

Technical Cooperation (TC) Document
Regional. Transmission for the Energy Transition in Latin America and The Caribbean (LAC) - RG-T4593

I. Basic Information for TC

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| ▪ Country/Region: | REGIONAL |
| ▪ TC Name: | Transmission for the energy transition in LAC |
| ▪ TC Number: | RG-T4593 |
| ▪ Team Leader/Members: | Alarcon, Arturo (INE/ENE) Team Leader; Larrea, Sylvia Virginia (INE/ENE) Alternate Team Leader; Walter, Martin (INE/ENE); Irigoyen, Jose Luis (INE/ENE); Juan Tulande Lopez (INE/ENE); Malagon Orjuela, Edwin Antonio (INE/ENE); Bonilla Merino Arturo Francisco (LEG/SGO); Sepulveda Pulido Andres Leonardo (INE/ENE); Paredes, Juan Roberto (INE/ENE); Snyder, Virginia Maria (INE/ENE); Jacome Montenegro, Carlos Alberto (INE/ENE); Suarez Aleman, Ancor (INE/PPP); Ayala Roa, Mauricio (DSP/ADV); De Vecchi Galindo, Ricardo (DSP/ADV) |
| ▪ Taxonomy: | Research and Dissemination |
| ▪ Operation Supported by the TC: | N/A |
| ▪ Date of TC Abstract authorization: | 27 Sep 2024 |
| ▪ Beneficiary: | Countries in the region interested in promoting private financing for transmission |
| ▪ Executing Agency and contact name: | Inter-American Development Bank |
| ▪ Donors providing funding: | OC SDP Window 2 - Infrastructure(W2B) |
| ▪ IDB Funding Requested: | US\$100,000.00 |
| ▪ Local counterpart funding, if any: | US\$0 |
| ▪ Disbursement period (which includes Execution period): | 24 months |
| ▪ Required start date: | January 2025 |
| ▪ Types of consultants: | Individual Consultants |
| ▪ 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 Institutional Strategy 2024-2030: | Economic integration; Productivity and innovation |

II. Objectives and Justification of the TC

- 2.1 The general objective of the Technical Cooperation (TC) is to evaluate mechanisms to encourage private investment in electricity transmission to support the energy transition process in the Latin America and the Caribbean (LAC) region. The specific objectives of this TC are: (i) to identify the factors affecting the private investments in transmission across the region; (ii) to evaluate the region in terms of investment needs and capacities, identifying a set of at least two countries where private investment can be encouraged; and (iii) to propose specific regulatory and sectoral measures that can be implemented to attract private investment. This TC is proposed as Research and Dissemination (R&D).

- 2.2 Expanding and modernizing LAC grid infrastructure is vital to achieving net zero emissions and fulfilling the region's climate commitments under the Paris Agreement. Reliable grids facilitate the integration of renewable energy sources, enhance energy security and resilience, and support transformative technologies like electric vehicles and clean hydrogen. By investing in transmission networks, LAC countries can reduce energy transition costs, drive economic growth, and improve access to affordable energy. Every dollar invested in transmission has the potential to generate substantial economic returns and long-term benefits for the region.¹
- 2.3 To meet ambitious climate and renewable energy targets, including the goal of reaching 80% renewable energy by 2030 under the Renewables in Latin America and the Caribbean initiative (RELAC), the region must prioritize large-scale integration of wind, solar, and other sustainable sources. These resources are often located far from major consumption centers, making reliable and extensive transmission networks essential. Without adequate investment in grid infrastructure, bottlenecks will hinder progress toward decarbonization, limiting access to clean, affordable energy and undermining regional growth and sustainability goals.
- 2.4 The investment needs for electricity transmission in LAC are substantial, with electricity demand projected [to double by 2050](#). According to the International Energy Agency (IEA), achieving the region's climate goals will require increasing investment in transmission networks by 6.5 times compared to 2022 levels, surpassing \$20 billion annually by 2050. Recent analyses conducted in a subset of countries showed that Energy Transition Scenarios required investments in transmission that were 30% to 67% higher than in a Business-as-Usual Scenario². This shows that the energy transition will require to increase transmission investments to deliver renewable energy and energy security to the system. Public funds alone are insufficient to meet this demand. Private sector participation is crucial to bridging this financing gap and accelerating the expansion and modernization of grid infrastructure, thereby supporting a resilient, low-carbon energy system.
- 2.5 Historically, attracting private sector investment in LAC's electricity transmission has been challenging due to complex market frameworks, regulatory uncertainties, and perceived investment risks. These barriers have deterred private engagement and slowed grid development. Effective solutions must address these challenges through regulatory and policy interventions that foster investor confidence, create a stable and transparent market environment, and align incentives with sectoral goals. By reducing investment risks and clarifying market roles, LAC can attract the capital needed for transformative grid projects.
- 2.6 Encouraging private investment also requires a targeted assessment of market readiness and investment capacities in specific LAC countries. Identifying high-potential markets allows for the design of tailored regulatory and policy reforms that attract capital and create stable conditions for investors. Leveraging global best practices and lessons learned will further strengthen this approach, unlocking

¹ As an example, according to the World Bank each US dollar invested in regional transmission in Southern Africa could unlock \$21 in economic benefits. Source: Grind Grids Initiative.

