

INFORSE-Europe - European Sustainable Energy Seminar,
Nordic Folkecenter for Renewable Energy, Denmark
August 17-20, 2021

Progress in Local Energy Efficiency and Ecodesign

17 August, 2021

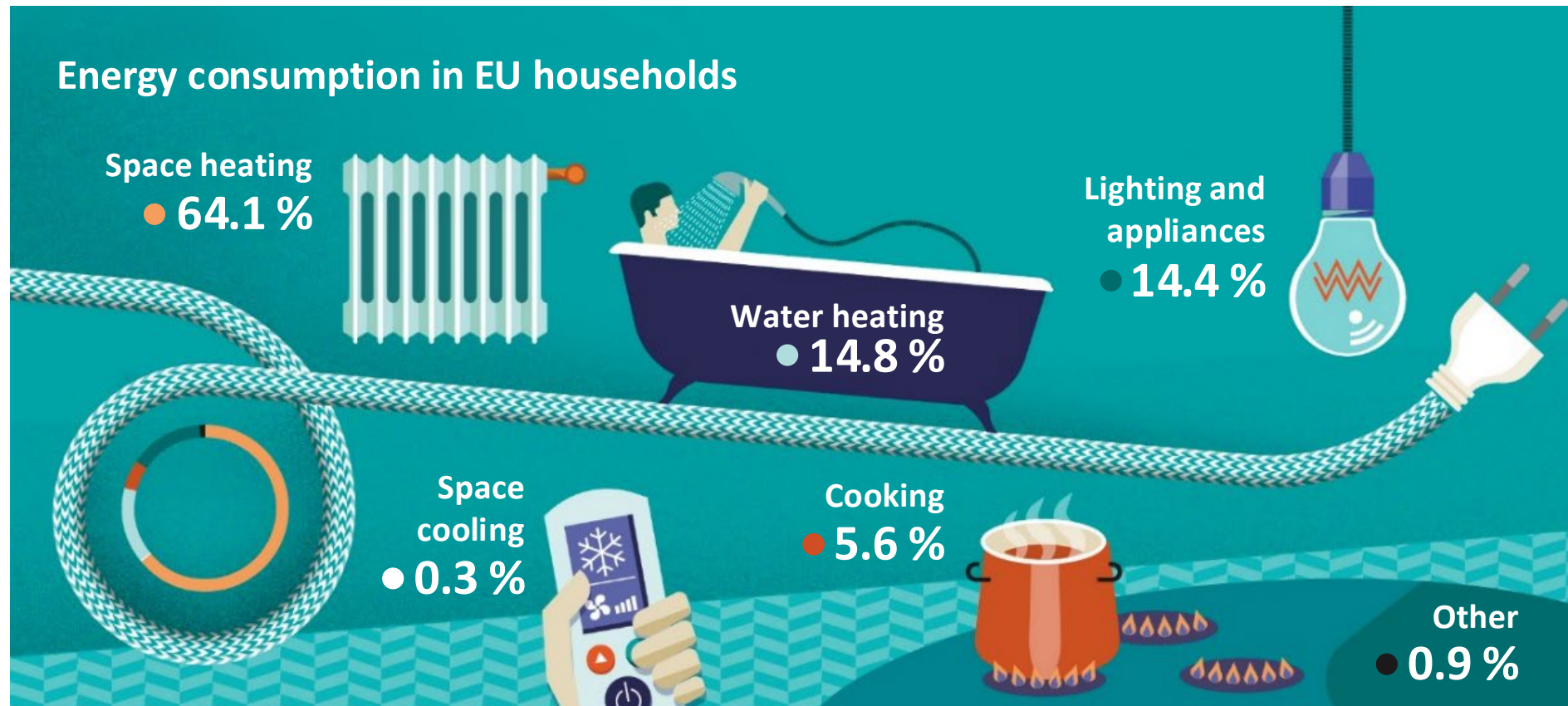
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Part of Proceedings at: https://www.inforse.org/europe/seminar_2021_INFORSE-Europe_DK.htm

Energy is used locally and shall be saved locally, - with local solutions that we all use

