TERMS OF REFERENCE

Job title:	Chief engineer to provide technical support and expertise to the project in implementation of energy efficiency and renewable measures
Duty station:	Chisinau
Reference to the:	Addressing the impacts of the energy crisis in the Republic of Moldova: Initiating solutions toward energy security and energy poverty" (FPI Programme)
Payment arrangements:	Lump sum contract (payments linked to satisfactory performance and delivery of outputs)
Contract type:	Individual Contract (IC)
Contract Duration:	October 2023 – January 2024 *(the estimated amount of work is 70 wd)*

1. PROJECT OBJECTIVES AND EXPECTED RESULTS

The overall objective of the Programme is to assist the Government of Moldova to tackle the current energy crisis and energy poverty in addressing prioritized systemic elements in the energy sector to cope with potential future energy crisis.

Specific objectives are to support the Government of Moldova to:

a. put in place the legal and regulatory framework in the energy sector with mainstreamed social and climate considerations in line with the EU requirements;
b. strengthen the capacities of the energy-related actors and enhancing institutional coordination mechanisms to address and avert risks entailed in recent and potential future energy crisis;
c. increased awareness and communication among the population to adopt the best energy saving practices and measures and to encourage the use of renewables;
d. operationalize nation-wide energy programmes and demonstrate solutions to increase energy affordability in residential and public buildings, targeting specifically the most vulnerable and affected groups of population.

2. BACKGROUND

Moldova is part of the EU's European Neighborhood Policy (ENP) and in the Eastern Partnership framework, which aims at strengthening individual and regional relationships between the EU and countries in its neighborhood. Moldova is also part of the Energy Community Treaty since 2010 and has signed the Association Agreement with EU in June 2014, including the DCFTA which entered into force in 2016. As a follow-up, Moldova is required to ensure transposition of the EU acquis Communautaire, which underpins the EU energy legislation on electricity, gas, oil, renewables, energy efficiency and environment. The country has recently synchronized its electricity network with the ENTSO-E to connect to European electricity market.

The energy sector is one of the top priorities for the Government and it is addressed in Government's Plans and a number of policy documents, laws and regulations. The most important are the following: the draft National Development Strategy 2030, the National Energy Strategy 2030, Law on energy, Law on electricity, Law on promoting use of energy from renewable sources, Law on natural gas, Law on energy efficiency, Law on the energy performance of buildings, Law on the labelling of products with energy impact, Law on eco-design

requirements for energy-related products, etc., as well as a list of secondary legislation, meant necessary to ensure for the implementation of the primary legislation.

In accordance with the existing strategic planning documents, one of main priorities of the Government is to diversify the energy mix with more renewable energy, which is also fully in line with commitments under the EU Clean Energy for all Europeans packages. Achieving this goal will require significant investment in the medium and long term, but also the country's ability to attract and absorb the funds. The development of renewables, such as wind and solar, will also depend on improving the balancing capabilities of the Moldovan power system and its integration with neighboring countries.

Starting with October 2021, Moldova faced significant crisis in the gas sector, which outlined the need to undertake more actions towards improving energy security of the Republic of Moldova, both in the natural gas and electricity sectors. To enhance security of gas supply, Moldovan authorities are seeking various ways to diversify gas and electricity supply, to strengthen its energy security and enabling a transparent, fully open and well-functioning energy market.

The acute gas supply crisis in Moldova has also been subject of discussions within the Moldova-EU Association Council meeting on October 28, 2021. The EU and Moldova stressed the importance of resilience against any potential efforts by third parties to use energy as a geopolitical lever. The Association Council recalled the importance of continued energy market reform to strengthen competition and transparency in this sector. The EU has urged Moldova to ensure that the energy sector reform demonstrates full respect of the Energy Community acquis and is in line with the EU Third Energy Package. The EU side confirmed its support to the objective of Moldova for integration into the EU energy system and market, an important step being the recent synchronization of its electricity network with the Continental European Network (CEN).

