4</sup> ECLAC, 1999.

<sup>5</sup> Sánchez and Suárez, 2012.

<sup>6</sup> [Evaluation of the effects and impacts of Tropical Storm Eta and Hurricane Iota in Honduras](#). IDB/ECLAC. Technical Note No. IDB-TN-2168, p. 82, 2021.

<sup>7</sup> Indicative Expansion Plan for Generation 2022 – 2031 ([CREE, 2022](#)).

(ii) institutional capacity, rule of law, and citizen security; and (iii) sustainable, resilient, and inclusive infrastructure.

- 2.6 Additionally, the TC is aligned to the IDB initiative *America en el Centro*, as it contributes to the pillar of Climate Adaptation and Resilience, by supporting the development of a Master Plan and capacity building for resilient infrastructure in Honduras. The TC is also aligned with the Update to the IDB Group Country Strategy with Honduras 2025-2026 (GN-2944-3), as it will contribute to the objective of increasing resilience by promoting better quality infrastructure and including appropriate designs for resilient infrastructure. The 2050 roadmap ([Hoja de Ruta 2050](#)) created by the Secretary of Energy also highlights the importance of identifying adaptation potentials that can be used to strengthen resilience in the energy sector.
- 2.7 The TC is consistent with the Energy Sector Framework (GN-2830-8) as it contributes to the objective of building institutional capacity and fostering effective governance for the sector by strengthening its capacity to develop sector policies and manage risk; it is also consistent with the CC Sector Framework (GN-2835-13) by supporting decarbonization through the development of a master plan for energy resilience in Honduras, which includes promoting the participation of renewable energy sources, and improving climate adaptation and resilience by helping Honduras to enhance its capacity to adapt to natural disasters and to build a more resilient infrastructure. The TC is aligned with the Japan Enhanced Initiative for Quality Infrastructure, Resilience against Disaster and Health (JEI) under Japan Special Fund (JSF). Among the three priority areas of the JEI, two - Quality Infrastructure and Resilience against Natural Disasters - are directly aligned with the TC, which is consistent with the JEI's priority objectives. Finally, the TC is consistent with the Sustainable Infrastructure Strategy for Competitiveness and Inclusive Growth (GN-2710-5), with the strategic principle of planning and maintaining infrastructure to provide quality services that promote sustainable and inclusive growth.

### III. Description of activities/components and budget

- 3.1 The budget and outputs of this TC will be organized in the following components.
- 3.2 **Component I: Power resilience infrastructure master plan (US\$350,000).** Consulting services will be financed to analyze the impact of damage caused by past disasters on energy facilities, assessing vulnerability and hazard risk in the electricity industry chain. Additionally, existing resilience policies and investment plans will be analyzed, along with proposed preventive and disaster response measures, culminating in the development of a resilient energy infrastructure investment plan. Once the draft proposal is prepared, workshops will be held with national stakeholders and international donors, to develop a viable plan that explores options applicable to the Honduran context. Finally, a knowledge-sharing event will be held on policies for a stable and efficient energy supply, including preventive and response measures based on the Japanese experience. Advisory services from Japanese experts are expected for intermediate and final products. Regarding the workshops and the event, the component will finance conference rooms, logistics, drafting of proceedings, etc.
- 3.3 **Component II: Development of fit-for-purpose regulation and capacity building (US\$150,000).** Consulting services will be financed to support the development of proposals for new standards and codes for construction to strengthen resilient infrastructure. It will provide support to national laboratories, universities, and organizations involved in regulating construction permits. By financing seminars, the component will also focus on building the capacity of implementing agencies to adopt

new regulations for resilient infrastructure, as well as to develop national emergency plans for the restoration of infrastructure and electricity supply following natural disasters. It also includes a study of existing international standards and best practices related to vulnerability to disasters, with a focus on adapting Japan's experience to the local context in Honduras. Regarding the seminars, the component will finance conference rooms, logistics, drafting of proceedings, etc.

- 3.4 **Component III: Preparation of financial facility for resilient energy infrastructure (US\$100,000).** This component will finance consulting services to develop a rapid execution financial facility to support electricity companies. This facility would enable them to take preventive and preparatory actions before natural phenomena and to respond quickly to restore electrical service. This component will prepare the financial facility for energy resilience and a draft loan contract based on findings from the master plan.
- 3.5 The main outcomes expected of this TC are: Component I will produce a comprehensive Master Plan for power resilient infrastructure in Honduras. This plan will include a nationwide hazard risk assessment of the energy sector, an analysis of past disaster impacts, and the development of a regulatory framework and investment strategy. The draft plan will be validated through workshops and knowledge-sharing events, incorporating Japanese expertise to propose context-appropriate solutions for disaster resilience. Component II focuses on strengthening institutional capacity and developing new regulations for resilient energy infrastructure. This involves creating new construction standards and codes, capacity building for key actors (like universities and laboratories), and adapting relevant international best practices, particularly from Japan, to strengthen national emergency response and infrastructure restoration capabilities. Component III will lead to the design of a financial facility for rapid implementation of resilience investments. Based on findings from Component I, the facility will support electricity service providers in taking preventive and response actions to natural disasters. It will also produce a draft loan agreement to operationalize this mechanism, supporting future disaster preparedness and continuity of energy services.
- 3.6 **Indicative budget.** The total cost of the TC will be US\$600,000 which will be financed with resources from the Japan Enhanced Initiative for Quality Infrastructure, Resilience against Disaster and Health (JEI) under Japan Special Fund (JSF). No local counterpart contribution is contemplated. The budget details are provided below.

