



TERMS OF REFERENCE

For the provision of long-term expert consulting services for District Energy projects in Colombian cities

PROJECT Energy Districts in Colombia– Phase II (190085)

1. INTRODUCTION

The United Nations Industrial Development Organization (UNIDO) is the specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environmental sustainability. The mission of UNIDO, as described in the *Lima Declaration* adopted at the fifteenth session of the UNIDO General Conference in 2013, is to promote and accelerate *inclusive and sustainable industrial development* (ISID) in Member States. The relevance of ISID as an integrated approach to all three pillars of sustainable development is recognized by the 2030 Agenda for Sustainable Development and the related Sustainable Development Goals (SDGs), which will frame United Nations and country efforts towards sustainable development in the next fifteen years. *UNIDO's mandate is fully recognized in SDG-9*, which calls to “Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation”. The relevance of ISID, however, applies in greater or lesser extent to all SDGs. Accordingly, the Organization’s programmatic focus is structured in four strategic priorities: *Creating shared prosperity; Advancing economic competitiveness; Safeguarding the environment; and Strengthening knowledge and institutions.*

Each of these programmatic fields of activity contains a number of individual programmes, which are implemented in a holistic manner to achieve effective outcomes and impacts through UNIDO’s four enabling functions: (i) technical cooperation; (ii) analytical and research functions and policy advisory services; (iii) normative functions and standards and quality-related activities; and (iv) convening and partnerships for knowledge transfer, networking and industrial cooperation. Such core functions are carried out in Departments/Offices in its Headquarters, Regional Offices and Hubs and Country Offices.

Bidders are encouraged to familiarize themselves with typical UNIDO operations through www.unido.org and UNIDO’s Open Data platform containing all ongoing technical cooperation projects, on <https://open.unido.org>.

The purpose of this Terms of Reference (ToR) is to garner proposals for the provision of a range of district energy expert consulting services for the execution of the UNIDO project “Energy Districts in Colombia– Phase II”, ID 190085 (hereinafter simply referred as the ED2 Project)

UNIDO intends to enter into Contract for the duration of three years, extendable by one-year period. The cost breakdown for the requested services shall be included in the bidders' proposal. Fixed rates of proposed key personnel shall be indicated separately from variable rates (reimbursable by UNIDO at cost) which shall be agreed upon between UNIDO and the contractor at time of execution of the specific activities (Work Order).

The resulting LTA shall give UNIDO the right, but not the obligation, to issue a Work Order on an "as and when required" and on a "non-exclusive" basis for the purpose of providing technical services and technical experts and expertise to UNIDO ED2 Project in Colombia. Work Orders will be issued in accordance with the terms and conditions of this TOR and the LTA.

The scope of service to be performed by the contractor(s) is outlined in this ToR and will be further detailed in the terms of reference for the specific assignment. Bidders shall prepare a binding offer quoting the number of days or hours to be charged for the specific assignment. If acceptable, UNIDO will issue a Work Order for the services in question (see Annex I Sample Work Order). Invoicing must reflect the respective work order and offer.

Should the contractor not be able to provide qualified consultants and/or the services as and when required, then UNIDO shall source the consultant and/or services from other contractors or individuals who are not party to the contract. The decision to source consultants and/or services from outside the contract shall be at the sole discretion of UNIDO.

This ToR includes the following sections:

1. Introduction
2. Aim of the Project
3. Scope of Services
4. Work Location
5. General Time Schedule
6. Work Order Procedure
7. Qualification and Evaluation Criteria
8. Personnel
9. Language requirements
10. Requirements for Proposals preparation
11. Annex 1 – Work Order Form
12. Annex 2 – Work Order Procedure

2. AIM OF THE PROJECT

The objective of the **Energy Districts in Colombia– Phase II** project (hereinafter referred as **UNIDO-ED2**) is to foster and promote energy efficient and sustainable urban development by further promoting the development of Energy Districts in Colombian cities. The project aims to improve energy efficiency and reduce emissions of greenhouse gases (GHG) and ozone-depleting substances (ODS) of cooling and heating utility services in buildings and infrastructure of the cities that will develop Energy District projects.

