

IEA DMS Task XXI

Standardisation of Energy Savings Calculations



Why a next step in energy savings calculation is needed

Many policies and measures for improving energy efficiency now exist and continue to improve. The ongoing development in these policies reflects growing acceptance of the importance of taking measures in seeking to reduce carbon dioxide emissions, minimising the cost of energy services, enhancing energy security and addressing wider environmental concerns. Estimations concerning (projected) energy savings, emissions reductions or financial gains from energy efficiency measures are now rather common. But these estimations are conducted in such a broad range of approaches that they hinder (international) comparison of calculated energy savings.

Within the context of the IEA DSM Agreement the Task researches options for harmonising energy savings calculations, contributes to more easily international comparison energy savings and sets a next step to standardisation of energy savings calculations.

Main Activities

The overall aim of Task XXI is to identify basic concepts, calculation rules and systems for Energy Savings Calculations (ESC) standards. Both energy savings, emissions avoidance calculation methods and standards will be evaluated for efficiency activities. In addition to this a methodology should be developed to nominate and describe the several Demand Response products. The Task will also explore how and by what type of organisations these draft standards could be used (and improved) to increase the comparability of international evaluations of policies and measures.

Subtasks

To conduct the work in the years 2009-2011, Task XXI is divided into three subtasks.

Subtask 1: Existing energy savings calculation, standards and standards under development, and use of most relevant reports for ESC

The first subtask concentrates on the identification of national and regional existing energy saving calculation (ESC), standards and standards under development. In this phase country experts identify and assess the most relevant (national) evaluation and monitoring reports for ESC. The Operating Agent and the experts will discuss and identify basic terms and definitions, calculation rules and systems. In addition to this they research key elements to structure Demand Response products.

Subtask 2: Basic concepts, rules and systems for ESC standards

The work in the second subtask deals with drafting the basic concepts, calculation rules and systems that are in use for ESC and with the possible transformation of them to (draft) standards. For achieving this experts produce national case applications and harmonised energy savings calculations. These cases are:

1. Industry; Variable Speed Drive and High Efficient motor;
2. Commercial Buildings; Heating system;
3. Commercial Buildings; Integrated Air conditioning system;
4. Households; Retrofit wall insulation; and;
5. Households; Lighting

The experts and the Operating Agent will also develop a methodology to nominate and describe the Demand Response products, including 'general accepted' criteria. In this process attention will be given to standards (existing or under preparation) to identify how and why these standards are or could be used for impact evaluations of policies and measures.

Subtask 3: Potential use and continue development of energy savings calculation standards

During the third subtask the report on the basic concepts, calculation rules and systems will be finalised and greenhouse gas emissions reductions related to energy savings will be included in the framework. During a regional workshop in Korea April 2011 experts discussed this framework and explored to what extent these basic concepts, calculation rules and systems could be improved to ease the use of them by relevant (standardisation) organisations. The experts and the Operating Agent explore how to nominate and to describe the Demand Response products, including 'general accepted' criteria that could be used in future Demand Response case applications.

Reports (planned)

Energy savings calculation, common practise and key elements

Guidelines for energy savings calculations and key elements

Demand Response projects, energy impacts and key elements

Country reports: Energy Savings Calculations for selected end use technologies and existing evaluation practices in the participating country

The report are expected to be published by the end of 2011 at the website www.ieadsm.org

Participation

France, Ademe, experts Luc Bodineau; Bruno Lapillonne (Enerdata)

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