EU Policy regarding emission reduction from domestic combustion

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EU Clean Air Policy Framework

$PM_{2,5}$: annual limit **25 µg/m³** (since 1-1-2015)

Air Quality Directives

Maximum concentrations of air polluting substances

CONCENTRATIONS

EMISSIONS

National Emission Ceilings Directive

National emission totals (SO_2, NO_x, NMVOC, $PM_{2.5}$, NH_3)

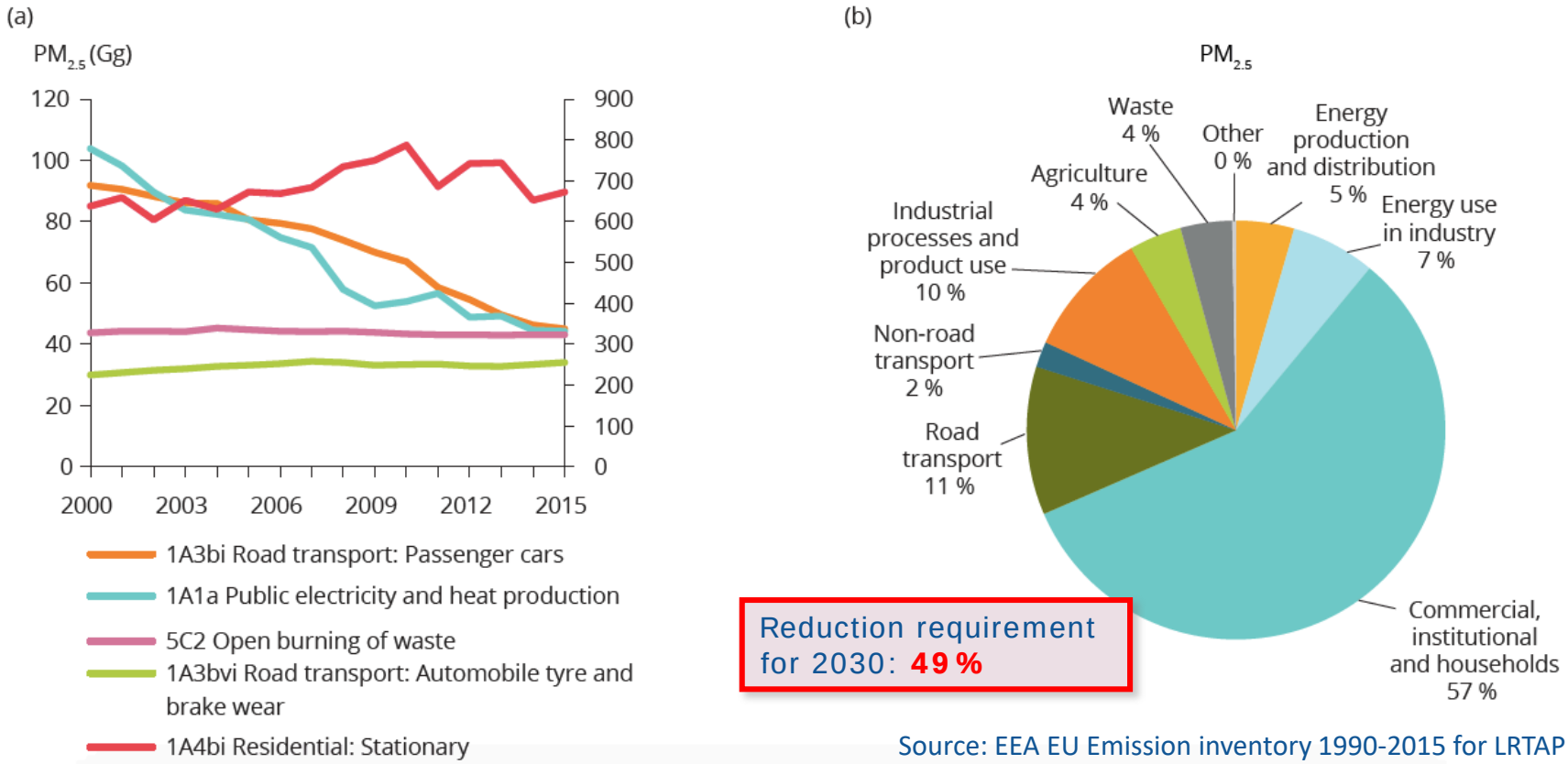
EU average emission reduction obligations $PM_{2.5}$: **2020: 22%; 2030: 49%**

Source-specific emission standards

- IED Directive
- MCP Directive
- Eco-design Directive
- Energy efficiency
- Euro and fuel standards

Primary $PM_{2.5}$ emissions in the EU in 2015

Figure 3.9 **$PM_{2.5}$ emissions in the EU-28: (a) trend in emissions from the five most important key categories, 1990-2015; (b) share by sector group, 2015; (c) sectoral trends in emissions**



Reduction requirement for 2030: **49 %**

Source: EEA EU Emission inventory 1990-2015 for LRTAP (2017)

Domestic combustion in the EU

While constituting about 2.6% of total energy consumption in the EU, solid fuel combustion in households contributes more than 46% to total emissions of fine particulate matter, i.e., three times more than road transport.