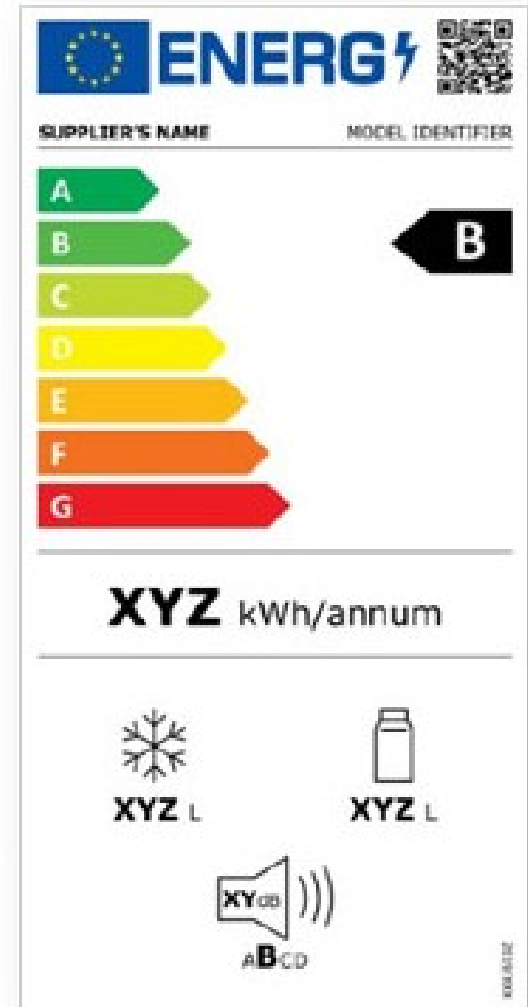
- In EU 58% of electricity and 30% of fuel+heat is used in households and service sector by smaller appliances, boilers, etc.