The first phase of the “Energy Districts in Colombia” was implemented in 2013-2019 by the Switzerland State Secretariat for Economic Affairs (SECO) in cooperation with the Ministry of Environment and Sustainable Development (MinAmbiente) and the Public Utility of Medellín (Empresas Públicas de Medellín - EPM). This first phase has successfully contributed to creating enabling conditions at institutional and market level and has achieved initial results in boosting Energy Districts infrastructure in Colombian cities.

Specifically, during the first phase of the project, working groups in several cities of Colombia were established. These groups are intended to work towards identifying potential district energy projects in their respective cities as well as harmonizing efforts to bring these projects to reality.

The purpose of the “Energy Districts in Colombia– Phase II” (UNIDO-ED2) project is to consolidate and scale up the results achieved in the first phase and further accelerate the diffusion of Energy Districts in Colombia. Interventions will be structured around three project components:

- Component 1: Institutional Support: Improve and implement the regulatory framework at national and city level in order to promote further development of Energy Districts as a solution for an efficient and better use of energy for cooling (or heating) and for a sustainable urban development.
- Component 2: Knowledge and capacity development: Reinforce knowledge and capacities for Energy Districts of all market players and facilitate collaboration among relevant actors in the value chain for Energy Districts. This will include the establishment of a Competence and Know-how Centre for Energy Districts.
- Component 3: Market development: Technically assist 7-10 selected cities to include Energy Districts into their territorial/urban planning and support the realization of 2-3 near-future mature projects.

The three components are interlinked and expected to feed into each other. In this way, the project will provide an essential push to the diffusion of the Energy Districts as an innovative and efficient infrastructure for utility services in Colombian cities, especially about the air conditioning market.

3. SCOPE OF SERVICES

The services required within the scope of the present LTA are aimed to primarily support project activities under Component 3, and to a lesser extent Component 1 and 2.

As of July 2020, the ED2 Project has already engaged with six Colombian cities in the identification, development and implementation of district energy projects, in particular district cooling projects. The six cities are Barranquilla, Bogotá, Cali, Cartagena, Medellín and Villavicencio. Most of these cities collaborated with and benefited from past ED1 Project, which conducted a number of studies. Bidders are invited to

review the ED2 project document for more information; the project document is available for download [here](#).

Package A – Expert Services for Institutional Partners

The ED2 Project is working closely with national and local government authorities that are responsible or highly relevant for the creation of a Colombian market for energy districts as well as the promotion, development and implementation of energy district projects at city level. ED2 Project's engagement and work with national and local authorities is led by the Project Management Unit (PMU) with the support of a pool of about 10 national professionals.

Expert services to be provided by the Contractor under Package A would include:

- i. Review of technical and institutional criteria for energy districts applicable to land use planning in Colombian cities. Technical criteria will include estimated energy savings and estimated reduction of emissions of greenhouse gas and ozone-depleting substance based on studies/reports developed at city-level by the ED2 Project experts.
- ii. Identify international cases that resemble Colombian cities and can serve as examples.
- iii. Provide recommendations for implementing energy districts in Colombian cities based on relevant international experience.
- iv. Provide recommendations on business and financial models applicable to DT in Colombia based on international experience.
- v. Review energy district projects in the conceptualization phase and/or preliminary/basic engineering phase that might be endorsed by city level Energy Districts Steering Committees
- vi. Provide written technical, commercial, and financial comments and recommendations

Package B – Expert Services for the evaluation of ED proposals received within the scope of the Project's competitive calls for proposals for Energy Districts projects and possible follow-up technical and commercial advisory support.

One of the instruments that the ED2 Project will use to stimulate private sector and potential ED developers in initiating or accelerating ED projects development, financing and implementation is that of competitive call for proposals.

