

The World Bank
TERMS OF REFERENCE

Consultancy Services for Technical Assistance Activity:
Design of Institutional Strategy for Sustainability in Energy Solutions for the Department of
Cundinamarca, Colombia

I. BACKGROUND

With the entry into force of Law 1715 of 2014, the participation of Non-Conventional Renewable Energy Sources (NCRES) officially began in the Colombian electricity sector and since then, progress has been made in the process of integrating this type of solutions both in the National Interconnected System (SIN) and in Non-Interconnected Zones (ZNI) and isolated areas. The public policy lines regarding NCRES have been strengthened to such an extent that in the PND Law 2294 of 2023 "Colombia, World Power of Life", Energy Communities were incorporated as a mechanism to advance the processes of expanding coverage in areas that currently do not have electricity service or it is obtained irregularly, or of poor quality and/or with a high cost per kWh that affects the economy of the community.

On the other hand, the Departmental Development Plan (DDP) of the Government of Cundinamarca "Governing: More than a Plan" 2024 - 2028, has bet within its goals on the expansion of coverage and implementation of energy generation projects with NCRES that seek to meet the needs of the inhabitants of the department, which is why it is in the process of structuring and implementing projects to be executed in the government period. On the other hand, it seeks to solve situations that could arise in the future as possible problems regarding the sustainability of the projects, their operation and maintenance, in the definition of ownership of assets in co-financed projects, among other identified problems, which generates the need to analyze alternatives to have a company/area and/or entity of the departmental order that leads the operation of this electrical infrastructure that will continuously enter the department in the immediate future.

The Government of Cundinamarca, with the support of the World Bank (WB), is taking steps to address critical challenges and seize opportunities in expanding energy coverage and ensuring the sustainability of non-conventional renewable energy sources (NCRES) projects.

This technical assistance (TA) will examine technical, financial, and organizational alternatives for the sustainable management of NCRES projects, including options for the creation or adaptation of a departmental entity to lead the operation, maintenance, and management of electrical infrastructure. Additionally, it will evaluate the potential role and structure of energy communities as a mechanism to enhance local participation, ownership, and sustainability in the energy transition. The objective is to ensure the long-term viability of these projects, address ownership, operational sustainability, and financial challenges, and facilitate an efficient and inclusive energy transition for Cundinamarca.

Comentado [JG1]: Add a paragraph like this... The World Bank is supporting the government of Cundinamarca... Blah blah

II. OBJECTIVE

The objective of the proposed assignment is to conduct a technical, financial and economic analysis for the operation and sustainability of generation projects using NCRES in the department of Cundinamarca, identifying the best alternatives and/or business structure, to carry out the management, operation, maintenance and replacement of electrical infrastructure financed with public resources for the expansion of coverage.

III. SCOPE OF THE CONSULTANCY

Activity 0 – Inception Report

Inception Report/work plan. The firm will present an inception report outlining the methodology, additional information and data required for the analysis, and the detailed schedule for the assignment.

This report will include a detailed description of the activities to be performed and expected deliverables, as well as the input the Government of Cundinamarca counterparts must deliver at each stage of the consultancy. A priori, the Government of Cundinamarca counterparts will be available for meetings and information exchanges with the Consultant to provide information on the organizational structure, initiatives and the current regulatory framework. To adequately develop this report, and shortly after the signing of the contract, the Consultant, The Government of Cundinamarca counterparts and the World Bank Group (WBG) will have a kick-off meeting where focal points, information exchange channels and next steps will be discussed.

Activity 1 – Diagnosis and definition of institutional and organizational component

This task's main objective is to diagnose and deliver a proposal for structuring the most appropriate organizational framework to carry out activities related to the construction, management, maintenance, and operation of energy solutions based on NCRES in the department. This should be done under different financing models and sources for infrastructure development, operation, and maintenance over time, the management of energy sales through PPA-type contracts, income generated, and the management of replenishment funds. The proposal should include: the corporate structure, operational framework, required personnel, applicable regulatory framework, inter-institutional coordination mechanisms, and the challenges for implementation. One of the alternatives to be analyzed is the possibility of Empresa Públicas de Cundinamarca - EPC S.A. E.S.P. expanding its corporate purpose to take on the activities as mentioned earlier.

