



TRAINING ON

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

- Date:** 20-21 January 2022
- Venue:** Agency for Energy Efficiency, Strada Alecu Russo 1, Chişinău, Republic of Moldova
- Organizers:** *United Nations Economic Commission for Europe (UNECE), Agency for Energy Efficiency of the Republic of Moldova, and United Nations Development Programme (UNDP) in Moldova*

DESCRIPTION

The training seminar covers 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 (with in-person participation and online connection)
- 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: Thursday, 20 January 2022

Time	Lecture	Content
09:30 – 10:00	Registration and welcoming coffee	
10:00 – 10:30	Presentation of the host. Introduction to the training seminar	<p>Mr. Evghenii Girlea, Deputy General Director, Energy Efficiency Agency, Republic of Moldova</p> <p>Mr. Alexandru Rotaru, Project Manager, Sustainable Green Cities, UNDP Moldova</p> <p>Mr. Oleg Dzioubinski, Regional Advisor, UNECE</p> <p>Ms. Nadejda Khamrakulova, Project Officer, UNECE</p> <p>Mr. Sergiu Robu, UNECE Consultant</p>
10:30 – 11:15	1st SESSION Energy audits procedure of buildings and multicriteria analysis	<ul style="list-style-type: none"> - Energy audits of buildings - Basic energy audits principles and procedures - Technical systems within the buildings (supply, demand) - Data collection and defining the baseline - Metering of energy consumption - Q&A's <p>(Mr. Matija Vajdić)</p>
11:15 – 12:00	1st SESSION – cont.	<ul style="list-style-type: none"> - 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 <p>(Mr. Matija Vajdić)</p>
12:00 – 12:15	Coffee break	
12:15 – 13:00	2nd SESSION Energy Management Information System and examples of energy management system tools	<ul style="list-style-type: none"> - 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 <p>(Mr. Matija Vajdić)</p>
13:00 – 13:45	2nd SESSION – cont.	<ul style="list-style-type: none"> - Analyzing large amounts of data (bigdata, multicriteria, etc.) - Energy monitoring and reporting - Recommendations for the development of EMIS - Q&A's <p>(Mr. Matija Vajdić)</p>
13:45 – 15:00	Lunch	
15:00 – 15:45	3rd SESSION Municipal energy management as a part of the national monitoring, reporting and verification system	<ul style="list-style-type: none"> - 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 <p>(Mr. Matija Vajdić)</p>
15:45 – 16:30	Wrap-up, Open discussion	

Day 2: Friday, 21 January 2022

Time	Lecture	Content
09:00 – 09:45	Breakfast	
09:45 – 10:15	3rd SESSION – cont.	<ul style="list-style-type: none"> - Municipal energy data collection - Classification of buildings - Key performance indicators (energy, environment, cost) - Monitoring and evaluation of data - Q&A's (Mr. Matija Vajdić)
10:15 – 11:00	4th SESSION Institutional, organizational and legal aspects of energy management and monitoring, reporting and verification at the global and EU levels	<ul style="list-style-type: none"> - 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 Vajdić)
11:00 – 11:15	Coffee break	
11:15 – 12:00	4th SESSION – cont.	<ul style="list-style-type: none"> - 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 Vajdić)
12:00 – 12:45	5th SESSION Energy Management (EM) and Monitoring, Reporting and Verification (MRV) in the buildings sector	<ul style="list-style-type: none"> - 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 Vajdić)
12:45 – 14:00	Lunch	
14:00 – 14:30	6th SESSION Economic evaluation and funding possibilities for energy efficiency measures in buildings	<ul style="list-style-type: none"> - 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 Vajdić)
14:30 – 15:30	Practical work	<ul style="list-style-type: none"> - 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 – 16:15	Wrap-up and closure of the event	