

HARP webinar

Heating Appliances Retrofit Planning

29th of March, online



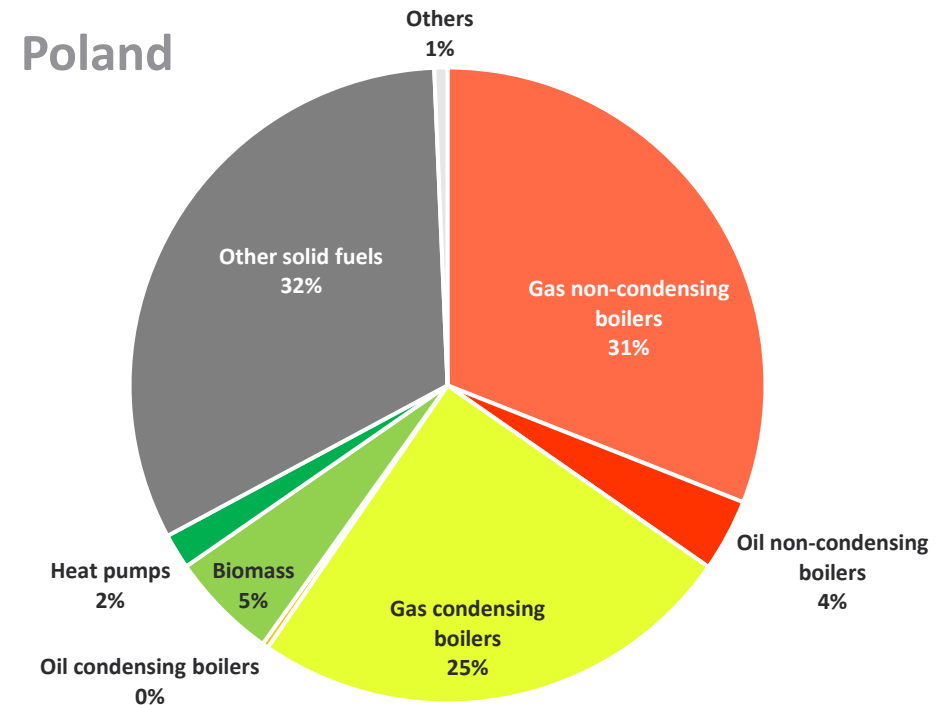
29 March 2022 | 10:00 - 12:00 CET

**EXTENDING ENERGY
LABELLING FOR EXISTING
HEATING APPLIANCES**

CURRENT MARKET OF INSTALLED HEATING APPLIANCES IN THE RESIDENTIAL SECTOR IN POLAND

Installed stock of heating appliances in Poland and use of fossil fuels

- Most space heating systems are based on coal/trash fired boilers and as well natural gas.
- Natural gas was gaining market share against the coal/trash fired boilers thanks to existing since some years financing support on each administration level.
- In so called low-emission reduction, the government promote district heating in its transformation strategies
- Multi family and public buildings in cities tend to using the district heating system.
- Individual bulidings, in case if it is not possible to join the DH-grid, use gas boilers or HP in cities, and biomass, gas and electric boilers and HP in rural areas
- According to statistics of Clean Air (Czyste Powietrze) program, the replacent share of appliances from 09.2019 till 01.2022 was: 42% gas condensing boilers, 29% biomass boilers, 16% HP, 11% coal boilers (from 01.2022 not allowed anymore, 2% others



COPMPARISON OF THE NUMBER OF HEAT SOURCES LISTED BY 2020 TO THE POLTENTIAL OF NECESSARY REPLACEMENTS IN POLAND

Województwo	Quantity of replaced heating appliances in Clean Air Programm [End of 2020]	Potential of out-of-class boilers to be replaced	share of exchanges in relation to the potential [%] – end of 2020
Podlaskie	2630	120000	2,2%
Pomorskie	4306	175000	2,5%
Śląskie	6770	382000	1,8%
Świętokrzyskie	4109	142000	2,9%
Małopolskie	2816	359000	0,8%
Lubelskie	4419	264000	1,7%
Łódzkie	3459	234000	1,5%
Warmińsko-mazurskie	2793	110000	2,5%
Opolskie	1716	96000	1,8%
Wielkopolskie	4164	328000	1,3%
Podkarpackie	3509	237000	1,5%
Zachodniopomorskie	1722	128000	1,3%
Kujawsko-pomorskie	4839	163000	3,0%
Mazowieckie	7562	463000	1,6%
Dolnośląskie	2145	223000	1,0%
Lubuskie	1545	81000	1,9%
RAZEM	58504	3505000	1,7%