The assessment should include at least the following activities:

- 1.1. Analyze the competencies and functions of the Secretariat of Mines, Energy and Gas of the Government of Cundinamarca, and the Public Companies of Cundinamarca - EPC S.A. E.S.P., in light of the implementation and sustainability of projects using NCRES.
- 1.2. Conduct a legal and regulatory review of the functions of the Public Companies of Cundinamarca - EPC SAESP, to identify the need for adjustments in its structure and corporate purpose, in case of assuming the tasks related to the implementation and sustainability of projects with NCRES.

- 1.3. Identify and analyze the regulatory framework applicable to NCRES energy generation projects, and the additional electrical infrastructure to be developed. This includes regulations for public service providers according to the law, and the regulation of charges and tariffs for estimating revenues and costs in the financial model.
- 1.4. Submit a proposal for institutional adjustment to ensure the sustainability of generation projects using NCRES that are financed with public resources.
- 1.5. Present different alternatives for the management of electrical assets developed by the Government of Cundinamarca.
- 1.6. Analyze the challenges for the company/area/entity that is proposed in topics such as financing the management and ensuring the sustainability of electrical assets.
- 1.7. Analyze the concept of Energy Communities and those established in the department of Cundinamarca, to ensure that the company to be structured can monitor their operation and long-term sustainability conditions.
- 1.8. Submit a proposal for the organizational structure of the company/area/entity that could manage the electrical infrastructure developed in the generation projects from NCRES.
- 1.9. Develop a manual of functions for the positions required in the process of management, operation, maintenance and replacement of electrical assets.

Activity 2 – Diagnosis and definition of the financial and sustainability component

The main objective of this task is to conduct a technical and financial diagnosis for the operation of the area, company or entity proposed for the administration and management of the electrical assets assumed for the development of electricity generation activities with NCRES. This includes presenting a short-, medium-, and long-term plan to ensure the sustainability of the operation of these assets throughout their useful life, their replacement process, and the development of Management, Operation, and Maintenance (O&M) activities. The proposal must include:

- Calculation of management and operation costs, including financial and insurance costs, of the proposed area/company/ or entity,
- Forecasting of the management and operating costs of the necessary institutional structure to manage the NCRES infrastructure.
- Calculation of forecasted revenues and its coverage of the O&M and investment costs.
- The financial structure for the replacement process of assets that go out of operation due to the end of their useful life, failure or damage.
- Identification of possible additional resources required and their sources, as well as other financial challenges for the implementation of the proposed electrical asset management framework.

To achieve this objective, the consultant must include the following activities:

- 2.1. Identify and analyze the characteristics of the business model on which energy generation projects with NCRES are based, and evaluate the implications for the business model considering the alternatives for institutional and organizational adjustment.
- 2.2. To analyze from a financial point of view the sustainability conditions of electrical assets for the generation of energy with NCRES, as well as their implications in terms of the resources required for the financing of the operation, based on a set of indicators to be proposed.
- 2.3. Identify the financial challenges that the entity/area/company that is proposed to be established would have to take charge of the management, operation, maintenance and replacement process of the electrical assets, as well as the billing and collection process of the generation projects with NCRES, and of any other electrical infrastructure that is required to provide the service to the end users, for which the income and costs for the management of this infrastructure, and the resources necessary for the operation of the company/area/entity established for this purpose, must be estimated.
- 2.4. Structure a financial model proposal for the management and operation of the area, company or entity that manages the NCRES electrical infrastructure and/or assets.
- 2.5. Present the financial model(s) for the analysis of the alternatives that guarantee(s) the sustainability of the management and operation of the infrastructure in the short, medium and long term, including a scheme for replacing equipment due to failure and/or end of its useful life, in order to guarantee the continuity of the energy service in the areas where the NCRES projects are located.
- 2.6. Present alternatives from a financial point of view for the management of electrical assets that are financed and/or developed by the Government of Cundinamarca, in case the process is not viable for the Public Companies of Cundinamarca - EPC SAESP

IV. DELIVERABLES AND TIMELINE

The proponent must deliver the signed contract as a sign of the official kick-off of the project and a detailed schedule with deadlines for each deliverable before initiating the study.

