

REQUEST FOR EXPRESSIONS OF INTEREST
CONSULTING SERVICES FOR BANK-EXECUTED OPERATIONS
SIMPLIFIED COMPETITIVE SELECTION PROCESS

PROJECT NAME: Consultancy for the Development of a transmission expansion planning framework for Belize and support for updating the current transmission expansion plan

SELECTION PROCESS #: RG-T4927

SELECTION METHOD: Simplified Competitive

COUNTRY: Belize

SECTOR OR DEPARTMENT: Infrastructure and Energy Sector (INE) – Energy Division (ENE)

TC NAME: Supporting electricity transmission in Belize, Dominican Republic and Honduras

FUNDING – TC #: ATN/SR-22821-RG

LINK TO TC DOCUMENT: <https://www.iadb.org/en/project/RG-T4927>

Attention Consulting Firms: Important Update Regarding BEO Bidder Portal Registration

All consulting firms, both new and previously registered in the [BEO Portal](#), **must add their Business Partner Number (BP Number)** to their organization's profiles to participate or continue participating in a BEO procurement process.

Please refer to the [FAQs](#) in the Portal for more details on **"How to Find or Obtain Your BP Number"**.

Avoid delays by not waiting until the last moment to complete this update. This process may take up to **48 hours** to complete and could prevent your organization from participating in a BEO Process.

For further questions or assistance, use the [live chat](#) on the BEO Bidder Portal page or email us at ocs.procurement@iadb.org

The Inter-American Development Bank (the Bank) was established in December of 1959 to help accelerate economic and social development in Latin America and the Caribbean. Today, the Bank is a major catalyst in mobilizing resources for the region (For more information about the Bank, please refer to the Bank's website at www.iadb.org.)

Section 1. Purpose of this Request for Expression of Interest

1.1 The Bank is executing the above-mentioned project. The Bank intends to contract consulting services described in this Request for Expressions of Interest (REOI). The purpose of this REOI is to obtain sufficient information to enable the Bank to evaluate if the eligible consulting firms (CF) have the experience and qualifications relevant to provide the consulting services requested by the Bank.

1.2 As defined in the Corporate Procurement Policy ([GN-2303-33](#)), participating CF must be from a Bank's Member Country¹ or Territory² to be eligible to submit an Expression of Interest (EOI). CF with the required experience relevant to the assignment shall be assessed. The Bank will conduct the assessment and ranking of the EOI submitted by the CF that expressed interest. The Bank will invite CF to submit a proposal in the order in which the ranking is established. If the proposal of the first-ranked CF is acceptable, the CF will be invited to negotiate a Contract. If the negotiations with the first-ranked CF fail, the next-ranked CF may be invited to submit a proposal and negotiate.

1.3 This REOI is not to be construed as either an RFP or an offer to contract and in no way obligates the Bank to contract anyone. The Bank reserves the right to reject any and all participating CF for any or no reason without having to provide an explanation. The Bank does not bind itself in any way to select any participating consulting firm. No debrief will be provided as to why CF have or have not been shortlisted.

Section 2. Instructions to the eligible consulting firms

2.1 Expressions of interest must be delivered using the *Bidder Portal for the Selection and Contracting of Consulting Firms for Bank-Executed Operations* (the Portal) (<http://beo-procurement.iadb.org>) by: 14th October 2026], 5:00 P.M. (**Washington, D.C., Time**) in PDF format only (Max. 45MB).

2.2 To access the Portal, the CF must generate a registration account, including **all** the data requested by the Portal. If any of the information requested is not included, the consulting firm will not be able to participate in this or any other Bank-executed selection process for operational work. If the consulting firm has been previously registered, please validate that you have **all** the consulting firm's information updated and complete before submitting an EOI.

