

METADATA (*)

TOPIC A – Training Unit 1: Energy Flexibility and demand response strategies

Source Partner: R2M Project: TRINEFLEX - Transformation of energy intensive process industries through integration of energy, process, and feedstock flexibility, Grant agreement ID: 101058174
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Abstract The Training unit “Energy and Flexibility and demand response strategies” treats arguments of energy management and production considering the industrial energy sustainability context.
Structure <ul style="list-style-type: none">• Lesson 1: Energy flexibility and energy saving concepts Presents the difference between energy saving and energy flexibility, providing definitions, examples of schemes and applicable contexts for industrial customers. Three industrials use cases are presented at the of the lesson as good practices and replicability projects.• Lesson 2: Demand Response strategies in Europe Provides insights into how European nations are leading the way in energy market transformation and sustainability. The lesson delves into the implementation of Demand Response in pilot sites located in Italy, Spain, and Greece, offering a comprehensive understanding of the strategies and initiatives in place to support these objectives.
Learning Outcomes Learning outcomes are the main differences between the concept’s energy saving process and flexibility with applicability in industrial use cases and a general overview of the demand response schemes available in the European context. Participants can expect to learn about the central role of Demand Response in enhancing grid stability, optimizing energy consumption, and facilitating the integration of renewable energy sources.
Intended Audience Students, production managers, general audience
Pre-requisites <ul style="list-style-type: none">• Main concepts related to energy consumption, energy profiles and characteristics of them.• General knowledge about energy systems such as storage and PV plants.

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- General overview on demand response schemes

Language: English

Format: Video mp4, PDF

Expected workload: 20 minutes each lesson

References / Complementary additional training material:

- Stem-Case-Study_Penske_FINAL.pdf, available here:
https://www.stem.com/wpcontent/uploads/2022/06/Stem-Case-Study_Penske_FINAL.pdf 2
- Stem-Case-Study_ShoEi-Foods_Jan-2023.pdf, available here:
https://www.stem.com/wpcontent/uploads/2020/11/Stem_Case-Study_ShoEi-Foods-USA-Inc-PDF.pdf 3.
- How United States Cold Storage Supports Sustainability Through Demand Response, available here: <https://www.enelx.com/n-a/en/resources/case-studies/US-cold-storage>

(*) The structure of the Metadata for the Training Units derives from the training Metadata model developed within the Leonardo da Vinci project LINKVIT (2013-15, GA N. 2013-IT1-LEO05-04046)