

A WARM WELCOME BACK BY ENTRAINER!

NEWSLETTER #2 - 2025



If you are receiving this newsletter, you have probably been in touch with one of the partners of the Project and this is the second out of three newsletters you will get in the next year.

In this issue:

- Highlights of 2024
 - EnTRAINER for professionals
 - EnTRAINER for companies
 - EnTRAINER Tools and open access
 - EnTRAINER academic papers
 - EnTRAINER Event
 - EnTRAINER Results
- A look ahead to 2025
- A message from us! Details and contacts to find us in every partner country

Entrainer is a 36-month project funded by the EU LIFE Programme that aims to support the energy transition and decarbonization in Europe working together with companies. It endeavours to enhance conventional energy audits by introducing a comprehensive and holistic Energy Transition Audit (ETA) methodology in four Southeastern EU countries, i.e., Greece, Italy, Romania and Spain. This novel approach highlights the multiple benefits of energy efficiency and provides a detailed roadmap towards complete decarbonization of assessed sites.

Entrainer is implemented by eight partners with a longstanding cooperation and by energy audit experts, while it focuses on **energy-intensive industries** in areas of the SE Europe, which are lagging in the implementation of energy audits compared to others.

In addition, encompassing educational components, the EnTRAINER project comprehensive methodology offers two accredited courses, tailored for energy auditors and energy experts, alongside other courses designed for corporate personnel. Finally professionals and companies can benefit from the advanced web-based portal, featuring four digital open-access tools, a training platform and a knowledge hub that fosters ongoing interaction and information exchange among participants.

HIGHLIGHTS FROM 2024



ENTRAINER FOR PROFESSIONALS - TRAINING PROGRAMME

The year 2024 was a crucial year for the EnTRAINER Training Programm. We delivered the first edition of the two EnTRAINER Training Courses: "Energy Transition Audits Course for Energy Professionals" and "Energy Transition Audits Course for Energy Auditors". Here are some figures:

- 2 training courses in each of the 4 partner countries
- 314 Registered participants
- 1 training platform launched
- O cost for participants thanks to the EU LIFE funding

The EnTRAINER Training Programme addresses an essential aspect of the holistic Energy Transition Audits (ETAs) approach. It focuses on providing the necessary skills and knowledge to the stakeholders participating in the implementation of the new methodology. Additionally, this dimension aims to re- and upskill current and aspiring energy professionals, who may also pursue careers as energy auditors, raise awareness among company staff members and effectively communicate the importance of sustainability plans. Find out more in the Accredited Training programmes in Energy Transition Audits.

The **second edition** of the two training courses has already started and **will be completed** by **Spring 2025**.

Find out more in section 'A look ahead to 2025'.

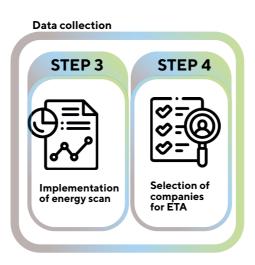
ENTRAINER FOR COMPANIES - FIRST ROUND OF ENERGY SCAN AND ETAS

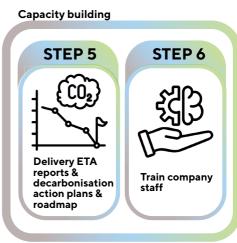
EnTRAINER introduces a transformative shift from traditional energy audits to a comprehensive "Energy Transition Audit" (ETA) approach. This new methodology aims to deliver decarbonization action plans for energy-intensive sites across Greece, Italy, Romania, and Spain.

The first step in our approach focuses on engaging energy-intensive companies through a multi-step process that promotes the adoption of Decarbonization Action Plans (DAPs). Companies were selected based on prior energy audits, energy consumption, and management practices, with a competitive evaluation process prioritizing candidates when interest exceeded capacity.











A total of 41 companies across the four target countries participated in the energy scans, conducted through the following steps:

- Initial kick-off meetings with selected sites
- Data collection
- Comprehensive energy analysis
- Preparation of the energy scan report
- Presentation of findings to key team members, including top management

The detailed process, results, and key lessons learned are available in the Report on Engagement of Clients and Initial Energy Scans.

The Energy Transition Audit (ETA) is the next phase in the energy scan initiative, having clear objectives and the goal of presenting a decarbonization action plan, scheduled on short-, medium- and long-term investments. The first round of ETAs was conducted in the second half of 2024 in 5 selected companies per target country. The outcomes of the implementation of ETAs in the selected companies led to the following:

- Final energy savings of 188 GWh/year
- Primary energy savings of 369 GWh/year
- Renewable energy generation of 93 GWh/year
- GHG emissions reduction of 135 ktCO2eq/year
- Investments in sustainable energy 260 mi €

For all engaged companies detailed DAPs have been agreed and properly communicated to all engaged personnel.

