



National training seminars on municipal energy management, energy management information system, measurement, reporting and verification in the building sector in the three selected UNECE member States (Armenia, Kyrgyzstan, and the Republic of Moldova)

– Final Report –

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Background Information

The target 7.3 of the Sustainable Development Goal 7 is to “double the global rate of improvement in energy efficiency by 2030”. There is significant potential worldwide for improving energy efficiency, even though the significant progress is indeed being made. Improving energy efficiency is one of the most cost-effective options for meeting growing energy demand in most countries. It contributes to energy security, a better environment, improved quality of life of both men and women, and their economic well-being. Out of all sectors of economic activity, the buildings sector has the largest potential for cost-effective improvement in energy efficiency and emissions reductions.

The United Nations Economic Commission for Europe (UNECE) is implementing the project “Enhancing National Capacities to Develop and Implement Energy Efficiency Standards for Buildings in the UNECE Region”. The project aims to enhance capacity of the UNECE member States to develop and implement energy efficiency in buildings and improve the knowledge of policy makers and experts from UNECE member States of the energy efficiency standards, their enforcement mechanisms and energy efficient technologies in buildings.

One of the project activities was to organize the national training seminars in the three selected UNECE member States (Armenia, Kyrgyzstan, and the Republic of Moldova) on high-performance energy efficiency standards in buildings.

Basic information

The objective of the training was to improve understanding of the energy management and monitoring, reporting and verification (MRV) in the buildings sector; understanding of institutional, organizational and legal aspects of energy management and MRV at the global and EU level; consolidate capacities to organize the municipal energy management as part of the national MRV system; knowledge to use existing or organize the development of the Energy Management Information System.

Timing and Content

The national trainings were organized in the three selected UNECE member States (Armenia, Kyrgyzstan, and the Republic of Moldova) and covered topic related to high-performance energy efficiency standards in buildings. The three UNECE member States as well as the dates and venues of the trainings are listed in the table below:

	Location	Date	Venue and the address
1	Yerevan, Armenia	25 th to 26 th of October 2021	Best Resort Aghveran Hotel <i>1 Antarayin St, Arzakan 2503, Armenia</i>
2	Bishkek, Kyrgyzstan	29 th to 30 th of November 2021	Bridges Hotel Bishkek <i>10, Kalyk Akiev Street, Bishkek, Kyrgyzstan</i>
3	Chisinau, Republic of Moldova	20 th to 21 st of January 2022	Agency for Energy Efficiency <i>Strada Alecu Russo 1, Chişinău, Moldova</i>

The main outcome of the training seminar was achieved, the participants gained knowledge and expertise on high-performance energy efficiency standards in buildings and got the following competencies:

- Understanding the energy management and monitoring, reporting and verification in the buildings sector
- Competence to understand the institutional, organizational and legal aspects of energy management and monitoring, reporting and verification at the global and EU level
- Knowledge to organize the municipal energy management as part of the national monitoring, reporting and verification system
- Knowledge to use existing or organize the development of the energy management information system
- Understanding of the energy auditing process and confidence in using multicriteria analysis tools
- Ability to use and understand the funding possibilities for energy efficiency measures in buildings

Participants

The selection of training participants was based on the open invitation sent by UNDP offices of all the three UNECE member states. The participants lists are provided in the ANNEX 2 – List of Participants.

Based on the answered evaluation questionnaire (ANNEX 5 – Evaluation Questionnaire Results – raw data) in Armenia most of the participants were from public institutions, in Kyrgyzstan - from private companies and university, and in the Republic of Moldova- from public institutions and private companies.

In Armenia there were 29 participants physically present at the venue in the Best Resort Aghveran Hotel from 25th to 26th of October 2021. Around 17 persons were participating online, meaning that all together around **46 participants followed the training held in Armenia** but only 9 participants filled the evaluation questionnaire.

In Kyrgyzstan there were 44 participants physically present at the venue in the Bridges Hotel Bishkek from 29th to 30th of November 2021 but only 21 filled the evaluation questionnaire. There were no online participants in Kyrgyzstan, so all together **44 participants followed the training held in Kyrgyzstan** out of which 21 participants filled the evaluation questionnaire.

In the Republic of Moldova there were 30 participants physically present at the venue in the Agency for Energy Efficiency from 20th to 21st of January 2022. Around 60 participants were participating online (at certain point 78 participants joined online) meaning that all together around **90 participants followed the training held in the Republic of Moldova** out of which 30 participants filled the evaluation questionnaire.

All together 180 participants followed the two-day training, both online and offline, in Armenia, Kyrgyzstan and the Republic of Moldova.

Lectures

All three training seminars were organized as a two-day event, and the presentations were distributed into six sessions. The first day sessions were focused more on energy audits procedures, energy management information system and municipal energy management. The second day sessions were more oriented towards institutional, organizational, and legal aspects of energy management and monitoring, reporting and verification of energy efficiency measures, energy management and monitoring, reporting and verification of energy efficiency measures in the buildings sector and economic evaluation and funding possibilities of energy efficiency measures in buildings.

The following form of teaching was used during the training seminar:

- Classroom lectures (with in-person participation and online connection)
- Classroom calculation exercises using calculation tools

The agenda of all three training seminars is attached to this report (ANNEX 1 – Events' Agenda).

National trainings evaluation

Participants were asked to fill in the questionnaire during the end of the second day to have a trainees' perspective of the delivered national training course. The trainees were asked to provide their evaluation of organisational issues, the quality of training and self-assessment of own capacity showing their understanding of topics covered by the training. The raw data received by the trainees is provided in the ANNEX 5 – Evaluation Questionnaire Results – raw data.

There were nine (9) questionnaires received from the participants in Armenia, twenty-one (21) in Kyrgyzstan and thirty (30) in the Republic of Moldova.

Organization of the training was evaluated as excellent (4.6 in Armenia and 4.8 in the Republic of Moldova) and very good in Kyrgyzstan with the score of 4,2. Venue of the training seminar, the number and duration of coffee/lunch breaks and the time schedule of lectures were scored in all three countries as excellent with average scores of 4.7, 4.8 and 4.6. The overall duration of the training seminar was scored slightly lower, however still very good with the average score of 4.3.

Participants also scored each session with various scores presented in the table below where the **overall average score of all the sessions is very good in Armenia (4.4) and Kyrgyzstan (4.0) and excellent in the Republic of Moldova (4.7).**

	Armenia	Kyrgyzstan	Moldova	AVERAGE
Quality of the session 2 "Introduction to energy management and monitoring, reporting and verification in the buildings sector"	4.3	3.8	4.7	4.3
Quality of the session 2 "Institutional, organizational and legal aspects of energy management and monitoring, reporting and verification at the global and EU level"	4.5	4.2	4.7	4.5
Quality of the session 3 "Municipal energy management as part of the national monitoring, reporting and verification system"	4.2	4.0	4.7	4.3
Quality of the session 4 "Energy management information system and examples of energy management system tools"	4.3	4.0	4.7	4.3
Quality of the session 5 "Energy audits procedure of buildings and multicriteria analysis"	4.6	4.0	4.7	4.4
Quality of the session 6 "Best practices of funding possibilities for energy efficiency measures in buildings"	4.2	4.1	4.8	4.4
AVERAGE	4.4	4.0	4.7	4.4

Similarly, the participants scored the overall satisfaction with the training seminar (4.3) as well as the ratio between theoretical and practical part of the training seminar (4.4).