Expert services to be provided by the Contractor under Package B would include:

- i. Support in developing evaluation/selection criteria and associated scoring system for the "Calls for proposals for Energy Districts" (at least 3 calls for proposals)
- ii. Support the PMU in the review/evaluation of submitted proposals from a technical, financial, commercial and other relevant point of view, and provide written feedback on the studies carried out for the selected thermal districts
- iii. For each selected ED proposal, provide written technical, commercial and financial comments and recommendations to improve awarded proposals and/or support their progress towards financing and implementation. A minimum average effort of 2 working-days per proposal is envisaged.

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- iv. Upon specific request of UNIDO, provide additional technical, commercial and/or financial expert advice/support to individual awarded ED proposals and relevant developers

Package C – Expert services for review of detailed engineering design of energy districts projects

Expert services to be provided by the Contractor under Package C would be specifically aimed to the review of detailed engineering designs of energy district projects that could be submitted to the ED2 Project for assistance by cities' authorities, ED developers cooperating with the ED2 Project or through the competitive Call for Proposals organized by the ED2 Project. Clearly substantiated written comments will have to be provided for the designs assigned for review.

Package D – Expert services for review of specific Colombia's regulations affecting EDs

Within Component 1 the ED2 Project will be closely working with national and local government authorities to support the development of policy and regulatory frameworks conducive to the creation of a thriving Colombian market for energy districts. Support will consist in expert technical and legal assistance for the review and amendment of existing policies and legislation, as well as for the development and formulation of possible new policy and/or legal documents.

Expert services to be provided by the Contractor under Package D would include:

- i. Provide technical review of the forthcoming "Technical Regulation of Thermal Systems and Installations in Colombia - RETSIT" to identify general as well as specific aspects of relevance for the design, development, marketing/promotion, construction, operations, etc. of energy districts
- ii. Upon specific request of UNIDO, provide technical review of other ED relevant regulations

Package E - Expert services for the development of City Energy Maps

A key work-stream and output of ED2 Project Component 1 is and will be the development of "Energy Maps" at city level that would be used for the identification and planning of energy districts projects opportunities as well as for other urban planning needs and purposes. This work will be coordinated at the national level by UPME and driven at city level by the relevant local energy and urban planning authorities and institutions with the support of small teams of national experts, including a national Energy Maps consultant.

Expert services to be provided by the Contractor under Package E would include:

- i. Provide technical advice in the review of institutional and technical aspects for the development and implementation of "Energy Maps" in Colombian cities, based on relevant international best practices.
- ii. Upon specific request of UNIDO, provide advice on other relevant issues.

Package F – Expert services for support of ED2 knowledge and capacity development

In order to ensure the sustainability of the project, the project component 2 focuses on building a platform to maintain the technical and professional capacities related to energy districts in Colombia. As part of this component, inter-institutional relationships, academia frameworks, international exchanges, among others will be developed and strengthened.

Expert services to be provide by the contractor under package F would include:

- i. Provide technical advice in the academic agenda proposed in component 2.
- ii. Acting as evaluator in the universities annual contest (at least 3 contest)
- iii. Support and advice the study trip proposed in the component 2
- iv. Participate in the one/two ED international congress in Colombia

4. WORK LOCATION

The contractor's personnel work location will be at the contractor's premises, combined with field presence and/or travel to Colombia as required.

5. GENERAL TIME SCHEDULE

The long term agreement will be for duration of 3 years, with the possibility of further extension of 1 year period.

6. PERSONNEL

Expert services to be provided within the scope of this LTA are expected to be provided by a team of professionals with the combined multi-disciplinary strong expertise and experience in the technical areas pertinent to this LTA. The contractor is expected to provide a Team with the following combined minimum competencies:

- Demonstrated strong expertise on technical, engineering, design, construction, operational, financial/investment, contractual, regulatory, business and managerial aspects of energy district (cooling and heating) projects development and implementation.
- Demonstrated experience in working on technical, engineering, design, construction, operational, financial/investment, contractual, regulatory, business and managerial aspects of actual energy district (cooling and heating) projects development and implementation (at least 3 relevant references in the past 5 years)
- Demonstrated experience in working with national and local governmental authorities, institutes, financial entities, as well as private sector (at least 3 relevant references in the past 5 years)
- The team members should hold Masters' degree or equivalent degrees in their respective areas of expertise (engineering, energy, environmental sciences, urbanism, or other relevant fields). In the absence of Master's degree, candidates will have to have at least 5 years of working experience in the relevant thematic area
- Analytical thinking; planning, organizing and problem solving abilities;

- Good interpersonal skills and must have experience in working with a multinational workforce;
- Previous experience working with UN is an asset;
- Fluent in written and spoken English and Spanish;

In line with SECO and UNIDO Gender relate policies, it is encouraged for the proposed Team to be gender-balanced.