	%of total primary energy use in the EU28	% of total primary emissions of $PM_{2.5}$ in the EU-28
Biomass	1.9%	36%
Coal	0.7%	10%

The high share of emissions from the household sector in total primary $PM_{2.5}$ emissions as well as their low release height make them an important contributor to ambient $PM_{2.5}$ levels and population exposure.

EU Ecodesign Directive (2009/125/EC)

Ecodesign Directive 2009/125/EC

-> *minimum requirements*

Energy Labelling Directive 2010/30/EU

-> *consumer information*

Solid fuel local space heaters: Commission Regulation (EU) 2015/1185.

Solid fuel boilers: Commission Regulation (EU) 2015/1189.

Energy labelling of local space heaters: Commission Delegated Regulation (EU) 2015/1186

Energy labelling of solid fuel boilers: Commission Delegated Regulation (EU) 2015/1187

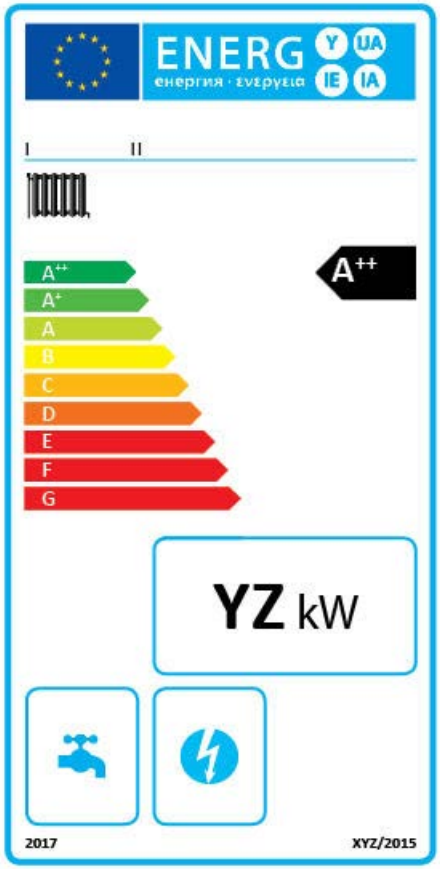
EU Ecodesign Directive (2009/125/EC)

- Ecodesign takes into account all the environmental impacts of a product right from the earliest stage of design
- Allows the Commission to set requirements for environmental performance of energy-related products (products with significant sales/trade in the EU)
- Main focus has been on energy in the use-phase
- Can address other significant environmental parameters (e.g. emissions)
- Requirements have to be met in order to place a product on the market
- Ecodesign requirements must not lower the functionality of a product, its safety, or have a negative impact on its affordability or consumers' health.
- Requirements are harmonised across the EU

CE

Energy Labelling Directive (2010/30/EU)

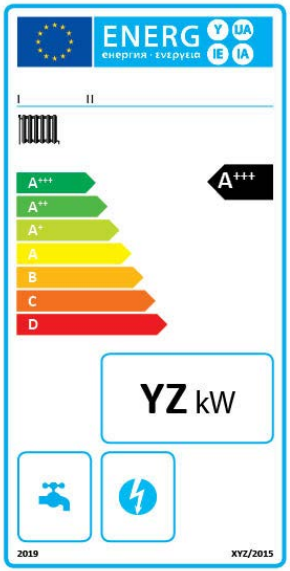
- Allows the Commission to specify a mandatory energy label for energy-related products
- The label shows energy efficiency in the use phase
- Use of other essential resources/ information during use also shown
- Manufacturers have to supply the label; dealers have to show it



Ecodesign solid fuel boilers

Emission requirements for 2020:

	PM mg / m³	OGC mg / m³	CO mg / m³	NO_x mg / m³
Automatic Boilers	**40**	**20**	**500**	**200**
Manual Boilers	**60**	**30**	**700**	**350 for fossil fuel**
All limit values at at 10% O_2				



Labeling Requirements:

- A++ to G from 1 April 2017
- A+++ to D from 25 Sept 2019
- Package label
- Biomass condensing boilers reach class A++