² 54% higher in Argentina, Bolivia 67% higher, 30% higher in Uruguay, 36% higher in Chile. Source: [La transición energética de América Latina y el Caribe. Una visión de sus oportunidades y desafíos hasta 2050](#).

significant private investment flows and enabling the development of robust, resilient energy systems that support economic growth and climate mitigation.

- 2.7 There are recent studies that focus on how to attract investment in clean technologies in developing countries, such as the recently published [Playbook of Solutions To Mobilize Clean Energy Investment](#), by the World Economic Forum. Other studies have focused in developing scenarios for the development of the power sector by 2050, such as the [Latin American Outlook by the IEA](#), and they quantify investment needs. Likewise, there are global studies that have focused on how [to attract financing for transmission expansion](#). Nonetheless, to the knowledge of the team, there is no regional study in LAC that quantifies investment flows in the region and identifies specifically the barriers that are hindering more private investment in transmission, taking into consideration particular country characteristics.
- 2.8 LAC's energy transition is driven by an urgent need to reduce dependence on fossil fuels and address climate change. However, limited transmission capacity remains a critical barrier. Addressing this challenge through private sector engagement, regulatory reform, and investment in modernized grid infrastructure is essential to support renewable energy integration, ensure reliable and efficient energy distribution, and achieve sustainable economic development across the region.
- 2.9 **Strategic alignment.** The TC is consistent with the IDB Group Institutional Strategy: Transforming for Scale and Impact (CA-631) and is aligned with the objectives of (i) bolstering sustainable growth, by evaluating mechanisms to encourage private investments in electricity transmission, supporting the energy transition process in the LAC region, and (ii) addressing climate change, by supporting measures that would enable greater integration of renewable energy. The TC is also aligned with the operational focus area of: (i) sustainable, resilient and inclusive infrastructure; and (ii) productive development and innovation through the private sector. The TC will enable and inform key discussions at the regional level to inform the public and private sector regarding infrastructure and regulatory needs in transmission, as well as the factors affecting private investments.
- 2.10 Additionally, this TC aligns with the Energy Sector Framework (GN-2830-8) by contributing to the strategic objective of enhancing the security and quality of electricity supply through the identification of measures to strengthen transmission and distribution networks, which could increase the resilience of the electrical system in the face of extreme climate events. It is also consistent with the Climate Change Sector Framework (GN-2835-13) by supporting the reduction of Greenhouse Gas (GHG) emissions through the reinforcement of infrastructure that facilitates the integration of renewable energy sources.
- 2.11 The TC is also aligned with the Strategy for Sustainable Infrastructure for Competitiveness and Inclusive Growth (GN-2710-5), adhering to the strategic principle of planning and maintaining infrastructure to provide quality services that promote sustainable and inclusive economic growth. Furthermore, the TC aligns with the Strategic Program for Development Financed by Ordinary Capital - Window 2 Infrastructure (W2B) (GN-2819-14) by contributing to more effective, efficient, transparent, and citizen-centered public policies and institutions.
- 2.12 **Lessons learned and coordination with other IDB Initiatives.** These TC will implement lessons learned from previous work conducted in coordination with IDB Invest, to attract private financing in the Electric Interconnection System for Central America (SIEPAC), and in the Colombia-Panama Interconnection

([ATN/OC-18736-RG](#) and [ATN/LE-19335-RG](#)), which include the detailed analysis of existing mechanism in the region which already serves to attract private investment. Likewise, the TC will benefit from the diverse work conducted by the Energy Division in terms of Policy Based Loans that have encouraged private participation, such as the ones in Panama ([PN-L1181](#)), Ecuador ([EC-L1265](#)), and Argentina ([AR-L1370](#)).