The work required to the contractor's Team to provide the services and carry out the activities required by these terms of reference are estimated in a total of 180 working-days. Table 2 provides a breakdown of working days by service package and in baseload (e.g. fixed) working-days and ad-hoc (e.g. variable) working day.

Table 2. Estimated working efforts required under the different service packages.

Service Packages	Baseload Working-days	Ad-hoc Working-days
Package A – Expert Services for Institutional Partners	20	30
Package B – Expert Services for the evaluation of ED proposals received within the scope of the Project's competitive calls for proposals for Energy Districts projects and possible follow-up technical and commercial advisory support	15	30
Package C – Expert services for review of detailed engineering design of energy districts projects	10	15
Package D – Expert services for review of specific Colombia's regulations affecting EDs	10	10
Package E - Expert services for the development of City Energy Maps	10	10
Package F – Expert services for support of ED2 knowledge and capacity development	10	10
Total	75	105

The CVs of the key Team experts will have to be provided for baseload services and ad-hoc services

7. LANGUAGE REQUIREMENTS

Vast majority of technical, engineering, regulatory, contractual documents to be reviewed and

commented by the contractor Team will be in Spanish and feedback will have to be provided in Spanish. Reporting to UNIDO will have to be in English. Fluency in written and spoken Spanish and English will be required to the Team.

8. WORK ORDER PROCEDURE

The services to be provided by the Contractor shall be requested by UNIDO and performed by the Contractor pursuant to the procedure set forth below. At no time during the term of the Contract shall the Company commence work without a Work Order issued in accordance with such procedure.

UNIDO shall issue an initial Work Order for the provision of baseload services described in this TOR and quantified in Table 2.

For additional work/services UNIDO shall issue a specific description of the services in the form of Terms of Reference required from the Contractor and request a proposal in the form of a draft Work Order based upon the fixed and agreed contractual price list.

The Contractor shall prepare its draft proposal and submit it to UNIDO. The draft Work Order shall include as a minimum:

- nature and scope of work to be performed and the expected timeframe for the provision of services;
- quantity and maximum not to exceed amount for the services to be performed based upon the fixed and agreed contractual price list, which will include all costs to be incurred by the Contractor in the performance of such services.

Upon review, any revision and acceptance of the proposal by UNIDO, the Contractor shall be notified by e-mail with an attached Work Order in PDF signed by UNIDO. The Contractor will countersign and return the Work Order whereupon the provision of the services may commence.

The contractor will be informed of the UNIDO focal point(s) authorized to engage in this process and receive updates should the focal point(s) change.

9. QUALIFICATION AND EVALUATION CRITERIA

Qualification criteria

- Certificate of Incorporation/Registration
- Number of five (5) years in business
- Confirmation of no conflict of interest (e.g. none of the bidder's key personnel is associated - financial, family, employment wise - with concerned UNIDO officials, UNIDO experts/consultants recruited under the relevant project or with UNIDO's Counterpart);
- Confirmation that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the offer, have been given, received, or promised in connection with the selection process or in contract execution;

- Confirmation of satisfactory past performance and that the bidder is not debarred from business with the United Nations and other organizations;
- Confirmation that the bidder did not participate in the preparation of the concerned procurement process or the bidding documents, including, but not limited to, the technical specifications, terms of reference, and the scope of works, being subsequently used by UNIDO;
- Confirmation of no conflict of interest between or among bidders. A bidder may be considered to have a conflict of interest, if the bidder:
 - directly or indirectly controls, is controlled by or is under common control with another bidder;
 - receives or has received any direct or indirect subsidy from another bidder;
 - has the same legal representative as another bidder;
 - has a relationship with another bidder, directly or through common third parties, that puts it in a position to influence the bid of another bidder, or influence the decisions of UNIDO regarding the bidding process;
 - submits more than one bid in the bidding process, for example, on its own and separately as a joint venture partner with another bidder. A bidder's submission of more than one bid will result in the disqualification of all bids in which such bidder is involved; or
- Any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the bid.

