

Household coffee machines: recommendations for policy design

May 2022, Nadja Gross

Summary

- The stock of residential coffee makers in the EU is estimated 100 Mio units, consuming 17 TWh per year. Estimates of annual sales are roughly 30 Mio units by 2025.
- European Regulation (EC) No 1275/2008 on standby defines auto-power-down-delay times (factory settings and programmable times). The recommended standby-consumption is at maximum 0.5 W.
- Measuring standard EN 60661:2014 can be applied to all types of coffee machines and can be used as a basis for an energy label according to the Swiss example (since 2015).
- Introduction of EU-Energy label is not foreseen at the present time. Topten strongly recommends this is being considered to put on the agenda. Switzerland is using an energy label for coffee machines successfully since 2015, which could be easily adapted for the European Market.

Stock and Saving potentials

The stock of residential coffee makers in the EU is estimated 100 Mio units, consuming 17 TWh per year. Estimates of annual sales are roughly 30 Mio units by 2025. The tendency for comfort and quality reasons are towards fully automatic and portioned coffee machines. The energy efficiency of coffee machines can be strongly enhanced with relatively simple measures such as auto-power-down, better insulation of boilers or flow-type heaters, energy saving mode, low or zero standby, reduction of the thermal capacity of the heating unit. If the existing stock would be replaced by energy efficient models within the next years, up to 10 TWh per year could be saved.

The Standby regulation

European Regulation (EC) No 801/2013 amending (EC) No 1275/2008 on standby defines auto-power-down delay times (factory settings and programmable times). The recommended standby-consumption in (EC) No 1275/2008 is at maximum 0.5 W.

For coffee machines, the delay time after which the product switches automatically into the modes and conditions as referred to in Annex II, point 2, Paragraph d) are as follows:

- *For domestic drip filter coffee machines storing the coffee in an insulated jug, a maximum time of 5 minutes after the completion of the last brewing cycle, or 30 minutes after completion of a descaling or self-cleaning process;*
- *For domestic drip filter coffee machines storing the coffee in a non-insulated jug, a maximum time of 40 minutes after the completion of the last brewing cycle, or 30 minutes after completion of a descaling or self-cleaning process;*

- *For domestic coffee machines other than drip filter coffee machines, a maximum time of 30 minutes after the completion of the last brewing cycle or a maximum of 30 minutes after the activation of the heating element, or a maximum of 60 minutes after the activation of the cup preheating function, unless an alarm that requires users' intervention to prevent possible damages or accidents has been triggered.*

However, these delay times should be understood as a maximum delay time for factory settings and also for the programmable delay times.

When factory settings can be altered by the user and be re-programmed up to several hours, the potential savings are lost again. Long auto-power-down delay times highly increase the energy consumption.

In contrast, short auto-power-down delay times do not hinder the comfort of a coffee machine. Assuming the coffee machine is frequently used, the machine is in the "on" mode often or has not yet completely cooled down and thus is promptly ready to use again. Thus, the regulation should be amended as follows:

It must not be possible for users to prolong by re-programming or by deactivating the factory setting auto-power-down delay times.

Energy label for the EU, based on measuring standard EN 60661

This standard can be applied to both pressurized and filter coffee machines. Switzerland's energy label (since 2015) is based on this method and is successfully labelling all household coffee machines with this label.

Topten is strongly recommending the introduction of a European Energy label based on the Swiss example, as many models are already measured and labelled for the Swiss market.

- Consumers have a need for being informed on energy consumption and classification of any appliance.
- It would be in line with many other household appliances in the EU, that already have a label.
- Even with the auto-power-down requirements, the energy consumption of various models varies greatly. A rating of energy efficiency of coffee machines makes sense and helps consumers to choose the most efficient machine.
- In addition, a label scheme gives incentives to industry to improve their products.

Links

- European Commission Regulation (EC) No 801/2013
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013R0801>
- European Commission Regulation (EC) No 1275/2008
<https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32008R1275>
- EN 60661:2014
<https://www.en-standard.eu/bs-en-60661-2014-methods-for-measuring-the-performance-of-electric-household-coffee-makers/>
- The Swiss Energy Label for household coffee machines
<https://www.bfe.admin.ch/bfe/en/home/efficiency/energy-labels-and-efficiency-requirements/household-appliances/coffee-machines.html>