III. Description of activities/components and budget

- 3.1 To achieve the general and specific objectives, the TC contemplates two components:
- 3.2 **Component 1. Assessment of Factors Affecting Private Investment in Transmission (US\$50,000).** This component will analyze the financing needs, main barriers, and enabling factors impacting private investment in electrical transmission in the region. Key activities include data collection, stakeholder consultations, and a comparative analysis of regional and international best practices. Results from this component include a quantification of investment needs in the region for transmission, financial flows, and key barriers. The findings will help identify investment gaps and provide a framework for understanding the challenges faced by private investors in the region.
- 3.3 **Component 2. Policy Recommendations and Roadmap for Attracting Private Investment (US\$50,000).** This component will identify two countries where private financing in the transmission sector could be encouraged, using a multicriteria analysis, and will propose specific policy, regulatory, and sector measures to promote private investment in transmission³. Activities include a multicriteria analysis to identify two countries, drafting policy recommendations, designing implementation roadmaps, and conducting workshops with key stakeholders in two prioritized countries. The component will result in a tailored set of strategies and action plans for boosting private sector participation in the two selected countries, including specific actions that could be implemented at the policy, regulatory and planning level.
- 3.4 With this TC, it is expected that the countries in the region will be the direct beneficiaries, as they will have a detailed analysis of the existing barriers for the private sector regarding investment in transmission lines. This will facilitate support for a clean energy transition, capable of integrating renewable and efficient energy sources, ultimately promoting sustainable development and enhancing energy security in the region.
- 3.5 The total project cost amounts to US\$100,000 and is financed entirely by the Ordinary Capital Strategic Development Program (OC SDP) Window 2 - Infrastructure (W2B)

Table 1. Indicative Budget (in US\$)

| Activity/Component | IDB/Fund Funding (W2B) | Total Funding |
|--|------------------------|---------------|
| Component 1. Assessment of Factors Affecting Private Investment in Transmission | 50,000 | 50,000 |
| Component 2. Policy Recommendations and | 50,000 | 50,000 |

³ Considering current involvement and discussions with counterparts regarding Transmission development, the TC team has pre-identified Ecuador, Bolivia, Brazil, and Honduras as countries where the work could be conducted. Nonetheless, this will be confirmed during the TC execution, and given the results of Component 1.

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| Roadmap for Attracting Private Investment | | |
| Total | 100,000 | 100,000 |

IV. Executing agency and executing structure

- 4.1 **Executing agency.** Given the nature of the TC, which is a regional R&D technical cooperation, and considering its strategic objective to provide an in-depth analysis of mechanisms to incentivize private investment in electrical transmission and support the energy transition in the region, the Bank will act as the executing agency for the TC, through the Energy Division (INE/ENE). Leveraging its expertise and strong relationships with stakeholders in the energy and electricity sectors, the Bank will facilitate the coordination among different stakeholders, and serve as a catalyst for knowledge, innovation, and impactful policy development at a regional level. The project will be implemented in close coordination with the IDB Invest, who have been actively working in transmission investment, and other IDB Divisions that might provide inputs for the discussion, including the Private Public Partnership units of the Bank. Prior to the initiation of specific in-country activities in the beneficiary countries, the Bank will obtain the letter of non-objection from the corresponding liaison office.
- 4.2 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) in case Contracting of services provided by consulting firms in accordance with the Corporate procurement Policy (GN-2303-33) and its Guidelines.
- 4.3 The knowledge products generated from Bank-executed activities within this technical cooperation will be the property of the Bank and may be made available to the public under a Creative Commons license. However, at the request of the beneficiaries, in accordance with the provisions of AM-331, the intellectual property of said products may also be licensed through specific contractual commitments that shall be prepared with the advice of the Legal Department.
- 4.4 The team leader will make the monitoring arrangements in the different consultancies for each component, with the annual validation process conducted by ORP/GCM at the end of each year. No evaluation reports will be prepared for this CT.

V. Major issues

- 5.1 Key risks for this TC include: (i) lack of stakeholder engagement and buy-in from local governments, which will be mitigated by conducting early-stage consultations and establishing a communication plan to ensure continuous involvement from key stakeholders; (ii) insufficient data availability or quality to assess investment needs and capabilities, to be addressed by partnering with local institutions and supplementing gaps with expert interviews; and (iii) overlap or duplication with other ongoing initiatives in the region, which will be managed through close coordination with international organizations, donors, and local partners to ensure complementarity and avoid overlaps.

VI. Exceptions to Bank policy

- 6.1 No exception to the IDB's policy is requested.

VII. Environmental and Social aspects

- 7.1 This TC Will not finance feasibility or pre-feasibility studies of investment projects with associated environmental and social studies; therefore, it is excluded from the scope of the Bank's Environmental and Social Policy Framework (ESPF).

Required Annexes:

[Results Matrix_52538.pdf](#)

[Terms of Reference_24763.pdf](#)

[Procurement Plan_5708.pdf](#)