D2.3: Overview of the relevant legislation and policies.

WP2: Status quo and monitoring of market development

Task 2.2: Overview of the relevant legislation and policies

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Content

1. Introduction

From Grant Agreement

“Task 2.2: Energy label and Ecodesign legislation are the EU´s central tools framing the effort to bring more efficient products to the market. The framework directives on enrgy label (2010/30/EU) and Ecodesign (2009/125/EC) define the overall principles of limiting the usage of the least efficient products (Ecodesign) and of supporting the market uptake of the most efficient products (energy labels). Following to this framework legislation, individual product specific regulations are consequently being elaborated to regulate products from individual categories. While until recently most product categories covered have been relevant for the household sector, increasing professional products are being regulated for energy efficiency parameters as well. Concerning professional cold products, no specific legislation is in place at the time of writing this application, it is in fact, being prepared for some of the sector segments and will subsequently enter force. This project tis therefore in a unique position to help framing and empowering public authorities in implementing strong and meaningful energy efficiency policies – strong adaption of the ones with legislation newly entering force and supporting ambitious preparation of legislation for the rest of the segment by providing information on the market situation developments. The timing of this project is also key to achieving this overall result.

Within this task, an overall review of available legislation will be elaborated – describing the overall principles of energy label (for the relevant product groups) and Ecodesign legislations, and the status of the legislation concerning professional cold products. The research and review will not only monitor and describe the legislation proposals and supporting documents and studies available, if fitting the timing of the legislation process, it will also comment and contribute practically to policy proposals and reviews, for example by reviewing the energy efficiency index definitions and thresholds, and comparing these with BAT models available on the market already at that time. By this analysis, the project will be able to actively contribute to the development of professional cold legislation (or its future updates) to fully reflect on the market situation.” (p. 13/14 of 37)

Goal

Providing an overview of the relevant legislation and polices for ProCold will be important for the future task of ProCold. This document will serve as summary of the national and international legislation.

2. Relevant legislation

Summary

Energy efficiency of household refrigerators has been a focus of the European Union policies for the last two decades. Today A+ models are the lowest performing products allowed on the market and even more A+++ models appear continuously.

In the member states of the EU 12 times more household refrigerators and freezers exist than professional cold products, but the household sector only uses two times more energy – household 84 TWh vs. commercial/professional 43 TWh.

This document provides an overview of the ProCold-relevant legislation in the EU and the participating countries.

EU Legislation

There are several different EU regulations which are relevant for ProCold. In 2015 two regulations have been published, described in the following chapter.

[1] Commission delegated regulation (EU) 2015/1094 of 5 May 2015 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to the energy labelling of professional refrigerated storage cabinets

The energy consumed by professional refrigerated storage cabinets accounts for a significant share of total electricity demand in the Union. Professional refrigerated storage cabinets with equivalent functionality exhibit wide disparity in terms of energy efficiency. The scope for reducing their energy consumption is significant. Professional refrigerated storage cabinets should therefore be covered by energy labelling requirements.

Harmonised provisions should be laid down on labelling and standard product information regarding the energy efficiency of professional refrigerated storage cabinets in order to provide incentives for manufacturers to improve the energy efficiency of those products, encourage end-users to purchase energy-efficient products and contribute to the functioning of the internal market.

The combined effect of this Regulation and Commission Regulation (EU) 2015/1095 (2) is expected to result in estimated annual energy savings of about 1,8 TWh in 2020 and 4,1 TWh in 2030, corresponding to 0,7 and 1,4 million tonnes CO2 equivalent, as compared with what would happen if no measures were taken.

This Regulation shall apply to electric mains-operated professional refrigerated storage cabinets, including those sold for the refrigeration of foodstuffs and animal feed.

This Regulation shall not apply to the following – ProCold relevant – product categories:

- open cabinets, where their openness is a fundamental requirement for their primary functionality;
- serve-over counters and other similar forms of cabinet primarily intended for display and sale of foodstuffs in addition to refrigeration and storage;

Per definition in the regulation, professional storage cabinet means an insulated refrigerating appliance, which is accessible via doors or drawers and capable of maintaining the temperature on a constant, cool, level. Such an appliance shall be

intended for the storage of foodstuffs in non-household environments and is not meant for the display to or access by customers.

