



## TERMS OF REFERENCE

<b>Title:</b>	Energy data scientist (to be part of a Team of experts for the Ministry of Labor and Social Protection (MLSP))
<b>Project:</b>	Addressing the impacts of the energy crisis in the Republic of Moldova: Initiating solutions toward energy security and energy poverty, Policy and Strategic Unit, evidence-based policy support to the MLSP on energy poverty and support to most energy vulnerable groups of population
<b>Reporting to:</b>	MLSP, guidance to be provided by the Policy Specialist and Energy Cluster Lead, UNDP Moldova
<b>Duty Station:</b>	at the premises of the MLSP, Chisinau, Moldova
<b>Contract Type:</b>	Individual Contract (IC)
<b>Duration:</b>	90 working days during September 2022 - February 2023

## BACKGROUND INFORMATION

Since early March 2020, the Republic of Moldova is confronting a complex health and socio-economic crisis induced by the COVID-19 pandemic. As summarized in the SEIA, the crisis is underscoring the importance of LNOB challenges in Moldova, due to shrinking incomes and expenditures, limited access to health and education, and challenges for local businesses due to supply disruptions and plummeting demand at home and abroad. The war in Ukraine will significantly affect poverty in Moldova, with two important emerging forms of poverty becoming more prominent, including energy and food poverties.

During the second half of 2021, these developments played out against a backdrop of the European gas crisis, when gas prices spiked above \$1000/cubic meter (5-10 times 2020 levels). Moldova's gas import contract with Russia's Gazprom expired in October 2021; and with a new negotiated contract, Gazprom will supply Moldova gas at a price of about \$450-500/1000 cubic meters. Gas tariffs for most users are expected to double or triple—at a time when the country is experiencing the fourth wave of the COVID-19 pandemic, and when heating needs are ratcheting up in the face of the on-coming winter.

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).

Moldova is therefore facing exorbitant prices for those supplies it can obtain. For a country in which nearly two thirds of the population was living on less than \$10/day before the pandemic began, in which spending on food and energy absorb the vast majority of vulnerable household incomes, and which generates the lion's share of its electricity from gas, this price shock can have significant crisis implications. Combined with the

country's on-going macroeconomic and epidemiological distress, the gas shock also poses major risks to the government's reform program, which seeks to strengthen Moldova's alignment with European and global good governance practices and is central to Moldova's hopes for achieving the SDGs.

In response to this unfolding crisis and in order to systemically tackle the energy poverty and vulnerability, the Moldovan Government is planning to create an Energy Vulnerability Fund (EVF) to compensate most vulnerable households for the increase in the tariffs for electricity, natural gas and heating in the upcoming cold period of 2022-23 and beyond. The planned compensations will be on-bill and the resources will come from a national Energy Vulnerability Fund – a blended fund that will include public budget resources and other resources, including from the development partners.

Another instrument of the Fund dedicated to the energy vulnerable households is the subsidies for implementation of energy efficiency measures which will include replacement of the old energy intensive home appliances, as well replacement the windows, thermal insulation of building envelope and renovation of the individual heating systems.

## **OBJECTIVES**

The objective of the assignment is to provide support to the Government/ Ministry of Labor and Social Protection to develop and implement a National Energy Vulnerability Fund (EVF) for on-bill compensation for energy and for the subsidies (Vouchers Programme and Green Homme Programme) dedicated to energy efficiency measures for the most vulnerable households in Moldova, as well as evaluate the impact of the compensations on the energy poverty in Moldova. Specifically, the expert will provide assistance in the development of the social protection component and mechanisms of the Fund, its costing, as well as the estimation of the national minimum energy consumption basket taking into consideration the context, the energy vulnerability profile of the HHs and other elements.