The set of questions related to participants' improvement of understanding of the energy efficiency topics presented during the training seminar, their enhanced capacities to perform specific tasks related to energy efficiency and improved capacities to deliver presentations on any specific topic presented is scored as very good with average scores of 4.0, 3.8 and 3.9.

Participants comments

The participants comments were mostly related to the need for such events to be organized regularly reflecting more local issues related to various field of energy efficiency and energy management information systems implementation in their countries. Some mentioned the need of such trainings focused on industrial energy management and energy auditing of industrial facilities with practical examples on how to use metering devices. Many participants commented that they would like to have more intensive energy auditing trainings.

There was also some criticism that the lectures would have been better if they included videos and if the visualisations were better. One comment was about the length of introductory parts of the presentations which should have been shorten. Also, participants wanted to receive the certificates of completion which were only distributed in the Republic of Moldova at the end of the training. Some participants missed more examples and more information on tools that they could use in practice.





Most of participants were, in general, very satisfied with the well-organized training and commented that everything went great, and that the information provided was well structured.

List of annexes

- ANNEX 1 – Events Agenda
- ANNEX 2 – List of Participants
- ANNEX 3 – Photos
- ANNEX 4 – Evaluation Questionnaire
- ANNEX 5 – Evaluation Questionnaire results – raw data

ANNEX 1 – Events' Agenda

National training seminar in Armenia from 25th to 26th of October 2021

ԵՆԵՔԻ ՈՒՈՏՈՒ ՎԱՍԵՔՅՈՒՆ ԷՆԲԳԵՏԻՎ ԿՈՎՈՎԱՐՄԱՆ, ԷՆԲԳԵՏԻՎ ԿՈՎՈՎԱՐՄԱՆ ՏՆԵԿԱՏՎԱԿԱՆ ՎԱՐՎԱՐԳ, ՉՊՐՈԴԱԿԱՆՈՒԹՅԱՆ, ՀԱՇՎԱՆՎՈՒԹՅԱՆ ԵՎ ՀՎԱՍՏԱԳՐՄԱՆ (ՉՀՀ) ԽՈՐՀՐԳԻՎ

ԴԱՆՎԱԹՅՈՒՆ

Ամսաթիվ՝ 25-26 հոկտեմբերի, 2021թ.
Վայրը՝ Արարատ Ռեզորթ Ճաղվանոր հյուրանոց
Կազմակերպիչներ՝ Միավորված ազգերի կազմակերպության ճյուղավաճակ փոփոխական համեմատող (ՅՀՀ) և «Հասարակում» Միավորված ազգերի կազմակերպության Չարգանան ծրագիր (ՄԱՇԸ)

ՆԱԿԱԳՈՒԹՅՈՒՆ

Դաշնագի ընթացքում անդադար չկիր շեքերում ենթաարդյունավետության բարձր չափորոշիչներին: Դաշնագը ներառում է վեց կետ, որոնք ներկայացված են ստորև՝

- Կետ 1 – Ենթակետի կատարման (ԷԿ) և շեքերի որոշում չափորակները, հաշվետվողության և հավաստագրման (ՉՀՀ) ներածություն,
- Կետ 2 – Ենթակետի կատարման և չափորակները, հաշվետվողության և հավաստագրման (ՉՀՀ) ինտեգրացիոնալ կազմակերպման և իրականացման հայեցակետերը գրքայ և ԵՄ մակարդակներում,
- Կետ 3 – Համայնքային ենթակետի կատարման որպես չափորակներ, հաշվետվողության և հավաստագրման (ՉՀՀ) ազգային համակարգի մաս,
- Կետ 4 – Ենթակետի կատարման տեղեկատվական համակարգը և ենթակետի կատարման համակարգի գործընթացի օրինակներ
- Կետ 5 – Ենթակետի ենթակետի արդյունքի ընթացակարգը և բազմաշախնչային վերլուծությունը
- Կետ 6 – Ենթակետի ենթաարդյունավետության միջոցառումների համար ֆինանսավորման հնարավորությունների իրացման չափորակները արդյունավետությանը

ԴԱՆՎԱԹՅՈՒՆ ՆՊԱՏՎԱԿՆԵՐ ՈՒ ՎԵՐՆԱԴՈՒՅՈՒՆՆԵՐԸ

Դաշնագի ավարտի մասնակիցները ձեռք կբերեն գիտելիքներ և փորձագիտական կարողություններ շեքերում ենթաարդյունավետության բարձր չափորոշիչներ մասին և կունենան հետևյալ կարողությունները՝

- Համայնքային ենթակետի կատարման և չափորակները, հաշվետվողության և հավաստագրման շեքերի որոշում,
- Գրքայ և ԵՄ մակարդակներում ենթակետի կատարման և ՉՀՀ ինտեգրացիոնալ կազմակերպման և իրականացման հայեցակետերը համակարգ կարողություններ,
- Համայնքային ենթակետի կատարման որպես ՉՀՀ ազգային համակարգի մաս կազմակերպման մասին գիտելիք,

- Գոյություն ունեցող ենթակետի կատարման տեղեկատվական համակարգի օգտագործման կամ այսպիսի համակարգի մշակման կազմակերպման մասին գիտելիք,
 - Համայնքային ենթակետի արդյունքի գործընթացը և վստահորեն օգտագործել բազմաշախնչային վերլուծության գործընթացը,
 - Ենթակետի ենթաարդյունավետության միջոցառումների համար ֆինանսավորման հնարավորությունները հասկանալու և որանցից օգտվելու կարողություն:
- ԴԱՏԱՎՈՐՄԱՆ ՄԵԹՈՒՆԵՐ**
- Դաշնագի ընթացքում կիրառվեն դասավանդման ստորև բերված մեթոդները՝
- Լսարանային դասախոսություններ (կամ առցանց)՝ կախված COVID-19-ով կայանափոխված սահմանափակումների իրավիճակից),
 - Լսարանային հաշվարկման վարժություններ՝ կիրառելով հաշվարկման գործընթացը:
- ԺԱՄԱՆԱԿԱՑՈՒՑ**
- Դաշնագը կունի 2 աշխատանքային օր, որի ժամանակացույցը բերվում է ստորև.

ՕՐԱԿԱՐԳ

Օր 1. երկուշաբթի, 25 հոկտեմբերի 2021թ.