Deliverable 0: Inception Report containing the work plan, timelines, and implementation strategy.

Deliverable 1: Report with:

- Analysis of the institutional and organizational component, including proposals for the institutional framework needed to ensure the sustainability of NCRES projects (activities 1.1 to 1.4).
- Analysis and development of a financial model at the Income Statement level for the operation of the entity/area/company established to manage the electrical assets for energy generation with NCRES owned by the department of Cundinamarca. This should include organizational alternatives and business models, as well as an analysis of the regulatory framework applicable to service provision and the calculation of revenues and costs associated with the projects (activities 2.1 to 2.4).

Deliverable 2: Report with:

- Detailed design and structuring of the operational and financial model to be implemented by the Department of Cundinamarca to guarantee the financial sustainability of the entity/area/company and the assets managed and operated by this company in the various municipalities where they are located (activities 1.5 to 1.8).

Deliverable 3: Report with:

- Management, technical, and financial functions manual (activity 1.9).
- Analysis of the business model, management model, and sustainability of the entity/area/company that could oversee the management of projects developed using FNCER (activities 2.5 and 2.6).

Deliverable 4. Final Report: the consultant will prepare a final report, in MS Word with the context, with the compilation of the methodology, findings, and recommendations of the work performed.

Note 1: For each product, the Consultant must deliver files and documents in an editable format in Spanish. Also, the Final Report shall be produced in both Spanish and English. Each deliverable will have an introduction and a conclusion section.

Note 2: The final dataset will be accompanied by appropriate data documentation, including metadata, data dictionary, and quality assurance measures, ensuring transparency and usability of the dataset.

Timeframe

The estimated duration of the consultancy is 18 weeks.

Milestone/Deliverable	Name	Timeline (since contract signing)	Indicative payments based on milestones
Deliverable 0	Inception Report: Document outlining the methodology and work plan.	2 weeks	10%
Deliverable 1	Report containing the analysis and findings detailed of activities 1.1 to 1.4 and activities 2.1 to 2.4.	8 weeks	25%
Deliverable 2	Report containing the analysis and findings detailed of activities 1.5 to 1.8.	12 weeks	25%

Deliverable 3	Report containing the analysis and findings detailed of activities 1.9 , 2.5 and 2.6.	16 weeks	25%
Deliverable 4	Final Report	18 weeks	15%

Note: The scope and grouping of deliverables, as well as their timeline, may be adjusted based on feedback and as the study progresses, subject to agreement with the Government of Cundinamarca counterparts

The Consultant will submit a draft report for each deliverable, which the WB and the government counterpart will review and comment on. The WB and the Government of Cundinamarca will be providing comments. After receiving comments, if these are not substantial, the Consultant will be expected to deliver an updated version in 5 business days. If significant comments are found, more than a single round of review might be needed. Deliverables will be considered finalized upon final approval by the WB.

The written reports have no maximum length, but the Final Report will include an executive summary. The WB might also request the Consultant to translate the Executive summary of the final deliverable into English.

Meetings. The consultant must conduct working meetings with the Secretariat of Mines, Energy and Gas (SMEG) of the Government of Cundinamarca and the Public Companies of Cundinamarca - EPC SAESP during the proposal construction process, to validate the different aspects analyzed and the recommendations. Meetings between the Consultant and counterparts will occur biweekly or as agreed, based on study progress, starting with a kick-off meeting and concluding with the socialization workshop. The Consultant will hold an initial meeting with each Government of Cundinamarca counterpart to gather perspectives and define starting points. Feedback will be incorporated, and additional meetings will be scheduled to ensure alignment. Main deliverables will be presented during these meetings with a brief presentation (e.g., PPT) according to the timeline for each deliverable.

V. CONSULTANT QUALIFICATIONS AND EXPERTISE

The Consultant could be a consortium of technical firms/advisers. The Consultant will be required to mobilize a team of experts with diversified technical competencies according to the scope of the assignment. The consulting firm (or consortium of firms) shall have both local and international experience in the topic of this assignment, a sizeable record working in Colombia and at least two local senior experts.