Under these circumstances, the Government of Moldova will be assisted to tackle the current energy crisis and energy poverty and addressing prioritized systemic elements in the energy sector to cope with potential future energy crisis. In partnership with EU, UNDP Moldova will therefore, support the Government of Moldova:

a. To tackle the current energy crisis and energy poverty, and addressing prioritized systemic elements in the energy sector to cope with potential future energy crisis
b. To support the Government of Moldova in building its capacities towards strengthening the national energy security, as well as in improving the legal and regulatory framework and operationalizing specific rapid large-scale interventions to tackle energy poverty and support most vulnerable and affected groups of population and businesses.

The project duration is envisaged between 2022- 2024 with support from Foreign Policy Instrument (herewith FPI) of EU.

One of the components of the project is *Demonstration/pilots of energy efficiency and renewable measures to increase energy affordability and development of sustainable financing mechanisms with primary focus on vulnerable households and public sector.* The main project activities where the support of the Engineers is required are:

a. Design and pilot of the Green Home Grant Programme;
b. Refurbishment of the distribution heating system form the multi-story residential buildings connected to CHP in the cities where it is operational;
c. Promote the use of renewable energy within medical institutions.

The Green Home Programme aims to help households affected by energy poverty to reduce their bills by implementation of energy efficiency measures and renewable energy solutions in households. Under this action about 250 households will benefit of measures such as: thermal insulation of building envelope, changing the heating source, installation of photovoltaic systems etc.

Refurbishment of the distribution heating system form the multi-story residential buildings initiative aims to help the apartment buildings to reduce their bills by refurbishment of the distribution heating system from the selected multi story residential buildings connected to CHP. The intervention will consist in switching from vertical to horizontal distribution of heat with installation of modern meters and individual heating substations to allow efficient and automatic operation of heating system in autumn and spring period and offering the possibility for beneficiaries to adjust the heat comfort in each apartment by adjusting the desired temperature.

To promote the use of renewable energy within medical institutions at least three medical institutions will benefit of photovoltaic systems. The initiative aims to help the beneficiary medical institutions to reduce their bills on electricity by applying the net metering mechanism. The intervention will consist in installation of the photovoltaic systems of about 200 kW power each in three medical institutions. Installation of photovoltaic systems according to the net metering scheme will allow the beneficiary medical institutions to save significant amount of energy and ensure a higher level of security

In this context, UNDP Moldova is seeking to recruit a Chief engineer to provide expertise and technical assistance in implementation of project activities. It should be noted that the Chief Engineer will be supported in his work by a team of 4 engineers. The number of sites to be monitored and the degree of execution of technical documentation and works are as follows:

a. 22 individual households where the technical design has already been prepared and works have been executed. All the sites are in the process of convening Committees for the Substantial and Final Phases of Completion.
b. 5 medical institutions where photovoltaic systems are being installed. At 4 of these medical institutions, the technical documentation has already been prepared and the works have been executed. All four (4) sites are in the process of convening Committees for the Substantial and Final Phases of Completion. For one (1) medical institution, the beneficiary requested the connection permit needed for the development of the technical design and execution of works.
c. 4 multilevel residential buildings where the reconstruction of the heating and hot water distribution system is in progress. The volume and quality of the works are to be monitored, and a meeting of the Commission for Acceptance of the completed works is to be organized.
d. 40 individual households to be provided with thermal insulation and replacement of doors and windows. The contract with the construction company is now ready to be signed, and the work will commence.
e. 22 individual households to have biomass boilers installed. The contract with the selected company is ready to be signed, and the works will commence.
f. 11 individual households where solar collectors are to be installed. The contract with the selected company is ready to be signed, and the works will commence.
g. A second cohort of 150 households to be equipped with photovoltaic systems. The selection and contracting procedures for the company are currently in progress.

3. SCOPE OF THE WORK, DUTIES AND RESPOSIBILITIES

The scope of the current assignment is to provide expertise to the project team in contracting the design and/or construction companies for works and technical assistance in monitoring the progress of implementation the construction works foreseen in the component 4 of the project.