Ժամ	Դասախոսություն	Բովանդակություն
09:00 Ռ՝Ն՝Ղ	Հավաք՝ Հանրապետության հրավաճակում	Տեղափոխում Արարատ Ռեզորթ Ճաղվանոր հյուրանոց
10:00 – 10:30		Գրանցում և ողջույնի ստոր՝
10:30 – 10:45	Ենթակետի կազմակերպման անմիջապես ներկայացում:	Ողջույնի խորք ՄԱԿ-ԵՄ-ՉՀՀ-ից (պրն. Օլիվ Զորիսյանի և սրն. Նարեկյան համարակրթված)
10:45 – 11:30	ՆԻՍՍ 1 Ենթակետի կատարման (ԷԿ) և շեքերի որոշում չափորակներ, հաշվետվողության և հավաստագրման (ՉՀՀ) ներածություն	Ենթակետի որոշում ՉՀՀ-ի անդրում ՄԱՇԸ-ԿԿ «Ենթակետի ենթաարդյունավետ արդյունավետությանն ուղղված ներդրումների ռիսկերի նվազեցում» ծրագրի շրջանակներում (պրն. Տրդատ Սևրյան)
11:30 – 12:15	ՆԻՍՍ 2 Ենթակետի կատարման և չափորակներ, հաշվետվողության և հավաստագրման (ՉՀՀ) ինտեգրացիոնալ կազմակերպման և իրականացման հայեցակետերը գրքայ և ԵՄ մակարդակներում	- Իրականացման կազմակերպման և գործընթացի վերլուծություն - Ենթակետի որոշում ենթակետի կատարման և ՉՀՀ-ի ինտեգրացիոնալ կազմակերպման կազմակերպմանը - Ենթակետի կատարման ազգային և համայնքային համակարգի կազմակերպումը - Հարց ու պատասխան (պրն. Մարտիյա Վաճիթի)
12:15 – 12:30		Սուրճի ընթացքում
12:30 – 13:15	ՆԻՍՍ 2 – շարունակություն	- Չափորակներ, հաշվետվողության և հավաստագրման (ՉՀՀ) ինտեգրացիոնալ կազմակերպմանը - Ենթակետի կազմակերպման շարունակական մշտադիտարկումը - ՉՀՀ ՏՀՀ գործընթացը - ՉՀՀ-ի կազմակերպման համայնքային/ազգային մակարդակում - Հարց ու պատասխան (պրն. Մարտիյա Վաճիթի)
13:15 – 14:00	ՆԻՍՍ 3 Համայնքային ենթակետի կատարման որպես չափորակներ, հաշվետվողության և հավաստագրման (ՉՀՀ) ազգային համակարգի մաս	- Ենթակետի համայնքային սպասումը (ենթակետի արտադրությունը մինչև ենթակետի սպասում – շեքեր, օրանախորհ, լուսավորություն, հանրային վայրեր) - Համայնքային ենթակետի կատարման կազմակերպման միավորները (աշխատանքի ծավալները) - Հարց ու պատասխան (պրն. Մարտիյա Վաճիթի)
14:00 – 15:15		Ճայի ընթացքում
15:15 – 16:00	ՆԻՍՍ 3 – շարունակություն	- Համայնքային մակարդակում ենթակետի կազմակերպմանը - Ենթակետի դասախոսություն - Ստանդարտի ցուցանիշները (ենթակետ, շրջանա միջավայր, ծախս) - Տվյալների մշտադիտարկում և գնահատում - Հարց ու պատասխան (պրն. Մարտիյա Վաճիթի)
16:00 – 16:45		Ամփոփում, քննարկում
18:00 – 19:00		Ընթացք

Օր 2. երեքշաբթի, 26 հոկտեմբերի 2021թ.

Ժամ	Դասախոսություն	Փոխանցվածություն
9:00 – 9:45	UNUS 4	Նախաճաշ
10:00 – 10:45	Եներգետիկ կառավարման տեղեկատվական համակարգը և էներգետիկ կառավարման համակարգերի գործիքների օրինակներ	- ԵՏՀ երկրներում ստեղծված բնակարանային փորձը - ԵՏՀ՝ ազգային և տեղական մակարդակներում - Համայնքային էներգետիկ կառավարման տեղեկատվական համակարգի մշակում - Տվյալների հավաքման գործընթացի կազմակերպում և տվյալների արդյունքների աստիճանում - Հարց ու պատասխան (սրբ. Մաաթիա Վաժիշի)
10:45 – 11:30	UNUS 4 – շարունակություն	- Մեծքանակ տվյալների վերլուծություն (big data), բազմափաստիչային և այլն) - Էներգետիկ մշտադիտարկման/հաշիվապահության և հաշվառման/տարրեր - Հայկական ԵՏՀ մշակման արագարկություններ - Հարց ու պատասխան (սրբ. Մաաթիա Վաժիշի)
11:30 – 11:45	Սուրճի ընդմիջում (և կողմնակցի սենյակների հանձնում)	
11:45 – 12:30	UNUS 5	Եներգետիկ արդյունքների ընթացակարգը և բազմափաստիչային վերլուծությունը
12:30 – 13:15	UNUS 5 – շարունակություն	- Եներգետիկ արդյունքների հիմնարար սկզբունքներն ու ընթացակարգերը - Եներգետիկ արդյունքների համակարգերը (առաջնորդ, պահանջարկ) - Տվյալների հավաքում և էլեկտրոնային մակարդակի աստիճանում - Եներգետիկ արդյունքների հաշվառում - Հարց ու պատասխան (սրբ. Մաաթիա Վաժիշի)

13:15 – 14:15	UNUS 6	Ճաշի ընդմիջում
14:15 – 15:00	Եներգետիկ կառավարման տեղեկատվական համակարգը և էներգետիկ կառավարման համակարգերի գործիքների օրինակներ	- Եներգետիկ արդյունքների հիմնարար սկզբունքներն ու ընթացակարգերը - Եներգետիկ արդյունքների համակարգերը (առաջնորդ, պահանջարկ) - Տվյալների հավաքում և էլեկտրոնային մակարդակի աստիճանում - Եներգետիկ արդյունքների հաշվառում - Հարց ու պատասխան (սրբ. Մաաթիա Վաժիշի)
15:00 – 15:15	Ամփոփում և միջոցառման փակում	ԱՄԿ-ԵՏՀ, ՄԱՆՇՊ
16:00	Տնօրինում երևան	

 National training seminar in buildings in Kyrgyzstan from 29th to 30th of November 2021

**TRAINING ON
MUNICIPAL ENERGY MANAGEMENT (MEM), ENERGY MANAGEMENT INFORMATION SYSTEM (EMIS), MEASUREMENT, REPORTING AND VERIFICATION (MRV) IN THE BUILDING SECTOR**

Date: 29-30 November 2021
Venue: Bridges Hotel Bishkek, 10, Kalyk Akiev Street
Organizers: United Nations Economic Commission for Europe (UNECE), State Committee on Architecture and Construction of the Kyrgyz Republic, and United Nations Development Programme (UNDP) in the Kyrgyz Republic

DESCRIPTION
 The training seminars are covering aspects related to the high-performance energy efficiency standards in buildings and is divided into six sessions, as follows:

