



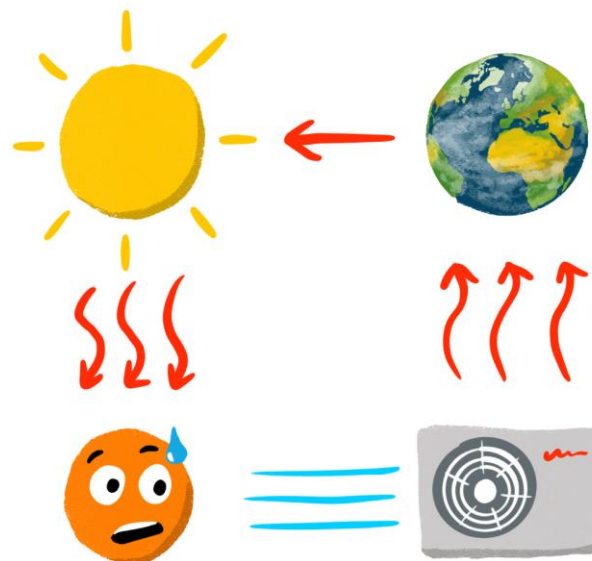
## A common energy label and natural refrigerants for all air conditioning systems

### Coolproducts position paper

Extreme temperatures are a dramatic manifestation of the climate emergency we live in. Heatwaves have now become an annual phenomenon in Europe and will become more extreme and more frequent as the anthropogenic climate change continues<sup>1</sup>. In July 2019, high temperature records were set in many European countries<sup>2</sup>, and May 2020 became the hottest ever recorded<sup>3</sup>.

Higher temperatures and humidity have rapidly increased the demand for cooling appliances in the European Union and all over the world. By 2050, two thirds of the world's households could be equipped with an air conditioner, with their total number expected to surge from 1.6 to 5.6 billion globally<sup>4</sup>.

#### Trying to keep cool on a warmer planet



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Such increasing number of appliances leads in turn, to a vicious circle, as it contributes to direct GHG emissions from their intensive energy consumption. Refrigerant gas leakage is even more problematic as some of these gases commonly used in air conditioning systems have a global warming potential up to 2000 times higher than CO<sub>2</sub>. The growing number of AC units is not the only issue: their

<sup>1</sup> <https://www.worldweatherattribution.org/human-contribution-to-record-breaking-june-2019-heatwave-in-france/>

<sup>2</sup> <https://public.wmo.int/en/media/news/european-heatwave-sets-new-temperature-records>

<sup>3</sup> [https://www.lesoir.be/305164/article/2020-06-05/climat-le-mois-de-mai-2020-ete-le-plus-chaud-jamais-enregistre-sur-la-planete?from\\_direct=true](https://www.lesoir.be/305164/article/2020-06-05/climat-le-mois-de-mai-2020-ete-le-plus-chaud-jamais-enregistre-sur-la-planete?from_direct=true)

<sup>4</sup> International Energy Agency, The Future of Cooling, 2018

environmental impact also depends on the efficiency of individual appliances and the use of refrigerants with high global warming potential (GWP) values.

During heatwaves, consumers are more likely to make quick and impulsive purchases and turn to cheap, inefficient solutions such as **small, portable air-conditioning units**. These appliances need to be operated with an open window or door, and thus are less efficient than split units<sup>5</sup>.

### What is the European Union doing?

2011 and 2012 saw the introduction of energy labelling and ecodesign regulations for air conditioners in the EU. These powerful policy tools have triggered annual savings of 20 TWh and 8mt CO<sub>2</sub> equivalent.

Unfortunately, in view of the ever-increasing demand, the current measures are largely outdated: some products already available on the market outperform the highest A+++ labelling class by over 20%<sup>6</sup>, which means that the energy label scale does not reflect the latest innovations. Therefore, unless new energy saving measures are put in place the electricity consumption of domestic air conditioning will rise from 40 TWh in 2020 to 62 TWh in 2030 - the same amount as residential electricity consumption of Italy!<sup>7</sup>

Revised versions of both regulations were discussed by Member States and other stakeholders in September 2019. If adopted, these could help save an estimated 4 TWh/year of electricity by 2030.<sup>8</sup>

It is high time limit the environmental the impact of air conditioning. Consequently, the existing regulations must be revised as soon as possible.

### What should the European Union do?

Above all, the EU must stop protecting inefficient technologies and focus on promoting climate friendly alternatives instead.

- **Introduce a common energy label scheme for all air conditioning appliances**

Local air coolers (LAC) or portable air conditioners are very inefficient products. They require an open window or door to operate, which is the summer equivalent of heating a room with a window open. These appliances are often an impulse purchase during heatwaves, and consumers do not necessarily get proper advice from retailers. On the other hand, the so-called room air conditioners (RAC) or split units, are installed by professionals who make sure that these are well-fitted and properly installed to maximise the efficiency.