#### Indicative Budget

Activity/ Component	Description	IDB (JEI)	Total Funding
Component I	Power resilience infrastructure master plan.	US\$350,000.00	US\$350,000.00
Component II	Development of fit-for-purpose and capacity building.	US\$150,000.00	US\$150,000.00
Component III	Preparation of financial facility for resilient energy infrastructure.	US\$100,000.00	US\$100,000.00
<b>Total</b>		<b>US\$600,000.00</b>	<b>US\$600,000.00</b>

#### IV. Executing agency and execution structure

- 4.1 In compliance with the Operational Guidelines for Technical Cooperation Products Revised version (GN-2629-1), this TC is classified as Client Support. At the request of

Honduras Government, the IDB, through its Energy Division (INE/ENE), will be the Executing Agency (EA) of the TC, in accordance with the guidelines and requirements set out in the Technical Cooperation Policy (GN-2470-2) and the Procedures for Processing Technical Cooperation Operations and Related Matters (OP-619-4). The Bank's execution of the TC is justified because resilience requires interaction not only with the ENEE, beneficiary of the TC, but also with the Secretary of Energy (SEN) and the Electric Energy Regulatory Commission (CREE), key players in the electricity sector and key entities in the execution of Components I and II of the TC. In addition to the electricity sector stakeholders, coordination will be achieved with construction chamber, universities, the Ministry of State in the offices of risk and contingency management (COPECO) and the Ministry of Finance, a key player in the execution of Component III. Finally, there will be ongoing dialogue with the Japan International Cooperation Agency (JICA) Honduras Office and the Japanese Embassy in Honduras. This interaction and coordination with different stakeholders, which will be led by the Bank, will allow for a strong dialogue with the different actors, ensure effective execution of the operation, and maintain a close relationship with the different authorities. The Bank will allow for better coordination with the execution of the TC given the importance of addressing technical, procurement, environmental, and climate aspects.

- 4.2 The knowledge products generated within the framework of this TC will be the property of the Bank and may be made available to the public under a creative commons license. However, upon the request of the beneficiaries, the intellectual property of said products may also be licensed and/or transferred to the beneficiaries through specific contractual commitments that will be prepared with the advice of the Bank's Legal area.
- 4.3 As the EA, the Bank will: (i) guarantee the technical quality of the products and compliance with the standards necessary for the execution of the TC; (ii) facilitate the contracting and execution of studies and consultancies; and (iii) maximize the benefits of the IDB's technical knowledge in the different areas. The TC will be implemented in coordination with the beneficiary. The Bank will be responsible for the procurement processes, which will allow the contracts developed under the TC to be timely and planned at the time of execution. The beneficiary may provide technical inputs to the terms of reference and reports of the consultants, but the Bank will have the autonomy to approve such documents and act as Executing Agency (EA) of the TC. This dynamic will facilitate better articulation between the various actors within the framework of the technical dialogue of this TC.
- 4.4 **Procurement.** All procurement to be executed under this TC have been included in the Procurement Plan (Annex IV) and will be hired in compliance with the applicable Bank policies and regulations as follows: (a) Hiring of individual consultants, as established in the regulation on Complementary Workforce (AM-650) and (b) Contracting of services provided by consulting firms in accordance with the Corporate Procurement Policy (GN-2303-33) and its Guidelines.
- 4.5 **Monitoring.** This TC will be executed in a period of 36 months. The project team at INE/ENE will be responsible for monitoring and facilitating the activities required to achieve the expected results. The TC will be monitored and evaluated in accordance with Bank requirements and through the Results Matrix. Annual and final reports will be prepared in Convergence, as established in OP-1385-4.

**V. Major issues**

- 5.1 No major risks are anticipated for this TC. The moderate risks identified in this TC include: (i) coordination between the different entities of the power sector as well as risk management sector and their institutions; and (ii) there are difficulties in obtaining information from the different entities. To this end, the role of the IDB in coordinating the work and providing information among the different entities based on the level of dialogue in the country is key.

**VI. Exceptions to Bank policy**

- 6.1 No exceptions to the Bank's policies are anticipated.

**VII. Environmental and Social Aspects**

- 7.1 This Technical Cooperation is not intended to finance pre-feasibility or feasibility studies of specific investment projects or environmental and social studies associated with them; therefore, this TC does not have applicable requirements of the Bank's Environmental and Social Policy Framework (ESPF).

**Required Annexes:**

[Request from the Client\\_67712.pdf](#)

[Results Matrix\\_90437.pdf](#)

[Terms of Reference\\_96163.pdf](#)

[Procurement Plan\\_56748.pdf](#)