- 1st session – Energy audits procedure of buildings and multicriteria analysis
- 2nd session – Energy Management Information System and examples of energy management system tools
- 3rd session – Municipal energy management as a part of the national monitoring, reporting and verification system
- 4th session – Institutional, organizational and legal aspects of energy management and monitoring, reporting and verification at the global and EU levels
- 5th session – Energy Management (EM) and Monitoring, Reporting and Verification (MRV) in the buildings sector
- 6th session – Economic evaluation and funding possibilities for energy efficiency measures in buildings

LEARNING OUTCOMES AND COMPETENCES
 By the end of this training seminar the participants will have gain knowledge and expertise on high-performance energy efficiency standards in buildings and will have the following competences:

- Understanding the Energy Management and Monitoring, Reporting and Verification in the buildings sector
- Competence to understand the institutional, organizational and legal aspects of energy management and monitoring, reporting and verification at the global and EU level
- Knowledge to organize the Municipal energy management as part of the national monitoring, reporting and verification system
- Knowledge to use existing or organize the development of the Energy Management Information System
- Understanding of the energy auditing process and confidence in using multicriteria analysis tools
- Ability to use and understand the funding possibilities for energy efficiency measures in buildings

FORMS OF TEACHING
 The following form of teaching will be used during the training seminar:

- Classroom lectures (or online depending on the situation with Covid-19 restrictions)
- Classroom calculation exercises using calculation tools

SCHEDULE
 The training seminar will last 2 working days in total, with the schedule explained hereafter

AGENDA

Day 1: Monday, 29 November 2021


Time	Lecture	Content
09:45 – 10:15	Registration and welcoming coffee	
10:15 – 10:30	Welcome addresses. Introduction to the training seminar UNECE – Ms. Hadejda Khamkulova, Project Officer and Mr. Oleg Dzubinski, Regional Adviser State Committee on Architecture and Construction of the Kyrgyz Republic – Mr. Khamatbek M.K., Deputy director UNDP Kyrgyzstan – Ms. Lira Zhokubeva, Programme and Policy Analyst, Team Leader, CC/DRM	
10:30 – 11:15	1st SESSION Energy audits procedure of buildings and multicriteria analysis	- Energy audits of buildings - Basic energy audits principles and procedures - Technical systems within the building (supply, demand) - Data collection and defining the baseline - Metering of energy consumption - Q&A's (Mr. Matija Vajdic)
11:15 – 12:00		- Energy efficient technologies - Energy retrofit measures (energy, financial and GHG emission reduction) - Multicriteria analysis and selection of buildings suitable for energy retrofit - Building retrofit - Energy savings calculation (ET curves, CUSUM diagrams) - Q&A's (Mr. Matija Vajdic)
12:00 – 13:00	Lunch	
13:00 – 13:45	2nd SESSION Energy Management Information System and examples of energy management system tools	- Best practices in ECE member states - EMIS at the country level and local level - Development of the municipal energy management information system - Organizing data collection and defining data sources - Q&A's (Mr. Matija Vajdic)
13:45 – 14:30		- Analysing large amounts of data (big data, multicriteria, etc.) - Energy monitoring and reporting - Recommendations for the development of Armenian EMIS - Q&A's (Mr. Matija Vajdic)
14:30 – 14:45	Coffee-break	
14:45 – 15:30	3rd SESSION Municipal energy management as a part of the national monitoring, reporting and verification system	- Municipal energy consumption (from energy generation to energy consumption - buildings, transport, lighting, public spaces) - Municipal energy management organizational units (scope of work) - Q&A's (Mr. Matija Vajdic)
15:30 – 16:30		Wrap-up, Open discussion

Day 2: Tuesday, 30 November 2021

Time	Lecture	Content
09:30 – 9:45		Registration and morning coffee
9:45 – 10:15	3 rd SESSION – cont.	- Municipal energy data collection - Classification of buildings - Key performance indicators (energy, environment, cost) - Monitoring and evaluation of data - Q&A's (Mr. Matija Vajdic)
10:15 – 11:00	4 th SESSION Institutional, organizational and legal aspects of energy management and monitoring, reporting and verification at the global and EU levels	- Legal aspects and global/EU experience - Institutional and organizational structure of EM and MRV in the buildings sector - Organization of the national and municipal energy management system - Q&A's (Mr. Matija Vajdic)
11:00 – 12:00		- Basic principles of the Measurement, reporting and verification (MRV) - Continuous monitoring of energy savings - IT MRV tools - Organization of MRV at the municipal/national level - Q&A's (Mr. Matija Vajdic)
12:00 – 13:00		Lunch
13:00 – 13:45	5 th SESSION Energy Management (EM) and Monitoring, Reporting and Verification (MRV) in the buildings sector	- Why energy efficiency first? - Basic regulatory framework (global and EU level) on MEM and MRV in the buildings sector - EU experience - Q&A's (Mr. Matija Vajdic)
13:45 – 14:15	6 th SESSION Economic evaluation and funding possibilities for energy efficiency measures in buildings	- Basic economic evaluation of investment projects (NPV, IRR, etc.) - How can building retrofit be funded? - Social aspects (capacity building, trainings, awareness rising) - Q&A's (Mr. Matija Vajdic)
14:15 – 14:30		Coffee-break
14:30 – 15:30	Practical work	- Calculation of financial savings - Economic evaluation of the EE actions - Basic concepts of economic evaluation of investments in EE - Practical work in Excel
15:30 – 16:00	Energy efficiency measures in the Bridges hotel	Mr. Mirbek Asangariev, founder of the hotel
16:00 – 16:45		Wrap-up and closure of the event

National training seminar in Moldova from 20th to 21st of January 2022





**INSTRUIRE PRIVIND
MANAGEMENTUL ENERGETIC MUNICIPAL (MEM), SISTEMUL INFORMAȚIONAL DE
MANAGEMENT ENERGETIC (EMIS), MĂSURAREA, RAPORTAREA ȘI VERIFICAREA (MRV)
ÎN SECTORUL CLĂDIRILOR**

Data: 20-21 Ianuarie 2022
Locație: AEE
Organizatori: Comisia Economică a ONU pentru Europa (UNECE) și Programul Națiunilor Unite pentru Dezvoltare (PNUD) în Moldova

DESCRIERE
Atelierul de instruire acoperă aspecte ce țin de standardele de eficiență energetică de înaltă performanță în clădiri și este divizat în șase sesiuni, după cum urmează:

- sesiunea 1 – Procedura auditului energetice a clădirilor și analiza bazată pe criterii multiple
- sesiunea 2 – Sistemul informațional de management energetic și exemple de instrumente ale sistemului de management energetic
- sesiunea 3 – Managementul energetic municipal drept parte din sistemul național de monitorizare, raportare și verificare
- sesiunea 4 – Aspectele instituționale, organizaționale și juridice ale managementului energetic și monitorizării, raportării și verificării la nivel global și UE
- sesiunea 5 – Managementul energetic (ME) și monitorizarea, raportarea și verificarea (MRV) în sectorul clădirilor
- sesiunea 6 – Evaluarea economică și posibilitățile de finanțare pentru măsurile de eficiență energetică în clădiri

