

Supportive tools, exams and M&V plans for 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. For each cross-sectoral technology additionally support tools were developed: data collection sheets and checklists for walk through audits. Furthermore, for each technology an exam was established for testing the knowledge of the target group in a playful manner.

In order to show the target group, how the results of implemented measures can be verified AEA established M&V plans (based on IPMVP and/or ISO 50015) for most of the technologies.

For the following 14 systems a data collection sheet, a checklist for walk-through audits and a quiz was established:

- Energy management
- Pumps
- Compressed Air
- Fans, HVAC
- Cooling systems
- Office
- Heating of buildings & envelop
- Lighting systems
- Industrial heating
- Steam
- Waste heat recovery, heat pumps
- Insulation of pipes, heat distribution
- Mobility
- Renewables

In addition, a separate document describes 23 measurement and verification plans for different technologies. Not for all technologies information on M&V plans is available, e.g. mobility.

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 an 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 (in D2.4)

2.1 Purpose of this document

This document summarizes the activities of task 2.2 for developing the supportive tools for each technology (checklists, data collection sheets, exams, M&V plans).

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

At the end of several months of discussion, 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 prepare the supportive tools (see list below).

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

For M&V it was decided to include some information on M&V within the factsheet descriptions and AEA provided 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 2.3

This deliverable contains a data collection sheet, a check-list, and an exam for each of the 14 technologies.

In addition, a document with 23 M&V plans was prepared, covering the main saving measures per technology. For some technologies no information on M&V was available.

Each factsheet describing the saving measures (D 2.2) contains some information on M&V.

For the languages French, German, Italian the main part of the documents were 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 was translated by all partners.

ANNEX

In total 14 times 3 supportive tools are uploaded on the IMPAWATT platform.

One document with 23 M&V plans is uploaded on the IMPAWATT platform.