2.3 Eligible CF may partner in the form of a Consortium/joint venture (JV) to enhance their qualifications. Such Consortium/JV shall appoint one of the CF as the representative responsible for the communications, the registration in the Portal, and the submission of the corresponding documents (Lead Firm). If submitting as a Consortium/JV, the proposed structure, as well as the Lead Firm, must be maintained if

¹ **Member Countries:** Argentina, Austria, Bahamas, Barbados, Belgium, Belize, Bolivia, Brazil, Canada, Colombia, Costa Rica, Chile, Croatia, Denmark, Dominican Republic, Ecuador, El Salvador, Finland, France, Germany, Guatemala, Guyana, Haiti, Honduras, Israel, Italy, Jamaica, Japan, Mexico, Netherlands, Nicaragua, Norway, Panama, Paraguay, People's Republic of China, Peru, Portugal, Republic of Korea, Slovenia, Spain, Suriname, Sweden, Switzerland, Trinidad & Tobago, United Kingdom, United States, Uruguay and Venezuela.

² **Eligible Territories:** a) Guadeloupe, French Guiana, Martinique, Reunion – as Departments of France; b) U.S. Virgin Islands, Puerto Rico, Guam – as Territories of the USA; c) Aruba – as a constituent country of the Netherlands; and Bonaire, Curacao, Saint Marten, Saba, St Eustatius – as Departments of the Netherlands; d) Hong Kong – as a Special Administrative Region of the People's Republic of China.

the Consortium/JV proceeds in this selection process..

2.4 Interested CF may obtain further information during office hours, 09:00 AM to 05:00 PM (**Washington, D.C. Time**), by sending an email to: [\[Arturo Alarcón, arturoal@iadb.org\]](mailto:Arturo Alarcón, arturoal@iadb.org), and, Andres Aldana, andresal@iadb.org

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2.5 The Bank hereby invites eligible CF to indicate their interest in providing the services described below in the draft Terms of Reference for the consulting services. Interested CF must provide information establishing that they have the necessary experience and are qualified to perform the services. So that all responses may be properly evaluated, eligible CF must include in their submissions the information requested in the following section, with full and clear explanations.

Section 3. Consulting Services

3.1 The consulting services include the design and institutionalization of a standardized transmission expansion planning framework for Belize, providing technical training and capacity building activities for national institutions and sector stakeholders related to transmission planning and modern grid development practices. Also, based on the proposed framework, the update of the transmission and network expansion component of the Least Cost Expansion Plan (LCEP). It is expected to be developed in 12 months with a budget of USD 150.000.

3.2 Although there is no standard format for presenting an Expression of Interest, eligible CF must submit an EOI containing the following information:

- 1) Basic Information—Provide the official name of CF, the contact's name, email address, phone numbers, and office address (es) of the key contact (s) responsible for the EOI.
- 2) Background—Provide a description of the CF. The CF may include brochures or documents that provide information about its organization, history, mission, structure, and number of staff.
- 3) Experience related to the requested consulting services—Provide all kinds of evidence the CF considers appropriate to show its experience and expertise in delivering services similar to those described in Annex A, Terms of Reference (e.g., brochures, reports, studies, description of similar assignments, references to cases

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in which it has provided similar services, experience in similar conditions, availability of appropriate skills among staff, etc.)

3.3 Estimated budget: USD 150.000

Annex A. Draft Terms of Reference

Please note that the attached Terms of Reference may be subject to changes by the Bank. The CF that have been shortlisted will be notified of these changes.

ANNEX A – Terms of reference

Consultancy for the Development of a transmission expansion planning framework for Belize and support for updating the current transmission expansion plan

1. Background and Justification

- 1.1.** In Belize, the 115 kV network heavily relies on a single interconnection with Mexico for electricity imports and overall system stability, creating vulnerabilities in the context of rapidly growing electricity demand. These constraints, together with broader infrastructure deficiencies, continue to affect the reliability and resilience of electricity supply, increasing operating costs, limiting opportunities for in-country power generation and integration with other neighboring countries. Electricity service disruptions remain a significant challenge for businesses, with firms reporting outages averaging 3.4 hours over the past year. In this context, strengthening institutional capacities for transmission planning, regulatory oversight, and the integration of modern technologies has become increasingly important to support a more resilient, reliable and future-ready power system.
- 1.2.** Power transmission planning should be realistic and implementable for a resilient and robust power system, also demands institutional coordination.
- 1.3.** To support the development of the energy sector in Belize, IDB seeks for a consultancy team to: (i) develop a methodology for transmission expansion planning, (ii) provide technical training and capacity building for national institutions and sector stakeholders, (iii) support the preparation of a transmission expansion plan based on the proposed methodology.