Evaluation criteria

- Experience and competency of the personnel (see PERSONNEL IN THE FIELD)
- Reference of 3 similar and relevant assignments in the last 5 years
- Time schedule for execution of the services: UNIDO will evaluate all information available with respect to the bidder's ability to develop a project schedule, execute according to that schedule and complete deliverables on time. A bar chart time schedule divided into weeks should be submitted.
- Personnel

Technical proposals will be evaluated in accordance with the below technical evaluation criteria and their weights:

Evaluation Criteria	Max Points
Understanding of the scope of services to be provided	20
Company's profile and references (such as references by national/local authorities, private sector clients, UN agencies or other relevant organizations)	30
Proposed approach and methodology	20
Proposed team composition and expertise	30
Total	100

Technical proposals falling short of the 80 point threshold shall be rejected.

9. PROPOSAL RESPONSE REQUIREMENTS

Bidder is requested to provide the following information as listed below to enable UNIDO to comprehensively evaluate the submission:

- Acceptance of UNIDO's Terms and Conditions;
- Company profile;
- Company organizational structure including the number of total employees and the number of consultants with respective expertise;
- Number of years of experience in providing tailored expert services;
- List of three similar ongoing and/or previous contracts with proper references including reference contact name, telephone number and email address as:

References	Contact Name	Contact email and telephone number
#1 Entity Name	First Name – Last Name	Email address – complete telephone number
#2 Entity Name	First Name – Last Name	Email address – complete telephone number
#3 Entity Name	First Name – Last Name	Email address – complete telephone number

- Provide at least 2 CVs for proposed experts of the Team and all-inclusive* fee in USD for remote services as well as onsite services (in case needed) of each consultant as outlined in the below table:

Service Packages	All-inclusive price (in USD) per working hour remote*	All-inclusive price (in USD) per 8 working hour day onsite in Colombia*	All-inclusive price (in USD) per 8 working hour day onsite in Vienna HQ*
Package A			
#1 Expert Name			
#2 Expert Name			
Package B, C, D			
#1 Expert Name			
#3 Expert Name			
Package E			
#1 Expert Name			
#4 Expert Name			

Package F			
#1 Expert Name			

*All costs of the proposed consultant, including but not limited to overhead costs of project management, contractor administration, consultant flights, insurance, etc., shall be factored into the daily and or hourly fee and listed in US Dollar.

- Technical plan for provision of consultants;
- Proof of capacity of operations demonstrating an ability to provide relevant experts;
- Indication of travel restrictions, if any.

10. COMMERCIAL PROPOSAL STRUCTURE/REQUIREMENTS

The bidder should provide:

All-inclusive daily rate in US Dollars (US\$) for onsite and all-inclusive hourly rate for remote in US\$, **including any and all overhead fees, administration fees, project management fees, travel, medical, etc.** in the area of expert support at the experience level as described in the Terms of Reference (Section 9).

Service Packages	All-inclusive price (in USD) per working hour remote	All-inclusive price (in USD) per 15 working hour day onsite in Colombia	All-inclusive price (in USD) per 8 working hour day onsite in Vienna HQ

Proposed payment terms are monthly invoice to be paid within 30 days of receipt and contingent upon UNIDO confirmation of services rendered satisfactorily.

Variable costs such as travel and other expenses will be considered at the issuance of the specific detailed Terms of Reference.


11. ANNEXES


ANNEX 1. PROJECT DOCUMENT

ANNEX 2. WORK ORDER PROCEDURE


ANNEX 1. PROJECT DOCUMENT

The **Energy Districts in Colombia– Phase II** project document can be downloaded [here](#), in the documents section.