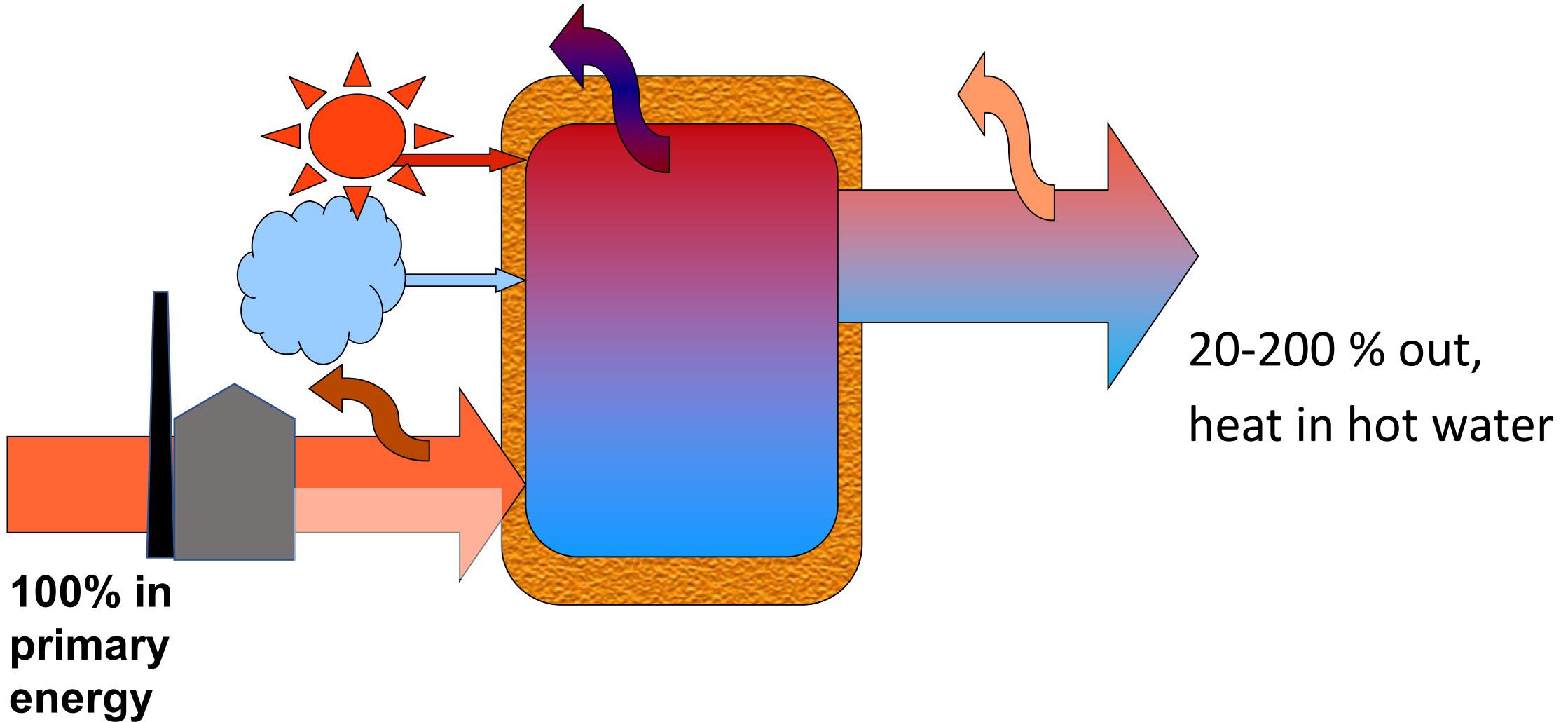
Graph:
Eurostat

EU regulations save massive on electricity & heating

- Ecodesign limits energy use of 25 product types, from refrigerators to welding machines, starting from 2009 for new product
- Energy labels inform consumers on 14 product types, from refrigerators to wood stoves, starting from 1994 for new products
- Savings are estimated to some 20% in 2020 and over 30% in 2030 (with some uncertainty)



Efficient Water Heaters simply



Energy Efficiency Does not Come by Itself

- INFORSE-Europe works in the Coolproducts Coalition for better ecodesign and energy labels
- Industries have the expertise, but they have many interests, both for energy efficiency, and for maintaining status quo
- Industry was campaigning against rescale of labels to A-G (phase-out A+)
- Industry is strongly represented in developing standards, including standards to measure efficiency
- Industry is divided: gas boiler makers do not want ban on gas boilers, but heat pump makers support it, lamp makers want to keep old lamps, IT importers want high el. consumption, LED lamp importers want low consumption, German stove makers want bad standards, Norwegian ones good standards, etc.

Example: Kitchen Fume Extractors



Photo:
APPLIA,
provided by
EU-JRC

They have Ecodesign Requirements + Labels, but

The standard to measure their energy consumption:

- Uses "best efficiency point", which is not reached in normal applications (has much higher back-pressure than in normal ducts)
- Only measure the efficiency of the motor+ventilator, not how good the fume extractor is to remove smoke and fumes from cooking



