

TC ABSTRACT

I. Basic Project Data

▪ Country/Region:	REGIONAL/IDB
▪ TC Name:	Regional Platform to Scale Up Rural Electrification Investment
▪ TC Number:	RG-T4133
▪ Team Leader/Members:	CUERVO, JAVIER (INE/ENE) Team Leader; ALARCON, ARTURO (INE/ENE) Alternate Team Leader; VANEGAS RICO, WILKFERG (INE/ENE); VEGA CASTRO, LOANA (INE/ENE); VILA SAINT-ETIENNE, SARA (LEG/SGO); GOMEZ, JOSE RAMON (INE/ENE); PRADO, VERONICA RODRIGUES DO (INE/ENE); ECHEVARRIA BARBERO, CARLOS JOSE (INE/ENE); JACOME MONTENEGRO, CARLOS ALBERTO (INE/ENE); BALLON LOPEZ, SERGIO ENRIQUE (INE/ENE); ZIZA MACHADO (INE/ENE)
▪ Taxonomy:	Client Support
▪ Number and name of operation supported by the TC:	N/A
▪ Date of TC Abstract:	18 May 2022
▪ Beneficiary:	Panama, Peru, Paraguay, Brazil, and Suriname.
▪ Executing Agency:	INTER-AMERICAN DEVELOPMENT BANK
▪ IDB funding requested:	US\$1,500,000.00
▪ Local counterpart funding:	US\$0.00
▪ Disbursement period:	36 months
▪ Types of consultants:	Individuals; Firms
▪ 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:	Social inclusion and equality ; Productivity and innovation

II. Objective and Justification

- 2.1 The objective is to support an increment in access to electricity with emphasis on accelerated installation of grid extension and off-grid solutions (mini-grids and individual systems) to help the region achieve universal access to electricity by 2030 in line with the SDG goals. The specific objectives of are to formulate five country specific universal access plans, to develop a tool based on digital georeferenced information platform to support the formulation of universal access plans identifying the best combination of network extension solutions, mini-grids or individual systems, and to create a toolkit to support analytical work that will serve as a knowledge repository and will support sector and policy dialogues.
- 2.2 The region of Latin America and The Caribbean (LAC) could be the first developing region of the world to achieve universal access to electricity services. In 2020, the region had an estimated 97.4% electricity service coverage, meaning 16.8 million people lacking service, most of them located in rural areas. All countries have subscribed to the SDG goal of universal access by year 2030 but reaching the so-called “last mile” is costly and adequate planning and public policies are required.

- 2.3 Geospatial planning identifies and incorporates the physical and demographic distribution of households without access to enable planners to better evaluate least-cost options for connecting these households. Different inputs are used for the geospatial aspect, including satellite imagery, census information, grid extension coordinates, and socio-environmental information. The process culminates with the development of an investment plan and prospectus. A geospatial, least-cost electrification plan begins with the collection of high-resolution datasets with geo-located information of existing energy infrastructure and demand points (settlements, households, etc.), followed by a demand forecast and a cost estimate for grid and off-grid technologies at all demand points. The total costs are compared for each demand point to generate a cost optimal system plan. This plan is then used to create an investment prospectus using country-specific costs and indicating the phased expenditures needed to achieve the electricity access targets. The process incorporates various factors such as demographics, demand, technology choice, existing infrastructure, renewable energy options and costs, and expected gaps over a defined planning horizon. The plan will provide estimates and recommendations for long-term electrification systems, as well as short- to medium-term options for interim electrification during the years required for grid expansion. The process is iterative and involves local stakeholders, thereby providing an opportunity for capacity building on energy planning and data collection and management.
- 2.4 In 2019, the Bank approved a its Energy Sector Framework Document (GN-2830-8) with four thematic lines to guide LAC's energy sector work:
- i. Energy access – coverage, reliability, and affordability.
 - ii. Energy sustainability – energy efficiency, renewable energy, and climate change.
 - iii. Energy security – quality of service, energy infrastructure and regional energy integration.
 - iv. Energy governance – institutional framework, sectorial organization, and policies.
- 2.5 This TC is aimed directly to the thematic lines: I. Energy access; II. Energy sustainability; and IV. Energy Governance since it will assist at least four countries to build capacity to identify the best sustainable solutions to increase access to energy for each remaining community without such services and will develop a platform of tools and best practices that will benefit all the countries. The results of this work and associated knowledge products will be disseminated in the region to support knowledge sharing and to increase regional capacity in these areas making use the Energy Hub hosted by the Bank.