The support will include:

- Specific detailed concept of the Energy Vulnerability Fund;
- Detailed description of the on-bill compensation mechanism; support for the approval of the mechanism by the Government;
- Supporting the government in providing data-driven evidence with regards to decision-making and the implementation of the EVF Development of a specific mechanism to evaluate the impact of the on-bill compensations;
- Development of a specific mechanism to evaluate the impact of the vouchers program to help energy vulnerable families to replace old energy-consuming appliances;
- Development of policy or position briefs on the implementation of the EVF, including mainstreaming the use of data for decision-making with regards to energy poverty and vulnerability, energy efficiency;
- Detailed description of the online application module, including contributing to its improvement, testing and support, and its interoperability with other relevant Government systems and datasets;
- Assistance for designing the needed operational procedures/regulation of the Vouchers Programme and Green Homme Programme and the eligibility criteria for the potential beneficiaries;
- Detailed description of the key variables for the application process, the algorithm for the categorization of the HHs depending on their level of energy vulnerability, algorithm for the verification of the applications/applicants, other;
- Development of the data related regulatory framework related to the implementation of the Program, including examining the approaches regarding the implementation of the program and related legislation and organizing information campaigns and training on the implementation of the Program and related legislation;
- Support in the implementation of the above;

- Costing for the EVF;
- Other related tasks.

**DUTIES AND RESPONSIBILITIES**

**a. Scope of work**

The **Energy data scientist**, in tandem with other technical experts, will lead on the conceptualization, development, and support to the implementation of the EVF. In particular, the expert will propose and consult suitable methodological approaches to the development of the EVF and the compensation package, taking into consideration the energy poverty and vulnerability in Moldova. The expert will review and incorporate the good practices from the region, make use of existing and new evidence to be used for the development of the EVF.

**The direct beneficiary of the Assessment report is the Ministry of Labor and Social Protection, as well as other subordinated agencies and other line ministries.**

**b. Deliverables and Timeline**

The consultant is expected to produce the following deliverables:

<b>Deliverables</b>	<b>Deadline</b>
1. Detailed concept of the Energy Vulnerability Fund/Outline to be agreed with the MLSP/UNDP and costing	October 2022
2. Concept for the application module with technical specifications, to include key variables, inclusion criteria, verification criteria, algorithm for the categorization of the HHs	October 2022
3. Development of a mechanism for impact evaluation of the compensations on energy poverty in targeted HHs	September 2022 - February 2023
4. At least 2 specific policy/position briefs on subjects to be identified; provide capacity building for staff of the MLSP on energy vulnerability and measurement of energy poverty in Moldova;	Throughout the process, by February 2023
5. Support in the implementation of the EVF and monthly reporting on progress	September 2022 – February 2023

**MANAGEMENT ARRANGEMENTS**

The consultant will work from the premises of the Ministry of Labor and Social Protection. He/she will use data available in Romanian, English and Russian, and will produce all the deliverables in English and Romanian languages. Shall the deliverables need to be translated into Russian; the project will cover the translation costs.

All deliverables must be quality reviewed and accepted by the Ministry of Labor and Social Protection and UNDP Policy Specialist and UNDP's Energy/Environment Cluster Lead. The payments will be disbursed in several instalments, upon the completion of the deliverables.

## **QUALIFICATIONS AND SKILLS REQUIRED**

### **Qualifications and Experience**

- Master's degree or equivalent in the field of data, big data, AI, social sciences, energy economics, statistics, or related fields;
- Thorough understanding of the energy market and energy poverty in Moldova;
- Minimum 7 years of relevant professional experience in research in areas related to energy poverty and vulnerability and social protection; experience in working with new types of data (including big data) is an important advantage;
- Experience in working with new types of data (including big data);
- Previous proven analytical experience in the areas of energy, energy poverty and vulnerability, access to energy, other;
- Previous energy sector related experience in development assistance or related work for a donor organization, governmental institution, NGO, or private sector;
- Advanced research skills and capability of producing analysis using quantitative and qualitative data (references to documents to be provided), AI, big data, development of new algorithms;
- Proven experience in convening partners, organizing, and leading strategic meetings, facilitating policy dialogues in areas related to energy, energy poverty and vulnerability;
- Strong leadership and team management skills;

### **Skills and Competencies**

- Excellent quantitative and qualitative research skills;
- Proven capacity to produce reports and analyses in English;
- Consistently ensures timeliness and quality of work;
- Innovative and creative thinking;
- Consistently approaches work with energy and a positive, constructive attitude;
- Excellent interpersonal and teamwork skills;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability;
- Ability to facilitate group processes, including when tensions arise.

### **Language:**

- Proficiency in Romanian and English. Knowledge of Russian is an asset.