Responsibilities of suppliers and timetable:
From 1 July 2016, suppliers placing professional refrigerated storage cabinets on the market or putting them into service shall ensure that the following requirements are met:

a) a printed label provided for each professional refrigerated storage cabinet
b) an electronic label shall be made available to dealers for each professional refrigerated storage cabinet model
c) a product fiche shall be made available
d) a technical documentation and promotional material shall also be made available.

Article 4 “Responsibilities of dealers” of professional refrigerated storage cabinets shall ensure that the following requirements are met:

a) at the point of sale, each professional refrigerated storage cabinet shall bear the label provided by suppliers in accordance with Article 3(1) on the outside of the front or top of the appliance, so that it is clearly visible
b) professional refrigerated storage cabinets offered for sale, hire or hire-purchase, where the end-user cannot be expected to see the product displayed, shall be marketed with the information provided by the suppliers
c) any advertisement relating to a specific professional refrigerated storage cabinet model and containing energy-related or price information shall include a reference to the energy efficiency class of that model
d) any technical promotional material concerning a specific professional refrigerated storage cabinet model and describing its specific technical parameters shall include a reference to the energy efficiency class of that model.

The energy efficiency class of a professional refrigerated storage cabinet shall be determined on the basis of its energy efficiency index (EEI), shown in table 1.

Table1: Energy efficiency classes of professional refrigerated storage cabinets

Energy efficiency class	EEI
A+++	EEI < 5
A++	5 ≤ EEI < 10
A+	10 ≤ EEI < 15
A	15 ≤ EEI < 25
B	25 ≤ EEI < 35
C	35 ≤ EEI < 50
D	50 ≤ EEI < 75
E	75 ≤ EEI < 85
F	85 ≤ EEI < 95
G	95 ≤ EEI < 115

Two energy labels will be relevant for refrigerated storage cabinets, one covering energy efficiency classes A to G and one covering the classes A+++ to G. The second one is shown in figure 1.
The following information shall be included in the label:

a) Name of the supplier or trade mark
b) Suppliers model identifier
c) The energy efficiency class
d) Annual electricity consumption in kWh
e) Sum of the net volume, expressed in litres, of all chilled compartments functioning at chilled operating temperature
f) Sum of the net volumes, expressed in litres, of all compartments functioning at frozen operating temperature
g) Climate class, dry bulb temperature and the relative humidity

Figure1: Energy label for professional refrigerated storage cabinets

The information in the product fiche shall be provided in a certain order and shall be included in the product brochure or any other literature which is provided with the product:

a) suppliers name or trade mark

b) supplier´s model identifier

c) type of model and energy efficiency class

d) the 24 hour energy consumption and the annual energy consumption

e) net volume and climate class

f) information about the use up to witch ambient temperatures

It is also compulsory to list information about the technical documentation:

a) Name and address of the supplier
b) Sufficient description of the model
c) if appropriate – information about the harmonised standards applied
d) if appropriate – any other standards and specifications used
e) identification and signature of the person empowered to bind the supplier
f) results of the measurements and calculations for the technical parameters

[2] Commission Regulation (EU) 2015/1095 of 5 May 2015 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for professional refrigerated storage cabinets, blast cabinets, condensing units and process chillers

Annual electricity consumption in the Union related to condensing units, process chillers and professional refrigerated storage cabinets was estimated to have been 116,5 TWh in 2012, corresponding to 47 Mt CO2 emissions. Unless specific measures are taken, the annual energy consumption is expected to be 134,5 TWh in 2020 and 154,5 TWh in 2030, corresponding to 54,5 and 62,5 Mt CO2 respectively. The combined effect of this Regulation and the Commission Delegated Regulation (EU) 2015/1094 (2) is expected to result in annual electricity savings of 6,3 TWh by 2020 and 15,6 TWh by 2030, as compared with what would happen if no measures were taken. These numbers show the massive energy saving potential in this industry sector.

The preparatory study shows that the use-phase energy consumption can be significantly reduced by applying cost-effective non-proprietary technologies that reduce the combined costs of purchasing and operating these products.