More specific, the Chief engineer is expected to perform the following tasks:

1. Provide technical assistance for contracting the technical design services (support for preparation of the specifications, support for the evaluation etc.).

2. Support contracted companies in the optimization of design for the installation of photovoltaic systems and other energy efficiency works and the use of renewable energy resources, providing leadership and strategic input into their finalization.
3. Ensure that all documents, permits for the preparation of technical design and the execution of construction works and other necessary decisions are technically correct and that they are adequately consulted and discussed with the relevant parties.
4. Provide support for contracting the works (support for preparation of the specifications, support for the evaluation etc.).
5. Overall coordination of the activities of a hired team of engineers on monitoring the constructions works.
6. Quality control of works carried out for thermal insulation, installation of equipment (biomass boilers, solar collectors and photovoltaic systems), reconstruction of heating systems in multi-story residential buildings etc.
7. Provide technical assistance to beneficiaries during the implementation of works.
8. Ensuring that for each construction site all required documentation and permits are obtained. Supervise and obtain all necessary approvals during the implementation of the project and including, at any stage of implementation or completion. Ensure that licenses and authorizations, as necessary and appropriate are in place, and proactively stop any works in case of withdrawal, suspension or expiration of such, immediately presenting a report in this respect to the Beneficiary and the Project Manager. Responsible for the adequate filing of technical documentation.
9. Conduct the committees at the substantial and final phase of completion of works.
10. Prepare and update the schedule of works implementation for each site.
11. Ensure application of the UNDP construction policy.
12. Support in elaboration of request for payments for the companies contracted for execution of works for thermal insulation, installation of equipment (biomass boilers, solar collectors and photovoltaic systems), reconstruction of heating systems in multi-storey residential buildings etc.
13. Provide at least bi-weekly regular progress reports of works on site.

4. EXPECTED DELIVERABLES AND TENTATIVE TIMEFRAME

The assignment will require delivery of the following outputs:

Deliverables for chief engineer	Tentative time frame	Estimated workdays
Deliverable 1: Provided Support for Technical Design and Contracting Works for Photovoltaic Systems Contents: Report and Documentation demonstrating support provided during the preparation of specifications and evaluation during contracting processes.	**Oct 2023 – Jan 2024**	2 w.d
Deliverable 2: Support for development of the Works Implementation Schedule Contents: Schedules for the implementation of works at each site, including updates and revisions made during the project.		10 w.d
Deliverable 3: Supervise engineers team during development of proposal for optimization of the Technical design documentation Contents: Report and Documentation demonstrating support provided during the preparation of Technical design documentation.		5 w.d
Deliverable 4: Coordinated Activities of Hired Team of Engineers Contents: Reports detailing the coordination efforts for monitoring construction works carried out by the hired team of engineers.		33 w.d

Deliverable 5: Conducted Quality Control for Thermal Insulation, Equipment Installation and Heating system on reconstruction in multi-story residential buildings Contents: Reports of site visits on Quality control for works related to thermal insulation, equipment installation (biomass boilers, solar collectors, photovoltaic systems), and heating system on reconstruction in multi-story residential buildings.		10 w.d
Deliverable 6: Provided Technical Assistance to Beneficiaries Contents: Records of technical assistance provided to beneficiaries during the implementation of works, including any support or guidance given.		2 w.d
Deliverable 7: Conducted support and coordination for organization of the Meetings of Committees at Substantial and Final Phases of Completion Contents: Reports and minutes notes of committees conducted during the substantial and final phases of works' completion, including findings and recommendations.		3 w.d
Deliverable 8: Examined and approved Payment Package Requests for Contracted Companies Contents: Quality control of the documents related to the elaboration of payment requests for companies contracted for the execution of works, including those related to thermal insulation, equipment installation (biomass boilers, solar collectors, photovoltaic systems), and heating system reconstruction in multi-story residential buildings.		5 w.d

The timeframe for the delivery of each activity/output shall be coordinated and agreed in advance with the UNDP Project team.

