

Terms of Reference for consulting firm

Improvement of Energy Efficiency advisory in Kyrgyzstan

1. Project background

Kyrgyzstan is facing significant challenges in energy efficiency, particularly in the construction sector. Despite recent legislative advancements, including the accreditation of energy efficiency experts (ECB experts) by the State Agency for Architecture and Construction (GOSSTROY), access to quality energy efficiency services remains limited, especially in regions outside of Bishkek. The project “**Making high-quality energy efficiency advisory services available nationwide**”, funded by GIZ through the IKI Small Grants Program, aims to develop high-quality energy efficiency advisory services nationwide, improve professional standards, and contribute to policy development in this area.

The Government of Kyrgyzstan has declared a three-year state of emergency due to the ongoing energy crisis and water scarcity. Effective energy demand management is critical, and the government is actively promoting the implementation of the Law of Kyrgyz Republic on Energy Performance of Buildings (EPB) No.137 from 26th July 2011 and strengthening minimum energy performance standards for buildings. Although GOSSTROY is mandated by law to enforce these standards, the implementation has been limited due to insufficient capacity among accredited experts and government officials. The EPB and its sub-laws¹ sets the minimum energy performance requirements for new construction and building retrofits. All new buildings and major renovations must meet energy performance standards of Class 'B,' verified through an Energy Performance Certificate (EPC). To comply with this regulation, capacity building and procedures for issuing EPCs must be established both for existing buildings and for post-retrofit assessments. Understanding the baseline energy performance or classification is essential to designing a set of energy-saving measures that can collectively achieve Class 'B' after retrofitting. In addition to EPCs, methodologies and capacities for conducting various levels of building energy audits are required to ensure the formulation of effective energy-saving strategies.

The Kyrgyz Republic undertook a comprehensive effort to establish an energy registry, which involved developing necessary guidelines, training materials, certification rules, and making amendments to relevant legislation. More detailed information can be found on the website of the Kyrgyz Energy Registry <https://energoreestr.kg/ru>. However, due to the rapid development of energy certification, there is a need to update the existing regulatory framework and integrate new data into the current guidelines.

2. Objective and purpose of the consulting services

Public Foundation “UNISON” will be engaging an international consultancy firm or individual experts (the Consultant in the following) to support the effective implementation of the project on capacity building and improvement of the ECB tools. The Consultant will be engaged using the simplified consultants’ qualification selection in according the UNISON procurement rules. The Consultant will conduct detailed due diligence required for ECB enhancement, work on ECB tool updating and provide Training of Trainers (TOT) for ECB capacity building.

¹ <https://cbd.minjust.gov.kg/93706/edition/405723/ru>

3. Terms of Reference

Scope of the work.

The Consultant will be responsible for

- the upgrade of the ECB tool for the calculation of the energy performance of buildings including the upgrade of the ECB tool manual;
- the design and provision of a TOT training on ECB;
- the delivery of an assessments on the ECB legislation framework and the policy recommendations;
- the participation in a conference.

The TOT training will be delivered mainly on-line. It is expected that the Consultant will be travelling to Bishkek and Osh for the delivery of the final session of the TOT training and to participate in the national Policy Dialogue conferences.

The Consultant will work in close coordination with UNISON project experts.

Detailed tasks

The Consultant will play a crucial role in aligning current practices in energy efficiency certification in Kyrgyzstan to international standards, particularly those established by the European Union.

1. Upgrade of the ECB tool (Excel tool)

The current ECB tool shall be reviewed and upgraded to meet the following objectives:

- have the whole calculation performed monthly for both building envelope and technical systems;
- align the overall calculation structure (needs, delivered energy, weighted energy) with the overarching ISO and EN standards;
- add missing calculation steps to improve usability, such as calculation of distribution losses;
- add a framework and simplified evaluation of the following generation systems: heat pump, PV, thermal solar;
- consolidate the calculation of the most frequent energy systems in Kyrgyzstan
- review and update the input data on building envelope (materials, structures)
- improve the user-friendliness of the user interface (concentrate input data and calculation results in dedicated areas of each sheet);
- update of the mixed-use buildings tool
- update of the reporting tables from calculation and of output for central register

The upgraded ECB tool shall be kept consistent with the structure and format of the existing tool.

The upgraded ECB tool will still be limited to heating and domestic hot water services for the whole building.

2. Training of the Trainer

The Training of the Trainer (TOT) shall cover the necessary topics to allow the understanding and use of the updated Excel tool, namely:

- general concepts of energy performance assessment, overview and indicators according to EN ISO 52000-1;
- building envelope assessment, including data collection;
- heating and domestic hot water systems assessment, including data collection;
- relation between measured and calculated energy use for heating and domestic hot water
- use of the upgraded ECB tool.

The training will be performed on-line, with a final in-person session in Bishkek, to be held in conjunction with the thematic conference.

3. Policy analyzes report on enhancing buildings energy efficiency in Kyrgyzstan in line with EPBD development and Kyrgyzstan Low carbon strategy 2050. The report shall cover the following topics:
 - review the existing Kyrgyz legislation on energy performance of buildings;
 - propose the short-term steps for Kyrgyzstan legislation on energy performance of buildings;
 - propose a road-map for the long-term steps for aligning with EPBD development and Kyrgyzstan Low carbon strategy for year 2050

Thematic Conferences

The Consultant will guarantee the participation of two experts in two thematic Conferences planned in Bishkek and Osh on the findings and recommendations, on enhancing buildings energy efficiency in Kyrgyzstan including the preparation of the presentations in English.

4. Assistance on the UNISON expert's capacity building on EU EPBD experience by helping to identify relevant counterparts from EU institutions during the EU visit organized by UNISON. The contact will be provided by Consultant but visits will be organized by Unison.

Working language

The working language will be English. All written deliverables, training and presentations to conferences shall be provided by the Consultant in English. The translation into Kyrgyzstan official language(s) will be in charge of Unison.

Deliverables and timetable

In coordination with UNISON project experts, the Consultant will prepare the following deliverables and activities:

Timeline	Deliverables / Activities
End-February 2024	1. Upgraded Excel ECB tool, Upgraded ECB tool manual
End March 2024	2. TOT training material, On-line TOT training
Mid April 2024	3. Policy recommendation report on enhancing buildings energy efficiency in Kyrgyzstan
End April 2025	Four consecutive days availability of two experts in Kyrgyzstan (Bishkek and one day trip to Osh) for the final TOT session and to take part in two thematic Conferences.
June 2025	4. Assistance on the UNISON expert's capacity building on EU EPBD experience by helping to identify relevant counterparts from EU institutions during the EU visit organized by UNISON.

4. Qualification Requirements

The Consultant firm and its experts must demonstrate successful experience in Energy Efficiency of Buildings, including technical and strategic involvement in related projects. Minimum qualifications include:

- The Consultant must be a legally recognized organization with international operations in energy efficiency, with a proven track record in services like energy certification, and strategic energy regulation development.
- Experience in both developed and developing regions, especially those with conditions similar to Kyrgyzstan.
- Expertise in designing and implementing training programs for energy efficiency professionals, covering both theoretical and practical skills.
- Proven experience in "Train the Trainer" programs and curriculum development. Experience with e-learning or blended learning formats, including digital tools for training delivery, will be considered an added value.

The expected amount of work by the Consultant experts with extensive ECB and EPBD implementation experience is estimated as:

- Expert on ECB (international), 0.75 person months
- Expert on boilers and heating systems, 1 person months

All travelling expenses and the accommodation in Kyrgyzstan for two experts will be provided by UNISON.