2. Objectives

- 2.1.** The general objective of this consultancy is to strengthen transmission planning, institutional capacities and institutional decision-making processes in Belize to support resilient and coordinated system expansion. The specific objectives are: (i) to assess and propose improvements to the Belize's transmission expansion planning methodology to establish a repeatable, institutionalized, and sustainable network planning cycle for Belize, and (ii) to revise the Least Cost Expansion Plan (LCEP) to reflect the latest system conditions, demand projections, policy objectives, planned generation projects, and technological development.

3. Scope of Services

- 3.1. Design, establish, and institutionalize a standardized transmission expansion planning framework for Belize that addresses the current absence of formalized methodologies, planning processes, governance structures, and performance metrics, while enabling coordinated, data-driven, transparent, and cyclical long-term network planning among the entities related, aligned with national energy policy, reliability requirements, and forecasted electricity demand growth.
- 3.2. Provision of technical training and capacity building activities for national institutions and sector stakeholders related to transmission planning and modern grid development practices.
- 3.3. Based on the proposed framework, update of the transmission and network expansion component of the Least Cost Expansion Plan (LCEP), incorporating updated system conditions, load forecasts, policy priorities, planned generation developments, interconnection opportunities, climate resilience considerations, and emerging technologies

4. Key Activities

- 4.1. **Work Plan (Deliverable 1):** Prepare a work plan for the consultancy that: (i) clearly defines the general objectives; (ii) list the activities to be carried out, including data gathering and consultations with stakeholders; (iii) provides a detailed schedule for each activity, including start and finish dates, milestones and deadlines; (iv) specify roles and responsibilities for each activity.
- 4.2. **Belize's transmission expansion planning framework (Deliverable 2):** Prepare a methodological framework that includes: (i) review and summary of the regional models and methodologies used for transmission expansion planning, with a detailed explanation of the rationale for selecting the most appropriate approach for Belize; (ii) a diagnosis for the current state, regulatory framework and institutional structure (roles and responsibilities); (iii) a process flow diagram describing all current and required new / adapted steps to analyze input data in accordance with the regulatory criteria, calculate forecasts, define scenarios, perform electrical studies, identify needs to comply with the criteria, define technical solutions to address those needs, carry out a multi-criteria evaluation (technical, economic, environmental, social, etc.) of the technical solutions and define the optimal portfolio, including the prioritization of projects and their implementation timeline; (iv) template or outline of the document of the expansion plan (v) tables of required input data such as historical demand, large costumers connections, special projects, generation plants expansions, GIS databases, environmental and social information, etc., as well as the entities responsible of periodically updating and reporting the information; (vi) Assessment and recommendation of the modeling software and licenses required to sustain the planning cycle. The assessment shall cover steady-state and dynamic network analysis, short-circuit analysis, production cost simulation, and load forecasting, and shall take as its starting point the power system modeling software currently in use by BEL, namely ETAP. list/description of the software, hardware and licenses required.
- 4.3. **Training program (Deliverable 3):** Perform a technical training and capacity-building program for national institutions and sector stakeholders involved in transmission, distribution and generation planning. This program should include: (i) definition of training approach (theoretical, theoretical-practical, learning-by-doing, workshop, case-based learning, coaching, etc.) and modality (in-person, virtual, hybrid). The program

shall comprise a minimum of 120 contact hours delivered over the consultancy period, of which not less than 50% shall be practical, hands-on workshops delivered in person in Belize.; (ii) identification of participants based on the diagnosis from Deliverable 2, including required prior background and recommendations for preparatory courses. The program shall be designed for approximately 20 participants, structured as a core technical group of approximately 10 participants completing the full program including all hands-on modeling modules, and a wider group of approximately 10 additional participants attending the framework, criteria and governance modules only; (iii) program content, which may be tailored by group (i.e. not all modules for all participants); (iv) schedule and session timing; (v) required resources such as trainers, software, hardware, licenses, models, databases, conference rooms, catering, etc.; (vi) mechanism of evaluation and follow-up.