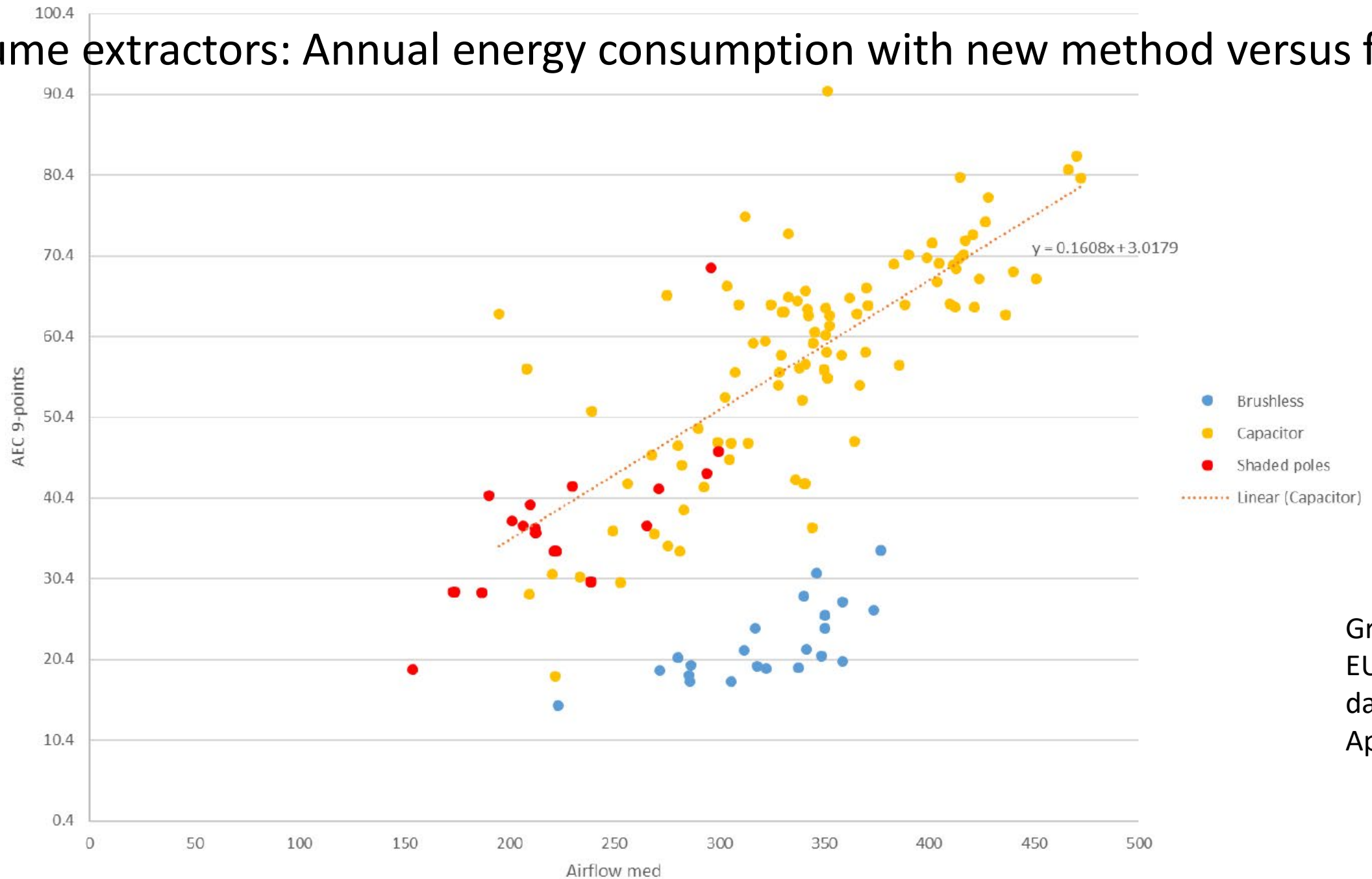
Photos by
Applia,
prvide by
EU-JRC

- Does not include recirculating fume extractors
- Does not include heat lost from room.

Standard is being improved, partly

- ✓ It replaces "best efficiency point" with three typical types of ducts
- Still Only measure the efficiency of the motor+ventilator, not how good the fume extractor is to remove smoke and fumes
- Still does not include recirculating fume extractors
- Still does not include heat lost from room.
- ✓ Tests with new standard shows that it is possible to reduce consumption substantially, mostly because of better electric motors

Fume extractors: Annual energy consumption with new method versus flow



Graph by
EU-JRC,
data from
Applia

Wood stoves get better, but continue to emit



- New ecodesign requirements require cleaner wood stoves in EU 2022
- It is based on a standard that:
 - only measure when the stove is burning well, while many particles come at start and at end
 - It normally does not include part load, which is quite normal in use
 - Only measure particles in chimney, not the many condensed particles that are formed when smoke meets fresh air
 - Does not count the small particles that are most harmful to health
 - Does not take into account imperfect use, imperfect fuel

New Wood Stove Standard Marginally Better

- The wood stove industry want a new standard that includes some emission from start and end of firing, but not condensed particles, not part load, not counting of small particles
- In Coolproducts Campaign we advocate for a Norwegian standard that includes start and end of firing, condensed particles and part load. In addition we advocate for counting particles.
- The industry has persuaded the EU Commission (DG Growth) to support industry standard with a standardisation mandate for its standard and to move regulations from ecodesign to standardisation
- The EU Committee of Standards has not supported this with qualified majority, but the Commission continues (decision is pending).

Decarbonising Heating

- To meet climate targets, we must move from coal, oil, and gas heating to renewables
- The solutions are heat pumps, solar and district heating (that can also use geothermal, waste heat, solar with seasonal storage etc.)
- We (in EU) should tell consumers to buy the renewable and energy efficient heating solutions
- We (in EU) should ban fossil fuel boilers quite soon, and support the transition, including energy renovations (embrace the Renovation Wave)

Countries Start to Ban Fossil Fuel Boilers

End of fossil-fuel heating in the European Union. What types of boilers will be banned by 2024?