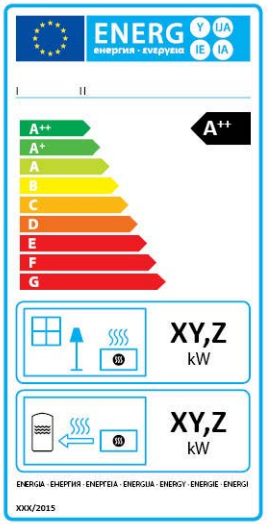
Ecodesign solid fuel local space heaters

Emission Requirements for 2020:

Product	PM mg/m³ *	OGC mg/m³	CO mg/m³	NO_x mg/m³
Open fronted	50	100	2000	200
Closed fronted	40	100	1500	200 (300 fossil fuel)
Closed fronted pellets	20	40	300	200
Cookers	40	100	1500	200 (300 fossil fuel)

Labeling Requirements:

- One label for gas, liquid and solid fuel local space heaters
- A++ to G label from 1 Jan 2018 (except for flueless or open to chimney solid fuel heaters: from 1 Jan 2022)
- Best biomass appliances can reach A++
- Best fossil fuel appliances can reach A



Enforcement

Market surveillance is the role of national authorities; it includes:

- Inspecting technical documentation
- Product testing
- Inspection of labels in shops/internet
- Random and/or risk based sampling
- Cross-border cooperation

(through the Administrative Cooperation Group and EU-funded joint actions)

Ecopliant

Improving Ecodesign Market Surveillance across the EU

Effect of Ecodesign measures

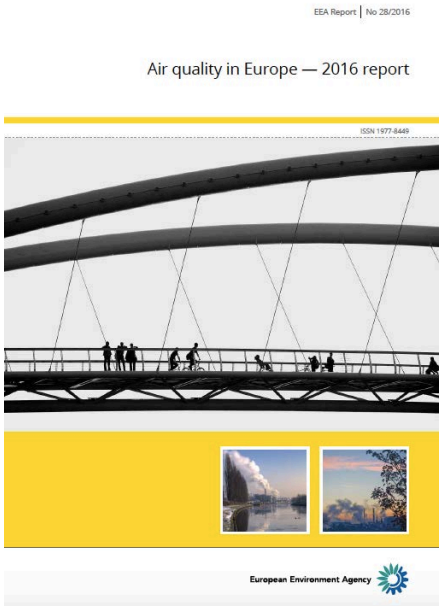
For solid fuel local space heaters (2015/1185/EU recital 12):

- reductions of particulate matter (PM), organic gaseous compounds (OGCs) and carbon monoxide (CO) of 27 kton/year, 5 kton/year and 399 kton/year respectively by 2030.

For solid fuel boilers, (2015/1189/EU recital 8):

- reduction of 10 kt in particulate matter, 14 kt in organic gaseous compounds, and 130 kt in carbon monoxide by 2030.

Reducing emissions from solid fuel



Mitigating emissions from residential wood combustion:

1. Reduce the use of non-regulated stoves
2. Reduce combustion under non-optimal conditions
3. Good maintenance of old and new stoves
4. The use of standardised biomass

EU funding for mitigating emissions from residential wood combustion, inter alia:

1. Horizon 2020 for Research and Innovation
2. LIFE projects: pilot/demonstration, governance
3. LIFE Integrated Projects
4. Structural Funds for massive deployment of measures

Source: EEA EEA Air quality in Europe-2016

Reducing emissions from solid fuel

Successful policy interventions that led to effective reductions of air pollutant emissions in the household sector include:

- awareness campaigns, informal platforms, product declaration and expert advice at the site,
- subsidies for thorough building renovation, for the switch to other fuels or the upgrade to new facilities,
- a ban of the use of solid fuels,
- measures in combination to fight energy poverty.

Source: EEA EEA Air quality in Europe-2016

Future study on residential solid waste burning

Recently (3 May) closed the call for Tenders for the Service Contract for:
"Analyzing the effect of residential solid waste burning on ambient air quality in Central and Eastern Europe and potential mitigation measures":

- assess the contribution of residential solid waste burning to pollution, notably of particulate matter (PM) but also benzo(a)pyrene (B(a)P), by region.
- assess the need and possibilities for action at local, regional, national or EU level and developing a strategy for reducing such emissions.
- Hungary and Romania, drawing on previous experience from Germany.
- Focus on fact finding. Dissemination/awareness raising in a follow-up project.
- Scientific research and real-life measurements during the heating season.
- Final report second half 2020.

More Information

http://ec.europa.eu/environment/air/

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Clean air is essential for healthy living. The EU is working to ensure that every citizen can breathe without risking their well-being.

Thank you!

European Commission

DG ENV C.3

Clean Air