4.4. Updated Transmission Expansion Plan (Deliverable 4): Based on the Methodology outlined in Deliverable 2, the Belize Transmission Expansion Plan will be updated collaboratively with relevant institutions and stakeholders. The consultancy team will support the local entities in preparing this building on the training and capacity development activities carried out under Deliverable 3. The final document should include at a minimum: (i) Baseline Assessment – Diagnosis. Assessment of current system performance and challenges through analysis of at least five years of loading, voltage, losses and interruption data, and development of a register of existing constraints, N-1 violations and transfer capability. (ii) Demand Forecast & Load Growth. A 20-year national and substation-level demand forecast with an 8760 hourly load shape, presented as high, base and low bands and reconciled against BEL's current forecast, together with recommendations for improvement of the long-term forecasting methodology. (iii) Generation Expansion Scenarios. Assessment of the generation expansion portfolio defined in the latest LCEP report, with all committed and planned generation sited at specific nodes, and identification of the transmission enhancements required to accommodate it in accordance with the planning criteria. Testing of alternative scenarios varying resource siting, technology mix and timing, including reduced availability of the Mexico interconnection, with chronological production cost simulation of each to establish dispatch, curtailment, congestion and system inertia. Recommendations for refinement of either the generation plan or the transmission network where siting, sequencing or network configuration delivers a better outcome. (iv) Network Studies. Load flow and contingency analysis across the 115 kV and 69 kV networks over the study period (peak, minimum load and maximum-PV conditions) in accordance with the planning criteria established in Phase 1, together with short-circuit assessment, reactive compensation requirements and technical loss analysis. Time-domain stability assessment covering frequency stability (including loss of the Mexico interconnection), large-disturbance rotor angle stability, and short-term voltage stability including load recovery following faults, supported by system strength screening at inverter-based resource connection points, with electromagnetic transient studies identified where required. (v) Identification of Expansion Projects. Identification of all potential projects and alternatives to address the gaps identified in the network studies, in accordance with the criteria established in Phase 1, with each need traced to the specific criteria violation, study year and scenario that gave rise to it and evaluated against all viable solution options, including non-network alternatives. Costing of candidates on a common basis with indicative timelines. (vi) Optimal Expansion Plan. Techno-economic analysis to determine the optimal portfolio of projects in accordance with the criteria established in Phase 1, supported by multi-criteria decision analysis and benefit-cost analysis, resulting in a prioritized portfolio with implementation timeline and annual capital profile. (vii) Network Models. Delivery of the complete model set used in the study, comprising the steady-state base case and all scenario cases, dynamic data and machine models, short-circuit cases, and any production cost simulation cases, together with a model documentation report describing data sources, assumptions, equivalencing of the Mexican network, and the validation performed. Models shall be delivered in the native format of the agreed software platform and additionally in a neutral exchange format along with any scripts, workbooks or automation used in the analysis. The

expansion plan should include all relevant supporting documentation and models, and where possible, publish them on public websites.

5. Expected Outcome and Deliverables

- 5.1.** Technical Methodology Report, supplemented by process diagrams, data tables, responsible matrix, templates and other annexes, including the review and selection of the methodology, map-based and easy reading table diagnosis, clear description of process flow, required input data and list of resources. The methodology should provide a clear and replicable process, with standardized templates and data requirements to ensure consistency and sustainability of future planning exercises.
- 5.2.** Training program plan with matrix of expected participants, detailed documentation with theoretical and practical sessions contents, a Gantt chart or calendar, a list of resources and assessment tools and closing report. It is expected a strengthened technical and institutional capacity of Belize's stakeholders involved in the power system evolution planning, with the practical ability to develop an expansion plan that meets the current global needs, being multi-criteria, forward-looking, robust, participatory and implementation oriented.
- 5.3.** The training program should be structured and tailored to Belize's specific conditions, strengthening institutional ownership and capacity, and ensuring the team will be able to update the current plan and subsequently develop future versions and reviews, thereby improving outcomes.
- 5.4.** Updated transmission and network expansion component of the Least Cost Expansion Plan (LCEP) document, including maps, tables and flux diagrams to present the diagnosis and prioritized portfolio of expansion projects, with clear justification and an implementation timeline.
- 5.5.** According to the number of customers, peak demand, geography, it is expected to include Power Distribution criteria and information.