



Energy performance audit and energy rehabilitation of buildings

21 – 25. April 2024

Sunday, April 21th 2024

08:30 – 08:45	Arrival and registration
08:45 – 09:00	Introduction and opening words <i>Prof. Karima Anouche, Faculty of Architecture and Civil Engineering USTO-MB</i> <i>Ahmed Hammou, Director of USTO-MB</i> <i>Djamal Nedjar, Dean of the Faculty of Architecture and Civil Engineering USTO-MB</i> <i>Olena Rusnak, GIZ Marta Stetsiv, RENAC</i>
09:00 - 10:30	Energy Audit Part I. General Overview. Standards and requirements <i>Marta Stetsiv, RENAC</i>
10:30 - 10:45	<i>Coffee Break</i>
10:45 - 12:15	Energy Audit Part II. Carrying out an energy audit <i>Marta Stetsiv, RENAC</i>
12:15 – 13:45	<i>Lunch Break</i>
13:45 - 15:15	Fuel energy balance calculation of energy consumption <i>Fouzi Tabet, RENAC</i>
15:15 - 16:45	Building envelope and thermal analysis. Thermal comfort <i>Fouzi Tabet, RENAC</i>



Monday, April 22nd 2024

09:00 - 10:30	Lighting system, HVAC and electrical power system <i>Fouzi Tabet, RENAC</i>
10:30 - 10:45	<i>Coffee Break</i>
10:45 - 12:15	Boilers and heat production <i>Fouzi Tabet, RENAC</i>
12:15 – 13:45	<i>Lunch Break</i>
13:45 - 15:15	Energy metering and monitoring. Performance measurement <i>Marta Stetsiv, RENAC</i>
15:15 - 16:45	<i>Case study. Work in groups.</i> <i>Marta Stetsiv Fouzi Tabet, RENAC</i>
	<i>City Tour in Oran</i>

Tuesday, April 23rd 2024

09:00 - 10:30	Energy efficiency measures in building envelope Part I. Wall insulation techniques, glazing replacement <i>Fouzi Tabet, RENAC</i>
10:30 - 10:45	<i>Coffee Break</i>
10:45 - 12:15	Energy efficiency measures in building envelope Part II. External shading and protection systems <i>Fouzi Tabet, RENAC</i>
12:15 – 13:45	<i>Lunch Break</i>
13:45 - 15:15	Energy efficiency measures in engineering systems Part I. Hot water systems <i>Fouzi Tabet, RENAC</i>
15:15 - 16:45	Energy efficiency measures in engineering systems Part II. Ventilation and air conditioning <i>Fouzi Tabet, RENAC</i>



Wednesday, April 24th 2024

09:00 - 10:30	Financial calculations and investment cost estimation. Prioritisation of measures <i>Marta Stetsiv, RENAC</i>
10:30 - 10:45	<i>Coffee Break</i>
10:45 - 12:15	On-site building inspection <i>Marta Stetsiv Fouzi Tabet, RENAC</i>
12:15 – 13:45	<i>Lunch Break</i>
13:45 - 15:15	Work in groups. Discussing on-site visit, calculation of energy balance <i>Marta Stetsiv Fouzi Tabet, RENAC</i>
15:15 - 16:45	Presentations of results <i>Marta Stetsiv Fouzi Tabet, RENAC</i>

Thursday, April 25th 2024

08:30 - 09:00	Final test <i>Marta Stetsiv Fouzi Tabet, RENAC</i>
09:00 - 10:00	From passive houses to energy-plus houses <i>Fouzi Tabet, RENAC</i>
10:00 - 11:00	Role of innovation in energy efficiency in buildings <i>Fouzi Tabet, RENAC</i>
11:00 – 11:15	<i>Coffee Break</i>
11:15 - 12:45	Quality assurance and supervision during the construction works <i>Marta Stetsiv, RENAC</i>
12:45 – 13:00	<i>Break</i>
13:00 - 14:00	Closing ceremony <i>Prof. Karima Anouche, Faculty of Architecture and Civil Engineering USTO-MB</i> <i>Djamal Nedjar, Dean of the Faculty of Architecture and Civil Engineering USTO-MB</i> <i>Marta Stetsiv Fouzi Tabet, RENAC</i>
<i>End of seminar, Closing</i>	



About the trainers:



***Marta Stetsiv** is an expert for international energy efficiency training projects at Renewables Academy AG in Solar & Energy Efficiency Division. She conceptualises, plans, and manages international and national training programmes, materials, and projects for energy efficiency. Before joining RENAC, Marta Stetsiv worked at GIZ for two IKI (Internationale Klimaschutzinitiative) projects focusing on energy efficiency in buildings. She has an in-depth understanding of electricity supply networks and industries, markets and policies, and technical details of power grids and their components, because of the previous experience of working at the electricity supplying company. Marta Stetsiv is CQI IRCA Certified ISO 50001:2018 Energy Management System Lead Auditor and Certified Expert in Climate Adaptation Finance.*



***Fouzi Tabet** is a senior professional, holding a PhD degree from ICARE-CNRS France in renewable energy, with more than 20 years of international (Europe, MENA region and Africa) working experience in academia (CNRS France, University of Orléans France, Technical university of Cottbus Germany, Karlsruhe institute of technology Germany, German biomass research center DBFZ) and industry (ANSYS, EDF, Daimler, Green Energy 3000) as consultant, expert, project manager, group manager, researcher and professor in the field of renewable energy and energy efficiency. Fouzi Tabet has joined RENAC as an expert in the field of renewable energy and energy efficiency in January 2024.*



Venue:

*University of Science and Technology of Oran
Mohamed-Boudiaf (USTO-MB)
Building C of the Faculty of Architecture and Civil Engineering
El Mnaouar, BP 1505, Bir El Djir 31000, Oran, Algeria*