III. Description of Activities and Outputs

- 3.1 **Component I: Universal access plans.** Resources will support the formulation of universal georeferenced access plans using geospatial planning with innovative, state-of-the-art granular least cost electrification to compare on-grid and off-grid technologies. The plan will include investment prospectus and regulatory analysis. Initially, target countries that have been identified are Panama, Peru, Paraguay, and Brazil-amazon states
- 3.2 **Component II: Geospatial platform.** The TC will finance a tool to facilitate the scaling-up of rural electrification investment using a platform that will integrate information about costs, market, consumer data and visual display of geospatial information aimed at increasing electricity access to underserved communities. The platform will be integrated to the energy hub.
- 3.3 **Component III: Analytical support.** Includes the formulation of concession protocols, standard contracts, and demand modeling; a prospective analysis on market opportunities for off-grid technologies; tools to design off-grid renewable energy projects (e.g. minigrids or solar home systems); template documents for business models for -off-grid projects; and the formulation of methodologies and procedures to

track the progress of rural electrification projects. The information will be linked to IDB's Energy Hub website.

- 3.4 **Component IV: Capacity building and dissemination.** The TC will facilitate regional workshops to exchange best practices and training to relevant stakeholders

IV. Budget

Indicative Budget

Activity/Component	IDB/Fund Funding	Counterpart Funding	Total Funding
Universal access plans	US\$800,000.00	US\$0.00	US\$800,000.00
Geospatial platform	US\$400,000.00	US\$0.00	US\$400,000.00
Analytical support	US\$200,000.00	US\$0.00	US\$200,000.00
Capacity building and dissemination	US\$100,000.00	US\$0.00	US\$100,000.00
Total	US\$1,500,000.00	US\$0.00	US\$1,500,000.00

V. Executing Agency and Execution Structure

- 5.1 At the request of the beneficiaries, and in line with the Operational Guidelines for Technical Cooperation Products (GN-2629-2), the Bank will act as the executing agency for this TC. Given the nature of the TC, which is regional, it will be executed by the Energy Division (INE/ENE) to facilitate the coordination among different stakeholders. The Bank will contribute with the harmonization of the activities at a regional level by providing a linkage between all rural electrification plans and the tools of the facility, guaranteeing that all countries benefit from the experience of the others. Prior to the execution of the project activities in any of the selected beneficiary countries, the Bank shall obtain the corresponding no-objection in the form of a letter from the liaison entity of that country.
- 5.2 The Bank is expected to serve as a catalyzer of knowledge, innovation, and impact policy on multiple scales within the region, making the regional coordination of the IDB a necessary condition of this TC. The Bank will lead implementation, programmatic oversight of the different activities. Active engagement with and awareness of the work of other organizations operating in the field will also help avoid any potential overlaps with ongoing efforts.
- 5.3 The Bank will be responsible for the selection and contracting of consulting firms and individual consultants, which will be carried out in accordance with the policies for the selection of consultants (GN-2765-1) and the operational guidelines (OP-1155-4) for the contracting of consulting firms, and the human resources standards (AM-650) for the hiring of individual consultants. In compliance with the Operational Guidelines for Technical Cooperation Products (GN-2629-1), this TC is classified as Client Support.

VI. Project Risks and Issues

- 6.1 One of the main risks associated to this TC is the coordination with different stakeholders related to the formulation of the universal access plans. It is contemplated to hire a project coordinator, who will be supported by the Access to Energy Group in the energy division. A second risk is to get all the information required to produce the plans on a timeline manner. To mitigate this risk, the studies will be conducted in countries which expressed interest to be part of this TC, and where the Bank has been already supporting the development of capacities regarding rural electrification. Also, as expressed above, the project team, which includes IDB's energy specialists based in the country offices, will be working in each country with teams designated by the beneficiaries.

VII. Environmental and Social Classification

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