Note:
Deliverables can be amended or specified for the purpose of the assignment. The documents will be delivered in Romanian.

5. INSTITUTIONAL ARRANGEMENTS

The Lead Engineer will work under direct supervision of the Team Leader– Component 4 of the FPI Programme. Overall supervision of the assignment will be the responsibility of the FPI Programe Manager.

This is a part-time consultancy. It is expected that the Consultant begins the assignment in October 2023 and completes it in January 2024. The UNDP will provide the administrative and logistical support in organization the travels on sites outside of Chisinau.

Performance evaluation: The Consultant's performance will be evaluated against such criteria as timeliness, responsibility, initiative, communication, accuracy, and quality of the products delivered.

Language of the deliverables: All communications and deliverables related to the assignment will be in English and/or Romanian and Russian, as communicated prior by the Team Leader/Programme Manager.

6. FINANCIAL ARRANGEMENTS:

The financial proposal shall specify a total **lump sum** amount, and payment terms around specific and measurable (qualitative and quantitative) deliverables (i.e., whether payments fall in installments or upon

completion of the entire contract). Payments are based upon output, i.e., upon delivery of the services specified in the TOR. To assist the requesting unit in the comparison of financial proposals, the financial proposal will include a breakdown of this lump sum amount (including the daily fee, taxes, and number of anticipated working days).

7. CONFIDENTIALITY

Materials provided to the Consultant and all proceedings within the consultancy contract shall be regarded as confidential, both during and after the consultancy. Violation of confidentiality requirements may result in immediate termination of contract.

8. QUALIFICATION AND SKILLS REQUIRED

The incumbent should prove sound knowledge in civil engineering, local/Moldovan construction norms and standards, national building laws, as well as extensive experience in implementing energy refurbishment projects in buildings.

I. Education

- University Degree in civil engineering, energy, architecture or other relevant related area.

II. Experience and knowledge

- Work experience: at least seven (7) years of work experience in the field of civil engineering;
- Extensive experience in construction of small-scale infrastructure and civil works, preferably buildings renovation;
- Strong knowledge and extensive experience of software similar to WinSmeta;
- In depth knowledge of national legislation pertaining to the construction works;
- Previous experience in development assistance or related work for a donor organization, development partners, UN Agencies would be an advantage.

III. Competences and skills

- Language skills: excellent command of written and spoken Romanian and Russian is required; knowledge of English is an asset;
- Computer proficiency, including knowledge of MS Office products (Word, Excel, Power Point) and electronic communication platforms such as Microsoft Teams, ZOOM, Google meet;
- High level of responsibility and organization capacities, creative approach to solving issues;
- Excellent communication and reporting skills;
- Ability to meet deadlines and prioritize multiple tasks.

The Chief engineer have to demonstrate commitment to the core values of the United Nations, in particular, respecting differences of culture, gender, religion, ethnicity, nationality, language, age, HIV status, disability, and sexual orientation, or other status.

The United Nations in Moldova is committed to workforce diversity. Women, persons with disabilities, Roma and other ethnic or religious minorities, persons living with HIV, as well as refugees and other non-citizens legally entitled to work in the Republic of Moldova, are particularly encouraged to apply.

Documents to Be Included When Submitting the Proposals

Interested individual consultants must submit the following documents/ information to demonstrate their qualifications:

1. Signed and filled-in Offeror's letter to UNDP confirming interest and availability for the individual contractor (IC) assignment, incorporating financial proposal in Annex 2 (in USD, specifying a total requested amount per working day, including all related costs, e.g. fees, phone calls etc.). Annex 2 to the Offeror's letter, incorporating the Financial Proposal, shall be filled in mandatorily and includes the detailed breakdown of costs supporting the all-inclusive financial proposal;
2. Proposal (Motivation Letter): explaining why they are the most suitable for the work including previous experience in similar Projects (please provide brief information on each of the above qualifications, item by item, including information, links/copies of documents for similar assignments);
3. CV with at least 3 references.