REZULTATELE ȘI COMPETENȚELE DREPT URMARE A INSTRUIRII
La finele instruirii, participanții vor obține cunoștințe și expertiză privind standardele eficienței energetice de performanță înaltă în clădiri și vor dispune de următoarele competențe:

- Înțelegerea managementului energetic și a monitorizării, raportării și verificării în sectorul clădirilor
- Competența de a înțelege aspectele instituționale, organizaționale și juridice ale managementului energetic și monitorizării, raportării și verificării la nivel global și UE
- Cunoștințe privind organizarea managementului energetic municipal drept parte a sistemului național de monitorizare, raportare și verificare
- Cunoștințe privind utilizarea sistemului existent sau organizarea dezvoltării sistemului informațional de management energetic
- Înțelegerea procesului de audit energetic și încredere în utilizarea instrumentelor de analiză bazată pe criterii multiple
- Abilitatea de a utiliza și înțelege posibilitățile de finanțare pentru măsurile de eficiență energetică în clădiri

FORME DE PREDARE
În cadrul atelierului de instruire se va utiliza următoarea formă de predare:

- Prelegeri (cu participare fizică și conectarea online)
- Exerciții de calcul în clasă utilizând instrumentele de calcul

ORAR
Atelierul de instruire va dura 2 zile de lucru în total, cu următoarea agendă:

Ziua 1: Joi, 20 Ianuarie 2022




















Ora	Tema	Conținut
09:30 – 10:00		Înregistrarea și cafea de bun-venit
10:15 – 10:30	Prezentarea gazdei. Introducere în atelierul de instruire	Evghehina Grîlea, Director General Adjunct, Agenția pentru Eficiență Energetică Alexandru Rotaru, Manager de proiect „Orase verzi durabile pentru Moldova”, PNUD Moldova Oleg Dzubinski, consilier regional, UNECE Nadejda Khamrakulova, offer de proiect, UNECE Sergiu Robu, consultant UNECE
10:30 – 11:15	Sesiunea 1 Procedura auditului energetic al clădirilor și analiza în baza criteriilor multiple	- Auditul energetic al clădirilor - Principalele și procedurile de bază ale auditului energetic - Sistemele tehnice din cadrul clădirilor (cerere, ofertă) - Colectarea datelor și definirea nivelului inițial - Contorizarea consumului de energie - Întrebări și răspunsuri (Dr. Matija Vajdic)
11:15 – 12:00	Sesiunea 1 – cont.	- Tehnologii eficiente energetic - Măsurii de modernizare energetică (energie, financiar și reducerea emisiilor GES) - Analiza pe bază de criterii multiple și selectarea clădirilor potrivite pentru modernizare energetică - Modernizarea clădirii - Calcularea economiilor de energie (curbele ET, diagramele CUSUM) - Întrebări și răspunsuri (Dr. Matija Vajdic)
12:00 – 12:15		Pauza de cafea
12:15 – 13:00	Sesiunea 2 Sistemul informațional de management energetic și exemple de instrumente ale sistemului de management energetic	- Bunele practici în statele membre ECE - SIME la nivel de țară și la nivel local - Dezvoltarea unui sistem informațional municipal de management energetic - Organizarea colectării datelor și definirea surselor de date - Întrebări și răspunsuri (Dr. Matija Vajdic)
13:00 – 13:45	Sesiunea 2 – cont.	- Analiza unor volume mari de date (date mari, criterii multiple, etc.) - Monitorizarea și raportarea energetică - Recomandări pentru elaborarea SIME - Întrebări și răspunsuri (Dr. Matija Vajdic)
13:45 – 15:00		Prânz
15:00 – 15:45	Sesiunea 3 Managementul energetic municipal drept parte al sistemului național de monitorizare, raportare și verificare	- Consumul municipal de energie (de la generare de energie la consum de energie – clădiri, transport, iluminat, spații publice) - Unități organizaționale de management energetic municipal (domeniu de activitate) - Întrebări și răspunsuri (Dr. Matija Vajdic)
15:45 – 16:30		Concluzii, discuții deschise







Ziua 2: Vineri, 21 ianuarie 2022

Ora	Tema	Conținut
09:00 – 09:45		Pauza de cafea
09:45 – 10:15	Sesiunea 3 – cont.	<ul style="list-style-type: none"> - Colectarea datelor municipale privind energia - Clasificarea clădirilor - Indicatorii cheie de performanță (energie, mediu, cost) - Monitorizarea și evaluarea datelor - Întrebări și răspunsuri (DI Matija Vajdič)
10:15 – 11:00	Sesiunea 4 Aspectele instituționale, organizaționale și juridice ale managementului energetic și monitorizării, raportării și verificării la nivel global și UE	<ul style="list-style-type: none"> - Aspectele juridice și experiența globală/UE - Structura instituțională și organizațională a ME și MRV în sectorul clădirilor - Organizarea sistemului național și municipal de management energetic - Întrebări și răspunsuri (DI Matija Vajdič)
11:00 – 11:15		Pauza de cafea
11:15 – 12:00	Sesiunea 4 – cont.	<ul style="list-style-type: none"> - Principiile de bază ale măsurării, raportării și verificării (MRV) - Monitorizarea continuă a economiilor pentru energie - Instrumente IT MRV - Organizarea MRV la nivel municipal/național - Întrebări și răspunsuri (DI Matija Vajdič)
12:00 – 12:45	Sesiunea 5 Managementul energetic (ME) și monitorizarea, raportarea și verificarea (MRV) în sectorul clădirilor	<ul style="list-style-type: none"> - De ce eficiența energetică în primul rând? - Cadru de reglementare de bază (global și UE) privind MEM și MRV în sectorul clădirilor - Experiența UE - Întrebări și răspunsuri (DI Matija Vajdič)
12:45 – 14:00		Prânz
14:00 – 14:30	Sesiunea 6 Evaluarea economică și posibilitățile de finanțare pentru măsurile de eficiență energetică în clădiri	<ul style="list-style-type: none"> - Evaluarea economică de bază a proiectelor investiționale (NPV, IRR, etc.) - Cum poate fi finanțată modernizarea clădirii? - Aspecte sociale (dezvoltarea capacităților, instruire, ridicarea nivelului de conștientizare) - Întrebări și răspunsuri (DI Matija Vajdič)
14:30 – 15:30	Activitate practică	<ul style="list-style-type: none"> - Calcularea economiilor financiare - Evaluarea economică a acțiunilor de EE - Concepte de bază ale evaluării economice ale investițiilor în EE - Activitate practică în Excel
15:30 – 16:15		Concluzii și încheierea evenimentului