Worse still, consumers are actually misled by the fact that the energy labels on both type of air-conditioning (i.e. portable and split units) are not comparable. As a consequence, consumers purchase a class A portable appliance convinced they are acquiring an efficient product, when in fact it corresponds to a class F split room air conditioner – 50% less efficient!<sup>9</sup>.

<sup>5</sup> [https://storage.topten.eu/source/files/Aircon\\_recommendations\\_April\\_2014.pdf](https://storage.topten.eu/source/files/Aircon_recommendations_April_2014.pdf)

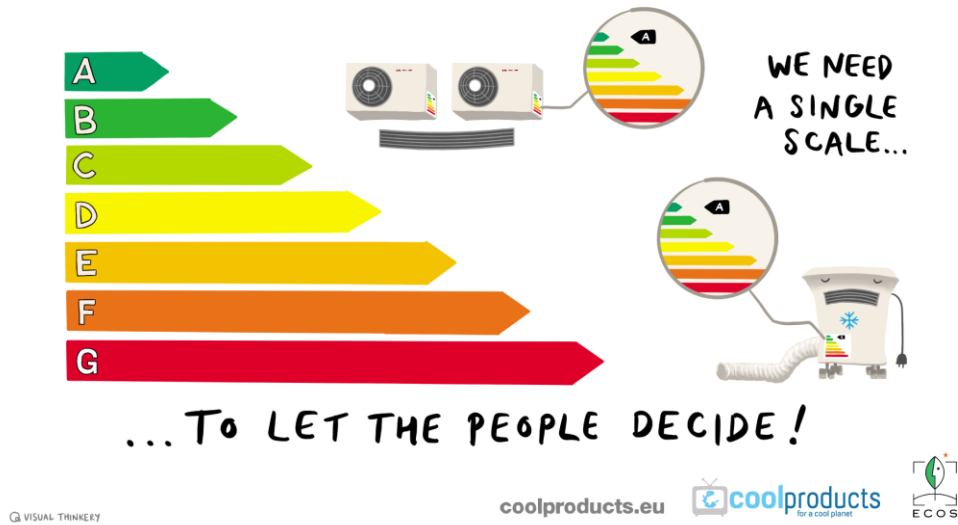
<sup>6</sup> <https://www.coolproducts.eu/product/air-conditioners>

<sup>7</sup> Review of Regulation 206/2012 and 626/2011 Air conditioners and comfort fans. Task 7 report (p.36). May 2018

<sup>8</sup> Review of Regulation 206/2012 and 626/2011 Air conditioners and comfort fans. Task 7 report (p. 43). May 2018

<sup>9</sup> [http://www.topten.eu/uploads/File/Aircon\\_recommendations\\_April\\_2014.pdf](http://www.topten.eu/uploads/File/Aircon_recommendations_April_2014.pdf)

The existing energy labelling scheme de facto favours portable air-conditioners and their higher energy consumption, which also leads to increased CO<sub>2</sub> emissions and puts a strain on the electricity grid.



• **Actively promote the use of climate friendly refrigerants**

An increased number of air conditioning units on the market translates into greater energy consumption, but also a growing use of refrigerants. Some of these gases, commonly used in air conditioning systems, have a global warming potential 2000 times higher than CO<sub>2</sub>.

We strongly regret to see that the crucial issue of refrigerants has been entirely omitted in the proposal for a revised ecodesign regulation.

The review clause of the 2012 Regulation clearly specified that an approach to promote the use of low-global warming potential (low GWP) refrigerants should be assessed. Tackling F-gases in the ecodesign regulation would provide a clear market signal to support and accelerate the implementation of the F-Gas Regulation.

Low GWP refrigerants are available but their uptake will be considerably slower without further incentives. A malus scheme on the energy efficiency requirements should be introduced for appliances deliberately using the highest GWP refrigerants (150 more potent than CO<sub>2</sub> and above) when climate friendly alternatives are readily available.

In addition, a pictogram on the energy label should indicate if the product contains a natural refrigerant to steer consumers towards greener alternatives.

• **Make longer-lasting air conditioning appliances**

We need a list of requirements to make it easier to repair and maintain air conditioning appliances so that they can operate for a long time.

Spare parts need to be available during the average product lifetime (12 years after the last unit is supplied), while buttons, remote controls, filters and casing need to be added to the list of spare parts.

In addition, spare parts should be easily available for all end users, and not only the so-called “professional repairers”; they should also be replaceable using commonly available tools.

Finally, air conditioning appliances should be designed in way which would make them easy to disassemble and maintain; in particular, it should be possible to perform maintenance without leaking the (high global warming potential) refrigerants contained in heat pumps.

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