Qualifications

The Consultant must demonstrate that they have the expertise required to undertake this assignment and fully appreciate the requirements of this ToR. In particular, the selected Consultant shall demonstrate experience in:

- Financial advisory in NCRES business models and recommendation of institutional restructuring to improve corporate operations

- Providing policy and regulatory analysis and recommendations. Preparation of roadmaps for the development of NCRES, is also desirable.
- Interacting with private sector entities, government officials, regulatory agencies, and/or financial institutions, especially with the objective of undertaking and registering consultations with various stakeholders.
- Knowledge about the Colombian energy sector, more specifically in renewable energy, energy transition and energy communities.

When describing the detail of the experience, the following will be included:

- The role developed in each project.
- Year of start and end of the consultancy.
- Purpose and scope of the contract.
- Describe the type of project developed.

The team of experts including, at least: a **financial specialist**, and a regulatory specialist.

Eliminó: , and an **institutional strengthening specialist**

- **Finance professional, expert in the construction of models and/or financial vehicles for the management of electrical infrastructure** , knowledgeable about the public sector and the regulatory framework that governs the provision of public utilities in Colombia, in light of the regulatory standards that govern the provision of these public services in the country, and the business models of generation, distribution and marketing of electrical energy, both in the national interconnected system and in non-interconnected zones (ZNI). Must meet the following requirements: **Education:** Doctorate/Master's/Bachelor's degree (or equivalent advanced degree) in Economics, Finance, Business Management, Industrial/Electrical Engineering, or other fields relevant to the responsibilities of the position. **Experience:** At least/between 10 years and 5 years of progressive experience in business models, regulation and management of public services, management of public services companies or management of electrical assets. **Language:** Mastery of the Spanish language.
- **Professional expert in electrical regulation and business models with NCRES**, and in the regulatory framework that governs the provision of public utilities in Colombia, for the electric power and combustible gas sector, in particular in the management and administration of the ownership of electrical assets by public entities, as well as in the legal, regulatory and regulatory aspects that govern the provision of these public services in the country. Must meet the following requirements: **Education:** Doctorate/Master's/Bachelor's degree (or equivalent advanced degree) in Law, Business Law, Engineering, Economics, Public Administration, or other fields relevant to the responsibilities of the functions to be performed. **Experience:** At least/between 10 and 5 years of experience in regulation, business models and design and management of commercial and financial mechanisms and vehicles in the public utility market. **Languages:** Mastery of the Spanish language.

Eliminó: Professional expert in institutional strengthening, knowledgeable about the public sector, with experience in public policies for infrastructure development, as well as in aspects related to public sector management, its options and possibilities in terms of coordination with public service providers. Must meet the following requirements: **Education:** Doctorate/Master's/Bachelor's degree (or equivalent advanced degree) in Law, Business Law, Economics, Public Administration, or other fields relevant to the responsibilities of the functions to be performed. **Experience:** At least 10 to 5 years of progressive experience in structuring public corporate figures, incorporation of public companies or management of electrical assets. **Languages:** Mastery of the Spanish language.

VI. IMPLEMENTATION ARRANGEMENTS FOR THE ASSIGNMENT

The World Bank will contract the consultancy services. As such, in performing the tasks above, the Consultant shall comply with the World Bank's policies and rules concerning the work of consultants, as well as the standards and requirements indicated in the contract.

The Consultant will report to Manuel Luengo (World Bank Task Team Leader) at mluengo@worldbank.org.

The Consultant will hold regular virtual, or in-person meetings as needed, starting from the start date of the consulting contract, and provide minutes of agreements and action items after each meeting.

Consultant Obligations

The Consultant will be entirely responsible for the assignment, including the services his subcontractors and employees perform. The Consultant will provide specialists, support structures and essential logistics to ensure the adequate fulfilment of the tasks envisaged under the assignment within the allocated timeframe.

The Consultant may be required to sign a non-disclosure agreement with relevant government agencies to get access to specific data.