Ecodesign requirements should harmonise energy consumption requirements for professional refrigerated storage cabinets, blast cabinets, condensing units and process chillers throughout the Union, thus helping to make the single market more efficient and to improve the environmental performance of those products.

This Regulation establishes ecodesign requirements for the placing on the market of professional refrigerated storage cabinets and blast cabinets. This Regulation shall apply to electric mains-operated blast cabinets, and electric mains-operated professional refrigerated storage cabinets including those sold for the refrigeration of foodstuffs and animal feed.

Not addressed by this regulation are the following product groups:

- refrigerated storage cabinets powered by energy sources other than electricity
- r.s.c. operating with a condensing unit

- open cabinets, where being open is a fundamental requirement for their primary functionality
- built in cabinets

Refrigerants are addressed under Regulation 842/2006, therefore no specific restrictions on the use of refrigerants shall be set in this ecodesign regulation.

Ecodesign requirements shall apply in accordance with the following timetable:

a) From 1 July 2016 condensing units, process chillers, professional refrigerated storage cabinets, heavy-duty cabinets and blast cabinets shall comply with requirements the set out (EEI < 115)
   For professional refrigerated storage cabinets product information, described below, shall be provided
b) From 1 January 2018: EEI < 95 for professional refrigerated storage cabinets
c) From 1 July 2018 special requirements for condensing units and process chillers
d) From 1 July 2019: EEI < 85 for professional refrigerated storage cabinets

In the following section legislations and policies, if available, on the national level will be described.

National Level

For ProCold, it is relevant to evaluate the status of legislations and policies in the following countries:

Austria

In Austria no additional legislation about the relevant product group exists.

Czech Republic

In the Czech Republic no additional legislation about the relevant product group exists.

France

In France only a voluntary agreement between the government and a federation of retailers exists. These retailers commit to closing their cooling walls in supermarkets.

To offer an incentive for this action, the government agreed to include the measure – in sense of action – of closing cooling shelf displays in the national white scheme certificate. Within this scheme, entities selling energy have a yearly obligation to save energy either by implementing an energy saving measure themselves or by buying certified savings that would have been implemented by other entities. Some supermarkets also sell energy – fuel for example – and can count the measure of cooling the doors of their own displays as a way to get these savings that they are obliged to deliver. If they do not sell energy and are not concerned by the savings obligations, they can sell the savings to other entities.

Germany

In Germany no additional legislation about the relevant product group exists.

Italy

In Italy no additional legislation about the relevant product group exists.

For remote systems the situation is different. The only additional specification comes from the private sector. Many retail chains have announced that they will install only closed refrigerators to save energy, but this concerns primarily remote systems. Studies show, that cooling systems use more than 40% of the energy consumption of a typical Italian supermarket. An energy monitoring system was introduced, to guarantee a safe and efficient cooling system for retailers [4].

Portugal

In Portugal no additional legislation about the relevant product group exists.

Sweden

In Sweden no additional legislation about the relevant product group exists.

Switzerland

In Switzerland the Swizz Energy regulation (EnV) sets the rules for professional and household cold products. In this regulation the requirements on energy efficiency and product placement are described. The scope of the regulation covers the professional products but nevertheless practical experience shows that it is only applied for the household category.

In Switzerland also a rebate programme, described in D2.2, for efficient and environmental friendly cold products exist. It offers a 25% discount of the purchase price. The selection criteria and a list of the eligible products can be seen under topten.ch.

3. Outlook

At the moment work is done on the final publication of professional display cabinets. This will be relevant for ProCold, but the document will not be available before end of 2015/ beginning of 2016.

References

EU regulations and studies:

[1] Commission delegated regulation (EU) 2015/1094 of 5 May 2015 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to the energy labelling of professional refrigerated storage cabinets

[2] Commission Regulation (EU) 2015/1095 of 5 May 2015 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for professional refrigerated storage cabinets, blast cabinets, condensing units and process chillers

[3] Ecodesign for Commercial Refrigeration, Preparatory study update Final report, 2014 by the European Commission Joint Research Centre (JRC). http://susproc.jrc.ec.europa.eu/comrefrig/index.html

[4] Chiudere bene le porte! 2014 by unicoopfirenze. http://www.coopfirenze.it/speciali/notizie/chiudere-bene-le-porte