Important notice: The applicants who have the statute of Government Official / Public Servant prior to appointment will be asked to submit the following documentation:

- a no-objection letter in respect of the applicant received from the Government, and;
- the applicant is certified in writing by the Government to be on official leave without pay for theentire duration of the Individual Contract.

9. PAYMENT MODALITIES

The Chief engineer will organize and facilitate the implementation of all activities as described above. His/her payment will be lump sum amount based, disbursed in several instalments, upon submission and approval of deliverables and certification by Programme Manager that the services have been satisfactorily performed.

10. EVALUATION

Initially, individual consultant/engineer will be short-listed based on the following minimum qualification criteria:

- University Degree in civil engineering, energy, architecture, or other relevant related area;
- At least (7) years of work experience in the field of civil engineering.

The short-listed individual engineers will be further evaluated based on the following methodology:

Cumulative analysis

The award of the contract shall be made to the individual consultant whose offer has been evaluated and determined as:

a. responsive/compliant/acceptable, and

b. having received the highest score out of a pre-determined set of weighted technical and financial criteria specific to the solicitation.

   - Technical Criteria weight – 60% (200 pts);
   - Financial Criteria weight – 40% (200 pts).

Only candidates obtaining a minimum of 70% score of the technical evaluation (at least 210 points) would be considered for the Financial Evaluation.

Criteria	Scoring	Maximum Points Obtainable
Technical		
Advanced degree (Master/equivalent or Ph.D., BCs) in civil engineering, energy, architecture, or other relevant related area	Bachelor's degree – 10 pts., Master/equivalent – 15 pts., PhD - 20 pts	20
At least 7 years of work experience in the field of civil engineering	No - 0 pts, 7 years – 40 pts, more than 7 years – for each additional year 5 pts up to the max – 50 pts.	50
Extensive experience in construction of small-scale infrastructure and civil works, preferably buildings renovation	no- 0 pts, 3 assignments – 20 pts, more than 3 assignments – for each additional project 5 pts up to the max – 30 pts	30
Language skills: excellent command of written and spoken Romanian and English is required; knowledge of Russian is an asset;	English – 10 pts; Romanian or Russian – 5 pts per each.	20
Interview evaluation criteria		
Proven knowledge and application of national legislation pertaining to the construction works	No knowledge – 0 pts. Poor knowledge < 20 pts Satisfactory knowledge <35 pts Good knowledge < 45 pts Very good knowledge < 50 pts	50
Proven experience in management and supervising the team of experts/consultants	No – 0 pts. 5 years – 30 pts. More than 5 years -for each additional year, 10 pts., up to max.– 50 pts	50
Previous experience in development assistance or related work for a donor organization, development partners, UN Agencies	no- 0 pts, 3 assignments – 35 pts, more than 3 assignments – for each additional project/assignment 5 pts up to the max – 50 pts	50
Knowledge and experience in checking the bill of quantities (BoQs)	No – 0 pts; Yes – 20 pts.	20
Belonging to the group(s) under-represented in the UN Moldova and/or the area of assignment	no – 0 pts., to one group – 5 pts., to two or more groups – 10 pts.	10
Maximum Total Technical Scoring		**300**

Financial Evaluation Scoring	
Evaluation of submitted financial offers will be done based on the following formula: **S = Fmin / F * 200** S – score received on financial evaluation; Fmin – the lowest financial offer out of all the submitted offers qualified over the technical evaluation round;	**200**

F – financial offer under consideration.	

Winning candidate

The winning candidate will be the candidate, who has accumulated the highest aggregated score (technical scoring + financial scoring).

11. ANNEXES TO THE TOR

Annex 1 - Individual Consultant General Terms and Conditions
Annex 2 - Offeror's letter confirming interest and availability, including a financial proposal (template).