EXISTING POLICIES FOR ENERGY EFFICIENCY – EPBD IMPLEMENTATION IN POLAND - EXAMPLES

- December 31, 2020 the requirements have changed with regard to:
 - limit of primary energy index for different types of buildings,
 - permissible values of the heat transfer coefficient (U) for building partitions and technical equipment of buildings.
- Requirements for equipping buildings with devices that automatically regulate the temperature in individual rooms and heated zones were introduced, technical and economic guidelines that should be taken into account when installing self-regulating devices in the building
- Draft act amending the act on the energy performance of buildings and certain other acts
- Draft resolution of the Council of Ministers on the adoption of the "Long-term strategy for the renovation of buildings"
- Draft act amending the act on electromobility and alternative fuels\
- Reform of the area of energy performance of buildings – preparations
- Locally binding legal acts

EXAMPLES OF EXISTING SUBSIDIES FOR ENERGY EFFICIENCY RELATED TO HEATING SYSTEMS

Example information related to the subsidies/incentives in place

- Clean Air Programme (Program „Czyste Powietrze) – national level program, dedicated for replacing of coal/trash fired boilers and reduction of low-emissions
- thermomodernization relief, (ulga termomodernizacyjna) allowing natural persons to deduct expenses for broadly understood thermal modernization projects (including replacement of heat sources and installation of photovoltaic installations) from income tax.
- Programm „STOP SMOG” - Its purpose is to help farms those hardest hit by poverty and social exclusion, which are not able to independently apply for support from the Fund - While the beneficiaries of co-financing for the thermal modernization of single-family residential buildings and the replacement of heat sources under this program are households, funds for investments are obtained by local governments
- Operational Programme Infrastructure and Environment (POIiŚ) (investment priority 4.III) to the extent thermo-modernization buildings multi-family - used by local governments
- Priority Program "Improvement of quality air. Part 2) Consumption reduction energy in construction ". - used by local governments
- Priority Program "Prosumer - purchase of i assembly of small installations i micro-installations renewable sources energy for production electricity or heat". - used by local governments
- Program thermo-modernization and renovations - a bonus thermomodernization and renovation bonus
- Program thermo-modernization and renovations - Support municipal self-governments in endeavors implemented in resources municipal
- The program concerning elimination of low emissions supporting growth energy efficiency premises in buildings residential multi-family (Warm Apartment) - design
- Programm My heat (Moje ciepło) – in prepration

EXISTING DRIVERS AND BARRIERS FOR THE APPLICATION OF EXISTING HEATING SYSTEMS LABELLING IN YOUR COUNTRY

- Cost of generating 1 kWh of heat in the device [EUR / kWh] , not just energy cost without definition
- To define the annual cost of heating a defined building for example: building of 160 m² (standard WT 2017), and hot water preparation for 4 people
- The useful tool for decision makers providing support financing programs, but focused on different local conditions, without preference for defined technologies – optimal solution depends on different inputs
- in our opinion, the correct criterion is to obtain the building's standard in terms of the annual heat demand

Energy efficiency standard of a single-family building	Utility energy [EU] for heating	Unit
Bad thermal insulation	170	kWh/(m ² *year)
Standard WT 2014	100	kWh/(m ² *year)
Standard WT 2017	80	kWh/(m ² *year)
Standard WT 2021	55	kWh/(m ² *year)
Building EU 40	40	kWh/(m ² *year)
Building EU 25	25	kWh/(m ² *year)
Building EU 15	15	kWh/(m ² *year)

Thank you for your attention!



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