- Oil and gas boilers in ALL buildings
- Oil and gas boilers in NEW buildings only
- Oil boilers in ALL buildings
- Oil boilers in NEW buildings only
- Gas boilers in NEW buildings only
- No ban

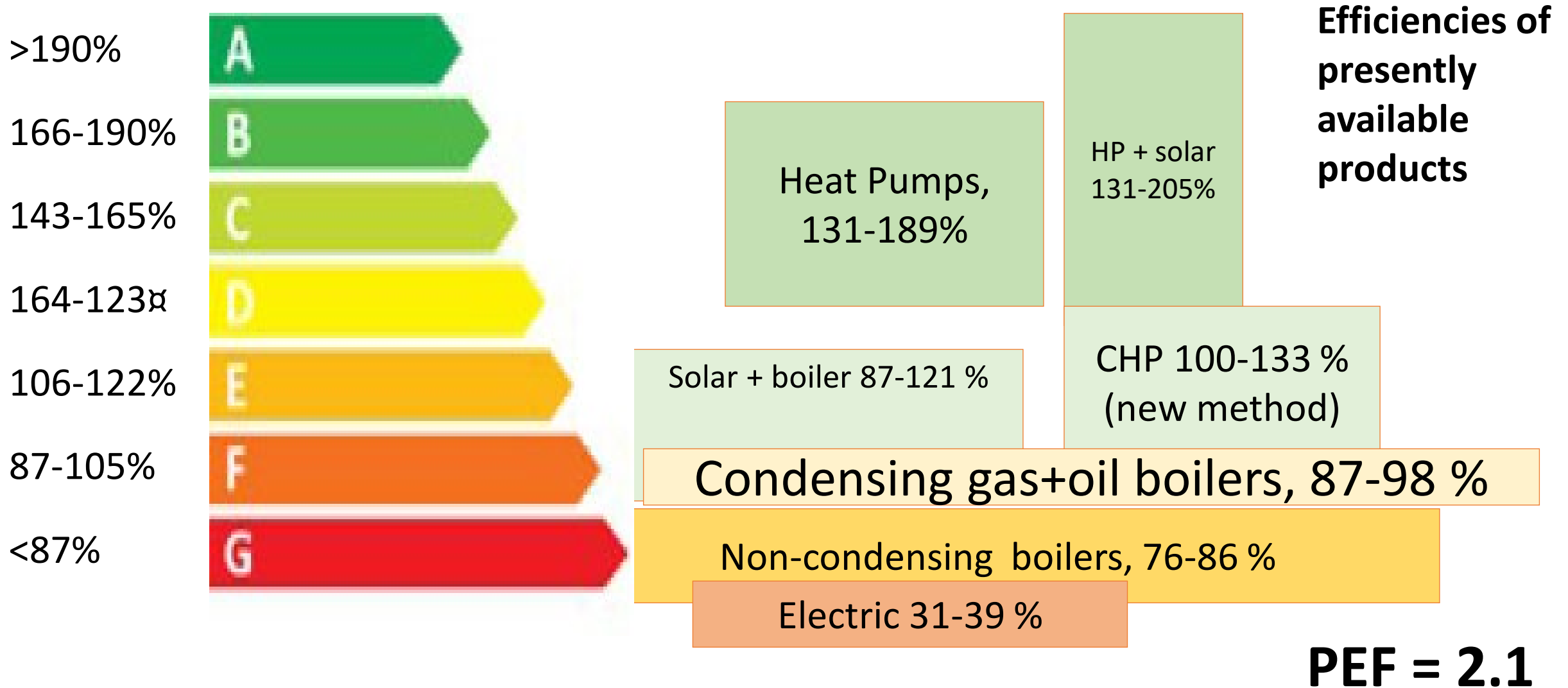
Source: National Energy and Climate Plans (NECP)



**We (Coolproducts Coalition) propose
new rescaled boiler label, as soon as
possible (2022/23),
not only in 2026 as planned before**

- **If EU Commission, EU Parliament, and countries
want, it can be done**

Our proposals for new rescaled boiler label



Next Step: Increase Ecodesign Requirements

- We (Coolproducts Coalition) propose to phase out electric, oil and gas boilers from the EU internal market before 2030.
- Ecodesign requirements for central heating should be set well above 100% to phase out fossil fuel boilers that never exceed 100% efficiency

New requirements will be discussed in September 2021 at EU Commission

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Thank
you

