

Set of about 70 energy efficiency measures of cross-sectoral technologies

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1 Executive summary

Within Task 2.2 Staff training material on energy efficiency descriptions of main energy efficiency measures (about 70 measures) in industrial enterprises (and offices) were developed. The focus of the measures is not sector specific, but will be set on cross-sectoral technologies and energy management measures.

After discussion during September, October 2018 several technologies were added to the 8 technologies mentioned in the contract.

For the following 14 systems /topics 71 measures were described:

- Energy management (7)
- Pumps (6)
- Compressed Air (8)
- Fans, HVAC (8)
- Cooling systems (6)
- Office (2)
- Heating of buildings & envelop (7)
- Lighting systems (4)
- Industrial heating (2)
- Steam (9)
- Waste heat recovery, heat pumps (3)
- Insulation of pipes, heat distribution (3)
- Mobility (3)
- Renewables (3)

In addition a separate document described 23 measurement and verification plans for different technologies.

The main results were for each technology:

- Measure descriptions
- For each technology support tools (data collection sheets, checklists) (D 2.3)
- For each technology an exam (quiz) (D 2.3)
- M&V plans (D 2.3)
- For each technology a training presentation of about 50 slides (D 2.4)

2 Introduction

Target

Task 2.2 will provide qualitative description of main energy efficiency measures (about 70 measures) in industrial enterprises. The focus will not be sector specific, but it will be set on cross-sectoral technologies and energy management measures.

The main results will include:

- Measure description
- For each technology support tools (data collection sheets, checklists)
- For each technology an exam
- M&V plans (for at least two measures for each technology)
- For each technology a training presentation of about 50 slides

2.1 Purpose of this document

This document summarizes the activities of task 2.2 for developing the staff training material on energy efficiency descriptions of main energy efficiency measures (about 70 measures) in industrial enterprises (and offices).

2.2 Relation to other activities in the project

These factsheets are used as informative material on the IMPAWATT platform.

2.3 Partners' contribution

Activities

For task 2.2 a list of 10 technologies and 63 measures was developed for further discussion within the consortium. This was distributed to all partners on 28.9.2018 for collecting comments and information. The list was also discussed during regular web-meetings and during the project meeting in Vienna (Dec. 2019). At the end 14 technologies were defined, some of them were not included in the contract: (energy management (not directly mentioned), office, industrial heating, mobility, renewables). In addition, for each technology a partner was selected to fulfil this work (see list below):

- Energy management (7) (prepared by CCI)
- Pumps (6) (prepared by PLA)
- Compressed Air (8) (prepared by AEA)
- Fans, HVAC (8) (prepared by AEA)
- Cooling systems (6) (prepared by AEA)
- Office (2) (prepared by SEN)
- Heating of buildings & envelop (7) (prepared by VTT/ENV)
- Lighting systems (4) (prepared by PLA)
- Industrial heating (2) (prepared by PLA)
- Steam (9) (prepared by AEA)
- Waste heat recovery, heat pumps (3) (prepared by PLA)
- Insulation of pipes, heat distribution (3) (prepared by AEA)
- Mobility (3) (prepared by CCI)
- Renewables (3) (prepared by ENV)

For M&V it was decided to include some information on M&V within the factsheet descriptions and provide a separate document with 23 M&V plans for selected measures. Not for all technologies M&V plans could be provided as there were no references.

3 Description of deliverable 2.2

This deliverable contains 71 factsheets.

Each factsheet has the following content (as far as information was available):

- Title of saving measure
- Description of cross sectoral technology
- Description of saving measure
- Average pay-back time
- Relevance of implementation (e.g. low-hanging fruit)
- Non-energy benefits
- Measurement and Verification
- Example of implemented measure (if available)

For the languages French, German, Italian the main part of the factsheets was translated in June, some material are translated in July. For Finnish only selected material was translated, since English content can be easily used with Finnish enterprises.

The M&V part is quite specific and will not be translated at the moment.

4 Conclusions

The deliverable is finished in time and factsheet were translated by all partners.

ANNEX

In total 71 factsheets are uploaded on the IMPAWATT platform.