ANNEX 2 – List of Participants

National training seminar in Armenia from 25th to 26th of October 2021

#	FULL NAME	TITLE/ORGANIZATION	SIGNATURE
1	Armen Yesoyan	Director of EPIU	
2	Davit Nikoghosyan	Chief Specialist of the Project Implementation and Monitoring Department, EPIU	
3	Armen Ajamoghlyan	Leading Specialist of the Project Implementation and Monitoring Department, EPIU	
4	Koryun Bznuni	Leading Specialist of the Project Implementation and Monitoring Department, EPIU	
5	Elen Muradyan	Consultant, EPIU	
6	Arman Sukiasyan	Head of Urban Development, Land Use, Emergency Situations, Commerce and Transport Department, Stepanavan Municipality	
7	Karen Poghosyan	Leading Specialist in Urban Development, Land Use, Emergency Situations, Commerce and Transport, Stepanavan Municipality	
8	Vanuhi Bareghamyan	Economic development Specialist, Hrazdan Municipality	
9	Ashot Yeritsyan	Specialist on Energy, Ijevan Municipality	
10	Arsen Sargsyan	Leading specialist of the Department of Urban Development and Land Use, Dilijan Municipality	
11	Tigran Karapetyan	R2E2	
12	Artem Kharazyan	National Expert, EC Covenant of Mayors East Project	
13	Andranik Avetisyan	Head of Financial and Economic Department, Vedi Municipality	
14	Nubar Chilingaryan	Leading specialist, Department of Urban Development, Vedi Municipality	
15	Sergey Abrahamyan	Head of Photometric Laboratory, Scientific Research Institute of Energy	
16	Mery Harutyunyan	Yerevan Municipality	
17	Narine Abelyan	Yerevan Municipality	
18	Vahram Jalalyan	Project Manager, UNDP-GCF Project	
19	Gohar Harutyunyan	Project Assistant, UNDP-GCF Project	
20	Artur Tsughunyan	National Expert on Energy Audits, UNDP-GCF Project	
21	Erik Antaryan	Media and Communication Consultant, UNDP-GCF Project	

22	Tigran Sekoyan	Senior Expert on Energy/Energy Efficiency, UNDP-GCF Project	
23	Mikayel Koshkaryan	USAID	
24	Oleg Dzioubinski	UNECE	
25	Nadejda Khamrakulova	UNECE	
26	Matija Vajdic	UNECE	✓+
27	Kristine Soghikyan	Interpreter	✓+
28	Artur Aroustamov	Interpreter	
29	Hayk Hovakimyan	Technical expert for interpretation equipment	

National training seminar in buildings in Kyrgyzstan from 29th to 30th of November 2021





**TRAINING ON
MUNICIPAL ENERGY MANAGEMENT (MEM), ENERGY MANAGEMENT INFORMATION SYSTEM (EMIS),
MEASUREMENT, REPORTING AND VERIFICATION (MRV) IN THE BUILDING SECTOR**

Date: 29-30 November 2021
Venue: Bridges Hotel, Bishkek, 10, Kalyk Akiev Street
Organizers: United Nations Economic Commission for Europe (UNECE) and
 United Nations Development Programme (UNDP) in the Kyrgyz Republic

List of Participants/Список участников

№ п/п	Ф.И.О.	Организация	Должность	Контактные данные Тел. Эл.почта	Подпись 29.11.2021	Подпись 30.11.2021
1	Бексултанова Мээрим Самыйбековна	Департамент Государственной экспертизы	Гл. специалист отдела коммуникаций и инженерного оборудования	me.ko.83@mail.ru 0550 710 796		
2	Вильданова Дарика Кубанычбековна	ОсОО «Дека Групп»	Инженер	info@dekagroup.org 555-474-312		
3	Кулумбетов Жаныбек Эшенкулович	ОсОО «Юнисон Групп»	Инженер по энергоэффективности	0557 801217 janybek.kulumbetov@unisongroup.org		

					29.11.2021	30.11.2021
4	Соронбаев Салават Абдыкеримович	ОсОО «Юнисон Групп»	Инженер	0553 801217		
5	Аскарбеков Айбек	ОсОО Юнисон Групп	Инженер-консультант по энергоэффективности			
6	Гудкова Екатерина Григорьевна	ОсОО «Юнисон Групп»	Инженер	0774 820 442		
7	Аскарбеков Бакытбек	ОФ Юнисон	Зам.директора			
8	Мамбетказиев Роберт Азимканович	ОсОО «Юнисон Групп»	Сотрудник программы, эколог	0555 56 88 2А		
9	Дюшембаев Эмиль Темирбекович	ОсОО СК «Пирамида»	Заместитель директора	0558 99 5052		
10	Боринцев Валерий Николаевич	АРИС	Консультант	0773 710 632 0558}		
11	Адилев Медет Омарович	АРИС	консультант	0773-66-34 28		
12	Вильданов Тимур Рафазьевич	ОсОО «Азия Вотор Билд»	Инженер по ТВ и котельной	0555 95 74 53		
13	Абдылдаева Айгуль Моидиновна	КГУСТА	Зав. кафедрой «Теплогасоснабжение и вентиляция»	0550 602606		
14	Жыргалбаева Нурбубу Мамбетжановна	КГУСТА	Старший преподаватель кафедры «Теплогасоснабжение и вентиляция»	0709770133 nurgul.nj@mail.ru		
15	Муханова Камила Кубанычбековна	КГУСТА	Старший преподаватель кафедры «Теплогасоснабжение и вентиляция»	gsangariev@gmail.com		

Асанжаров Мухамед
Hotel Bridges
founder



UNEP

					29.11.2021	30.11.2021
16	Солдатова Асель Мукаевна	КГУСТА	Старший преподаватель кафедры «Теплогазоснабжение и вентиляция»	0705009295 solodatova.asel@mail.ru		
17	Боронбаев Эркин Капарович	КГУСТА	Профессор кафедры «Теплогазоснабжение и вентиляция»	0555 11 48 20		
18	Бекбаева Августина Константиновна	КГУСТА	Старший преподаватель кафедры «Теплогазоснабжение и вентиляция»	0555 681345 b.augustina@mail.ru		
19	Маматминов Талантбек Белекович	ОсОО «Энергозффе́кт»	Генеральный директор			
20	Омокеева Айзада Абдиевна	Госинспекция по энергетическому, горному надзору и пром. безопасности при МЭП КР	Главный инспектор управления энергетического надзора	0500 409 555 aizag@mail.ru		
21	Шаршембиев Улан Кулжугачевич	ОсОО «Димед»	Главный инженер			
22	Конурбаев Бактыбек Адылбекович	ОсОО «Демир Проект»	Инженер по электроснабжению	ligbota@list.ru 0700 124393		
23	Ысабекова Таалайгул Абдимуталиповна	Департамент Государственной экспертизы	Главный специалист	taalajgul-84@mail.ru 0502 800844		
24	Мейманбеков Барчынбек	ОСОО «Кэмп Ала-тоо»	Исп.директор			
25	Исмаилов Руслан	ОСОО «Кэмп Ала-тоо»	Специалист			
26	Балалиев Калыбек Орозалиевич	ОсОО «Берекестрой»	Зам директора по качеству	0559008994 Kalybek72@mail.ru		