Details of the completed ETAs are available in the Report on performed detailed Energy Transition Audits.

The **second round** of energy scan and ETAs will be in **2025**. Would you like to be one of our **selected companies** for an energy scan and an ETA?

See how in section 'A look ahead to 2025'.

ENTRAINER TOOLS AND OPEN ACCESS



Four Entrainer tools have been developed and are freely available for professionals and companies on the Entrainer website (https://entrainer-project.eu/). Here is a brief outline of them:

- **CUSUM** Control offers on-line supervision of energy consumption anomalies or extreme behavioural deviations from the baseline pattern.
- **Heat loss calculator** provides a rough quantified estimation of the current status of the building's thermal insulation characteristics.



- **Energy audit estimator** offers a brief, yet valid, estimation of energy efficiency potentials of the involved site, as the first step to raise awareness of the application of actual energy efficiency measures before performing a detailed energy audit.
- On Site Auditor acts as a remote portal that will facilitate the on-site surveys during the actual energy audits.

The tools aim to consolidate the knowledge among energy transition auditors, creating a close relationship between energy professionals and the audited clients.

Go to our EnTRAINER website and start using them today!

THREE ACADEMIC PAPERS



2024 was a prolific year for papers. We submitted, presented and publish **three papers**:



1.Stavros P. Filippidis; Nikolaos S. Kelepouris; Aggelos S. Bouhouras; Georgios C. Christoforidis; Ioanna D. Pasiopoulou; Grigoris K. Papagiannis: *EnTRAINER's Project Tools Framework for Energy Transition Audits Towards Decarbonization*, 2024 3rd International Conference on Energy Transition in the Mediterranean Area (SyNERGY MED), Limassol, Cyprus, 2024, pp.1-5, DOI:10.1109/SyNERGYMED62435.2024.10799389.

This paper presents the tools framework that was developed in the context of the EnTRAINER LIFE21 CET project. The tools that make up the framework were built to allow energy managers and energy experts of industries to assess energy and CO_2 saving potentials but also to aid during energy transition audits that will take place during the project. The framework is composed of four tools. The first tool utilizes the cumulative sum (CUSUM) methodology to detect consumption anomalies or extreme deviations from the baseline pattern of the company's consumption. The second tool offers a quantified estimation of the building's insulation status, while the third is composed of four simple questions that can detect energy efficiency potentials in the involved site. Finally, the fourth tool aims to create part of the energy transition audit report that will occur in the project.





2. Briscan Roxana-Valentina; Şteţ Denisa; Czumbil Levente; Cîrstea Ştefan; Jurj Dacian; Mureşan Alexandru, Empowering Energy Professionals: A Novel Educational and Training Program on Energy Transition Audits and Decarbonization, 2024 IEEE International Conference And Exposition On Electric And Power Engineering (EPEi), Iasi, Romania, DOI: 10.1109/EPEi63510.2024.10758039.

The paper presents the implementation and impact of an innovative educational and training program, delivered as a postgraduate program at the Technical University of Cluj-Napoca, Romania. This program addresses the urgent demand f skilled professionals within companies capable of facing the complexities of decarbonization. A blended learning approach that integrates theoretical instruction with practical applications is applied. The program represents an essential component of a paradigm shift from traditional energy audits to a holistic and comprehensive "Energy Transition Audit" methodology. This novel approach was developed by a consortium of four European countries in the framework of a European-funded project.



3. Cañada-Soriano, Mar; Peñalvo-López, Elisa; Montagud- Montalvá, Carla; Valencia-Salazar, Iván: *Energy transition audits in industries located in Valencian region*, 2024 EN 41st International Heat Transfer Conference (1 - 8), Napoli, Italy.

This paper presents the first results of an Energy Transition Audit conducted in a Valencian food processing facility within the framework of the European project EnTRAINER - Energy Transition Audits towards Decarbonisation. Starting from the industry baseline in terms of energy consumption and costs and production through a one-year analysis, five improvement actions are proposed and evaluated using the following performance indicators: energy and cost savings along with emissions reduction. Finally, the improvement measures are prioritised based on the company's emissions reduction targets. Therefore, this innovative approach empowers the industries to monitor their progress towards achieving their decarbonization targets.

Do you want to learn more? Contact us

ENTRAINER EVENTS!