Documents 



UNIDO_190085_ProDoc_Energy Districts in Colombia.pdf

Download 

ANNEX 2. WORK ORDER PROCEDURE

UNIDO reserves its rights to conclude LTAs on the same terms with several contractors.

For each specific Work Order, a request for proposal will be sent to all shortlisted contractors. UNIDO will award the contractor whose proposal has been evaluated as offering the lowest evaluated price.

No guarantee can be given for the number of requests issued, for the number of Work Orders awarded to a given contractor or for the total amount contracted with it.

Request for Proposal

The contractor will receive the request for proposal via e-mail together with the related terms of reference.

The contractor will have up to fifteen (15) calendar days, counted from the date of the request for proposal, to prepare and dispatch (by e-mail) its proposal to the mail box that will be indicated in the request. Depending on the complexity of the assignment the request may allow for a longer or shorter period of submission of proposals, which will be specified in the request.

The terms of reference will include a detailed description of the scope of the assignment. The terms of reference will specify as a minimum:

- the scope and location of the assignment;
- the expertise required;
- the duration of the assignment;
- the reporting requirements and deadlines;
- whether a briefing/debriefing session is required;
- whether the presence of member(s) of the contractor's team is required.

The terms of reference will define more detailed criteria and related weights for the technical evaluation.

Proposal

The proposal shall be prepared and submitted by the contractor by taking the following into account:

- Commercial rates should be based on the Price List contained in the Long Term Agreement;
- The accuracy of information contained in the experts' CVs;
- Appropriate steps should be taken to ensure the availability and exclusivity of the experts proposed;
- Appropriate steps should be taken to ensure that the quality control system is in place and if necessary expertise will be appointed in line with the needs of the assignment;
- Ensuring professional graphic design services for reports and dissemination products;

Each contractor requested to submit a proposal can ask for clarifications during the period of submission; however, no later than three (3) working days before the deadline for submissions. UNIDO shall answer as rapidly as possible and simultaneously to all. UNIDO may extend the deadline for submission of proposals if a substantial change is introduced by the clarification.

Evaluation of Proposal

The proposals submitted by the contractors shall be evaluated if:

- Submitted by email within the deadline; and
- Have not exceeded the budget for the assignment; and
- The minimum required skills and expertise described in the terms of reference are included.

The technical evaluation will consider the criteria specified in the terms of reference, the proposed organization and methodological approach (working methods, tools, analysis), as well as the expertise and CVs of the team leader and team experts proposed. Only the total proposed fees will be taken into consideration in the commercial evaluation.

UNIDO awards the proposal offering the technically acceptable lowest cost proposal.

Work Order

The specific Work Order will be drawn up in accordance with the model form. The Work Order will come into force when signed by both parties.

The specific terms of reference and the proposal (including any clarifications made, the methodology proposed, the CVs of the experts) form an integral part of the Work Order.

The Work Order amount is fixed at the level of each specific assignment.

Invoicing

When the outputs requested in the specific terms of reference are not delivered or are not considered acceptable by UNIDO, which has to justify reasons for its rejection, UNIDO may refuse the payment and terminate the specific Work Order.

The per diem may not exceed the per diem rate valid at the date of the request and published on the EuropeAid website¹. The per diem are paid per night when an overnight away of expert's place of residence is justified. A night spent in a transport (a plane, a train etc.) does not give right to a per diem for that night. The items covered by the per diem are indicated on the EuropeAid web site. They notably cover accommodation, subsistence and intra-city travels, regardless the means of transport used by the expert.

The per diem as indicated in the proposal is considered as an amount to be fully paid to the expert to allow him/her to perform his/her assignment in the appropriate conditions and therefore shall not be considered as a direct financial benefit for the contractor.

¹ Available at the following website - http://ec.europa.eu/europeaid/search/library_en, which is regularly updated.



Transport: Experts are expected to use the most economically advantageous transport possibilities to join and leave the place of the mission as well as for the local travels during the implementation period. Costs related to a stay beyond the assignment, as approved by UNIDO, are not eligible. Any air travel must be