					29.11.2021	30.11.2021
27	Олег Дзюбинский	Отдел устойчивой энергетики ЕЭК ООН	Региональный советник	oleg.dzyubinskiy@un.org		
28	Надежда Хамракупова	Отдел устойчивой энергетики ЕЭК ООН	Руководитель проекта	nadejda.khambakulova@un.org		
29	Матия Вайдич	ЕЭК ООН	Международный консультант по устойчивой энергетике	matija.vaidich@gmail.com		
30	Ли́ра Жолдубаева	ПРООН, КР	Руководитель направления по изменению климата и ЧС	0440 112 247		
31	Шербет Нуржанова	ПРООН, КР	Ст. специалист направления по изменению климата и ЧС	0700 301505		
32	Улар Ниязалиев	ПРООН, КР	Национальный консультант	0555 368484		
33	Мэзрим Русланбекова	ПРООН, КР	Специалист по коммуникациям	074277929		
34	Сунуева Асия	ЖТЧСТА	и.о. заместителя дир. "Теплогаз и вент"	0709386711		
35	Алиев Раис Ш.	Тосаифе	зав. сект	0772191635		
36	Ординаева Л.	ЖТЧСТА	ст. упр. дир. ТБ	0500 008300		
37	Терекбаев Н.К.	ОФ "УРВНЭЭ"	и.и.и.	0775534669		
38	Алиев Асан А.	ОФ "УРВНЭЭ"	инженер	0700 41447		
39	Гуреева Оксана	ОФ "УРВНЭЭ"	инженер	0776834321		
40	Алиева Б.	ЖТЧСТА	и.и.и. ТБ	0505 453348 aliyeva@mail.ru		
41	Алиев А.	СЕЕВА	инженер	0772148818		
42	Котомов Р.М.	СЕЕВА	руководитель	0552 540331		
43	Абурашвили Н.А	UNISON	директор	0772578940		

44	Константина М. Тодорова КР	beg. eners.	0552 584173	<i>[Signature]</i>	<i>[Signature]</i>
45					

National training seminar in Moldova from 20th to 21st of January 2022



Empowered lives.
Resilient nations.

List of Participants / Lista participanților
20-21.01.2021

TRAINING ON "MUNICIPAL ENERGY MANAGEMENT (MEM), ENERGY MANAGEMENT INFORMATION SYSTEM (EMIS), MEASUREMENT, REPORTING AND VERIFICATION (MRV) IN THE BUILDING SECTOR"

INSTRUIREA

„MANAGEMENTUL ENERGETIC MUNICIPAL (MEM), SISTEMUL INFORMAȚIONAL DE MANAGEMENT ENERGETIC (SIME), MĂSURAREA, RAPORTAREA ȘI VERIFICAREA (MRV) ÎN SECTORUL CLĂDIRILOR"

Nr.	Name, Surname / Nume, Prenume	Institution/Organization, Title / Instituția/Organizația, Funcția	E-mail / tel.	Signature / Semnătura		Temperature	
				20 January / January	21.01	20 January	21.01 anuary
1.	Alexandru Rotaru	Project Manager Green Cities / Manager de Proiect "Orase Verzi Durabile pentru Moldova"	Alexandru.rotaru@undp.org	<i>[Signature]</i>	<i>[Signature]</i>	35.0	35.2
2.	Evghenii Gîrlea	Director adjunct al Agenției pentru Eficiența Energetică/ Deputy General Director, Energy Efficiency Agency		<i>[Signature]</i>		35.1	



UNECE

				20	21	20	21
				Empowered lives. Resilient nations.			
3.	Matija Vajdic	International expert on energy efficiency / expert international in domeniul eficientei energetice	Matija.vajdic@gmail.com			35,8	36,2
4.	Gheorghe Riciu	Communication and Visibility Officer / Green Cities	Gheorghe.riciu@undp.org			36,6	36,3
5.	Olesea Bucos	Project Associate / Green Cities / Asociata de Proiect	Olesea.bucos@undp.org			35,9	
6.	Nicolae Covalenco	Auditor Energetic / Energy auditor				36,1	
7.	Fusuraru Irina	Auditor Energetic / Energy auditor	ifusuraru@mail.ru			35,8	
8.	Chipar Victor	Auditor Energetic / Energy auditor	chiparvictor@gmail.com			36,6	
9.	Elena Nicolaev	Auditor Energetic / Energy auditor	elenanicolae@protonmail.com			36,3	36,4
10.	Tirsu Mihai	Auditor Energetic / Energy auditor	tirsu.mihai@gmail.com			36,1	
11.	Celac Irina	Auditor Energetic / Energy auditor	15131610@mail.ru			36,1	36,1
12.	Ghenadie Oclanschi	Auditor Energetic / Energy auditor	Oclanschi@gmail.com			36,2	36,5
13.	Sergiu Ungureanu	Energetic auditor / Energy auditor	Chergig@chixuan.net			36,3	36,4
14.	Plamadala Igor	Energy Manager / Manager Energetic	igorpamadala311@gmail.com			36,2	36,3
15.	Petru Ulinici	Energy Manager / Manager Energetic	ulinici.petru@gmail.com			35,8	36,1
16.	Irina Apostol	Dezvoltator al sistemului informational de management energetic / EMIS developer	irina.apostol@protonmail.com			36,4	
17.	Eugen Camensic	Manager dezvoltare produse/ Product development manager	CamensicEugen@gmail.com			36,5	
18.	Sarbu Nicolae	Manager Energetic / Energy Manager	nicolae.sarbu@hotmail.com			36,2	

				20	21	20	21
				Empowered lives. Resilient nations.			
19.	Roibu Sergiu	UNECE consultant				36,6	
20.	Olion Pascal	Institutul de Standardizare din Moldova	olion.pascal@standard.ro			36,3	36,1
21.	Vlad Ojferi		v.ojferi@protonmail.com			36,4	36,3
22.	Leopold	IE				36,1	
23.	Vasilescu G	IF				36,1	
24.	Bostac Iovan	AEE				36,3	
25.	Rita Raina	AEE				35,8	
26.	George Arina	AEE	alina.arina@protonmail.com			36,1	
27.	Radu Sergiu	IE	energplan.srl@gmail.com			36,4	
28.	Boibuc V	Consiliul Raional	boibuc.vladimir@protonmail.com			36,5	
29.	Mindru U.	AEE	mindru.u@protonmail.com			36,4	
30.	Nautschi Natalia	AEE	nautschi.natalia@gmail.com			36,6	36,4
31.	Vlad OJ						

National training seminar in Kyrgyzstan from 29th to 30th of November 2021



National training seminar in Moldova from 20th to 21st of January 2022



ANNEX 4 – Evaluation Questionnaire

Evaluation Questionnaire

Professional background:	<input type="checkbox"/>	Electrical Engineering
	<input type="checkbox"/>	Mechanical Engineering
	<input type="checkbox"/>	Architecture
	<input type="checkbox"/>	Civil Engineering
	<input type="checkbox"/>	Environmental Engineering
	<input type="checkbox"/>	Economy
	<input type="checkbox"/>	Other (please specify):
Affiliation:	<input type="checkbox"/>	Public institution (ministry, agency, ...)
	<input type="checkbox"/>	University
	<input type="checkbox"/>	International organization
	<input type="checkbox"/>	Private company
	<input type="checkbox"/>	Other (please specify):
<i>Evaluation is anonymous. We only ask information on your professional background and affiliation for analysis purposes.</i>		

For each questionnaire category, please provide a grade from the scale 1 to 5, with 1 being the worst and 5 the best grade. We would appreciate all additional comments. Thank you!