This year was also an opportunity to culminate our efforts to communicate about the EnTRAINER project. By the end of 2024 we could count across the four partner countries:

- 22 events presenting EnTRAINER and reaching +3,500 people
- Four tailored local workshops reaching 200 key stakeholders
- Paving the way to net-zero energy in industry and small and medium-sized enterprises, a policy session jointly delivered with our Sister Projects within the EU-SEW 2024. A pioneering effort by EnTRAINER, AUDIT2MEASURE, DEESME2050, EE4SMEs, EE4HORECA, KNOWnNEBs, six EU funded flagship projects tackle a common challenge: spearheading decarbonization in industrial sectors and SMEs, while advocating for clean energy transitions. The session reached 388 people.





Finally, we met for our regular consortium meetings in Rome (Italy) and Cluj-Napoca (Romania). Two-day meetings where we worked internally to continue to guarantee a smooth delivery of the project for the best results.







Consortium meeting Rome (Italy)

Consortium meeting
Cluj-Napoca (Romania)

We will soon meet again, hosted by the **University of Western Macedonia**, in **March 2025** in **Kozani** (Greece)!

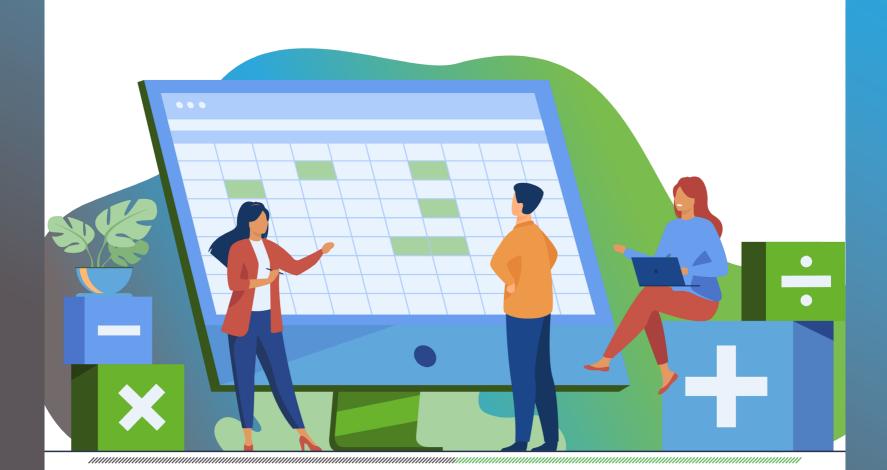
OUR RESULTS IN TWO-YEAR WORK ARE PUBLISHED





In the <u>RESULT</u> page all our reports are now fully available to be viewed and downloaded for free:

- Holistic Energy Transition Audit Methodology
- Decarbonization roadmap
- Report on engagement of the clients and initial energy scans
- Energy Transition Audits towards Decarbonization
- Online tools
- Accredited Training programmes in Energy Transition Audits
- Portfolio of Dissemination Material and Activities



A LOOK AHEAD TO 2025



The EnTRAINER consortium has still one intense year ahead, and we will focus our efforts in the delivery of the activities aiming to reach out to the highest number of stakeholders to ensure the sustainability of the project beyond its life.

Among the upcoming scheduled activities there will be:

- Second round of training courses for professionals or expert auditors in the four partner countries to know how to participate, look for your country in the below section 'A message from us' and contact us
- Second round of energy scan and ETAs for companies in the four partner countries would you like to submit your company for a free energy scan and ETA? Look for your country in the below section 'A message from us' and contact us
- New workshops and events stay tuned for more news by following us on our social media



in EnTRAINER_Project

info@entrainer-project.eu



A MESSAGE FROM US



Find below the information on the EnTRAINER partners and the contact details for each target country.



EnTRAINER – Greece Aristotle University of Thessaloniki, University of Western Macedonia





EnTRAINER training Programme - contact detail: greece@entrainer-project.eu

EnTRAINER energy scan and ETA - contact detail: gchristoforidis@uowm.gr

Entrainer Tools - contact detail: abouchouras@uowm.gr

General information and any other enquiries: gpapagia@ece.auth.gr

EnTRAINER – Italy Agenzia per l'Energia Alto Adige CasaClima, UniverCities





EnTRAINER training Programme - contact detail: entrainer.univercities@gmail.com

EnTRAINER energy scan and **ETA** – contact detail:

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General information and any other enquiries: entrainer.univercities@gmail.com

EnTRAINER – Romania SERVELECT, Technical University of Cluj-Napoca







Entraining Programme for energy auditor and energy professionals - contact detail: entrec.center@ethm.utcluj.ro

Entraining Programme for companies – contact detail: entrec.center@ethm.utcluj.ro

EnTRAINER energy scan and ETA – contact detail:

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General information and any other enquiries:

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EnTRAINER – Spain Technical University of Valencia (UPV) BEON Energy





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