VII. OTHER PROVISIONS

Travel. All travel costs will be covered by the Consultant and included in the lump-sum financial Proposal. Virtual and hybrid meetings are fully accepted, although some might require at least part of the team to be present in the location. At least one in-person (plus hybrid) meeting to present each deliverable will be expected.

Handing of data: All data generated, and the methodology used under this project shall be owned by the World Bank and shall not be shared with anyone outside the firm without explicit written permission from the World Bank. The work might require the Consultant to sign an NDA with the company benefiting from this study.

Products from this consultancy might be published by the World Bank and/or Government of Cundinamarca counterparts, ensuring that confidential data is protected per the WB Access to Information Policy. These products aim not only to inform a single project but to provide case-study cutting-edge technical and economic analyses that can help inform other similar projects in the country and globally.

The World Bank is commissioning this assignment as technical assistance support to the Government of Colombia. The World Bank shall issue the contract according to its standard terms and conditions for consultancy services, and all outputs shall be the property of the World Bank unless otherwise specified.

There must be no offline communication with any World Bank employees relating to this assignment during the request for Expression of Interest (REOI) and Request for Proposals (RFP) processes. All questions must be submitted through the RFXNow procurement portal.

All financial offers must be in US Dollars.

VIII. PROPOSAL SUBMISSION

Submissions shall be received via the World Bank's RFXNow procurement platform.

The selection process will have an Expressions of Interest (EOI) and Request for Proposals (RfP) stage.

For the Expressions of Interest (EOIs) stage, vendors will be evaluated, and a shortlist will be created based on qualifications in the field of the assignment, technical and managerial capabilities, core business and years in business, and qualifications of key staff. The main section of the EOI shall not be longer than 40 pages (excluding annexes).

Vendors are not restricted to the consortium/team they proposed at the EOI selection stage and may add or drop firms/individuals in their final Proposal. Shortlisted firms may associate or partner with other shortlisted or non-shortlisted firms (including firms not included on the Roster) and may alter their choice of partners and/or sub-contractors as needed to meet the criteria outlined in this document. All firms are expected to have a strong local presence and/or local partner(s) to satisfy the requirements outlined.

For the Request for Proposals (RfP) stage, both a **Technical** and a **Financial Proposal** will be required. The Technical Score shall weigh 70%, and the Financial Score 30% when the final score is calculated. Technical Proposals below a certain threshold shall be excluded from final consideration. The Consultant's offer shall be submitted in two sections:

- **Technical Proposal:** (i) Comment/Suggestion on the TOR; (ii) Description of approach, methodology and work plan, including time and resourcing for in-country work and engagement; (iii) Team composition, task assignments and level of effort per task; (v) Work schedule. The following should be included as annexe material: (i) Other experience and (ii) CVs of key personnel.
- **Financial Proposal:** (i) Financial proposal submission form (to be completed and signed); (ii) Summary of costs, broken down by major component; (iii) Breakdown of daily fees per team member; (iv) Summary of any optional items for consideration by the WB team.²

For the Request for Proposals (RfP) stage, the main body of the **Technical Proposal** shall be at most 50 pages (excluding annexes), and the full Proposal (including annexes) shall have at most 100 pages. Proposals shall be evaluated according to the following criteria:

- Methodology: The robustness and depth of the proposed methodology, built-in flexibility, and feasibility of the proposed work plan/timeline.
- Team: The qualifications and experience of key personnel; appropriate balance in senior/junior and national/international. **The team or part of the team shall be based in Colombia.**

In support of the WB's commitments to gender equality, particular emphasis is given to the proposed team's diversity concerning gender, which will be considered in the technical evaluation.

The Financial Proposal shall include provision for time spent in Colombia with the relevant agencies for the purposes of consultation and presentation of findings. The Consultant's core offer must

consist of the cost of obtaining any required data, reports, or other documents/materials (if necessary).

The contract type shall be a fully inclusive, lump sum contract issued in US Dollars. For any travel, the Consultant shall be responsible for their own in-country logistics (including getting to/from meetings and site visit locations). A single cost figure must be entered into RFXNow (equal to the sum of Section 1 of the Financial Proposal) based on a compliant Technical Proposal: failure to provide this, or a technically compliant offer, will lead to disqualification.