Evaluation regarding the training seminar organisation					
	(1) Unsatisfactory	(2) Satisfactory	(3) Good	(4) Very good	(5) Excellent
Organisation of the training seminar (timely notice, sufficient information)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Venue of the training seminar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number and duration of coffee/lunch breaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Time schedule of lectures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall duration of the training seminar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Please, add additional comments					
Evaluation of the training seminar content					
	(1) Unsatisfactory	(2) Satisfactory	(3) Good	(4) Very good	(5) Excellent
Quality of the session 2 “Introduction to energy management and monitoring, reporting and verification in the buildings sector”	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For each questionnaire category, please provide a grade from the scale 1 to 5, with 1 being the worst and 5 the best grade. We would appreciate all additional comments. Thank you!

Quality of the session 2 “Institutional, organizational and legal aspects of energy management and monitoring, reporting and verification at the global and EU level”	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality of the session 3 “Municipal energy management as part of the national monitoring, reporting and verification system”	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality of the session 4 “Energy management information system and examples of energy management system tools”	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality of the session 5 “Energy audits procedure of buildings and multicriteria analysis”	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality of the session 6 “Best practices of funding possibilities for energy efficiency measures in buildings”	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ration between theoretical and practical part of the training seminar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall satisfaction with the training seminar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Please, add additional comments					
Self-assessment of own capacity and understanding of the key topics covered by the energy efficiency in buildings training seminar					
	(1) Unsatisfactory	(2) Satisfactory	(3) Good	(4) Very good	(5) Excellent
Your understanding of the energy efficiency topics presented during the training seminar is refined	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your capacity to perform specific tasks related to energy efficiency in buildings is enhanced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For each questionnaire category, please provide a grade from the scale 1 to 5, with 1 being the worst and 5 the best grade. We would appreciate all additional comments. Thank you!

Your capacity to deliver presentations on any specific topic presented is improved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Please, add additional comments					
Proposal for improvements of the training seminar					
Please, provide your suggestions for improvement of the training seminar content and execution					

National training seminar in Moldova from 20th to 21st of January 2022

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
Professional background:																																
Electrical Engineering		1										1	1							1			1	1		1				1	8	
Mechanical Engineering															1		1										1	1			4	
Architecture				1		1								1					1												4	
Civil Engineering					1																								1	2		
Environmental Engineering			1													1						1									3	
Economy	1						1	1			1																				4	
Other (please specify):									1	1								1			1				1						5	
Affiliation:																																
Public institution (ministry, agency, ...)		1	1	1		1	1	1	1	1	1									1		1		1	1		1				15	
University				1										1							1										3	
International organization																													1	1		
Private company	1											1			1	1	1	1					1			1		1			9	
Other (please specify):												1						1													2	
Evaluation regarding the training seminar organisation																																
Organisation of the training seminar (timely notice, sufficient information)	5,0	5,0	5,0	4,8	5,0	4,6	5,0	4,8	3,8	4,4	5,0	5,0	5,0	4,8	5,0	4,4	4,8	4,4	4,8	4,4	4,4	4,4	5,0	5,0	4,6	5,0	5,0	4,8	5,0	4,4	4,8	
Venue of the training seminar	5	5	5	5	5	5	5	5	4	4	5	5	5	5	5	4	5	4	5	5	5	4	5	5	5	5	5	5	5	5	5	4,8
Number and duration of coffee/lunch breaks	5	5	5	5	5	5	5	5	3	4	5	5	5	4	5	5	5	5	5	5	5	3	5	5	5	4	5	5	5	5	5	4,8
Time schedule of lectures	5	5	5	5	5	5	5	5	4	5	5	5	5	5	5	4	4	4	4	4	4	5	4	5	5	5	5	5	5	5	4	4,7
Overall duration of the training seminar	5	5	5	4	5	4	5	4	4	5	5	5	5	5	5	4	5	4	5	4	4	4	4	5	5	5	5	5	4	5	4	4,6
Please, add additional comments																																
Evaluation of the training seminar content																																
Quality of the session 2 "Introduction to energy management and monitoring, reporting and verification in the buildings sector"	5	5	5	5	5	5	5	5	3	4	5	5	5	5	4	4	4	4	4	5	4	5	5	5	5	5	5	5	4	5	4	4,7
Quality of the session 2 "Institutional, organizational and legal aspects of energy management and monitoring, reporting and verification at the global and EU level"	5	5	5	5	5	5	5	5	4	4	5	5	5	5	4	4	4	4	4	5	4	4	5	5	5	5	5	5	4	5	5	4,7
Quality of the session 3 "Municipal energy management as part of the national monitoring, reporting and verification system"	5	5	5	5	5	5	5	5	4	4	5	5	5	5	4	5	4	5	5	4	4	5	5	5	5	5	5	5	4	5	4	4,7
Quality of the session 4 "Energy management information system and examples of energy management system tools"	5	5	5	5	5	5	5	5	4	5	5	5	5	5	4	4	4	4	4	5	4	3	5	5	5	5	5	5	4	5	4	4,7
Quality of the session 5 "Energy audits procedure of buildings and multicriteria analysis"	5	5	5	5	5	5	5	5	4	5	5	5	5	4	4	5	4	4	4	5	4	5	5	5	5	5	5	5	4	5	4	4,7
Quality of the session 6 "Best practices of funding possibilities for energy efficiency measures in buildings"	5	5	5	5	5	5	5	5	4	5	5	5	5	4	5	4	4	4	4	5	5	5	5	5	5	5	5	5	4	5	4	4,8
Ration between theoretical and practical part of the training seminar	5	5	5	5	5	5	5	5	4	4	5	5	5	5	4	4	4	4	4	5	4	5	4	5	5	5	5	5	3	5	4	4,6
Overall satisfaction with the training seminar	5	5	5	5	5	5	5	5	4	4	5	4	5	5	4	4	4	4	5	5	4	5	5	4	5	5	5	5	4	5	4	4,7
Please, add additional comments																																
Self-assessment of own capacity and understanding of the key topics covered by the energy efficiency in buildings training seminar																																
Your understanding of the energy efficiency topics presented during the training seminar is refined	3	5	5	4	5	4	5	3	3	4	5	4	4	5	4	4	5	4	5	4	4	4	4	5	5	4	5	5	4	4	4	4,3
Your capacity to perform specific tasks related to energy efficiency in buildings is enhanced	4	5	5	4	5	4	5	3	3	4	5	4	4	5	4	4	4	4	4	5	4	2	4	5	5	3	5	5	4	2	4	4,1
Your capacity to deliver presentations on any specific topic presented is improved	4	5	5	4	5	5	5	2	3	4	5	4	4	5	3	4	4	4	4	5	4	3	4	5	5	3	5	5	4	1	4	4,1
Please, add additional comments																																