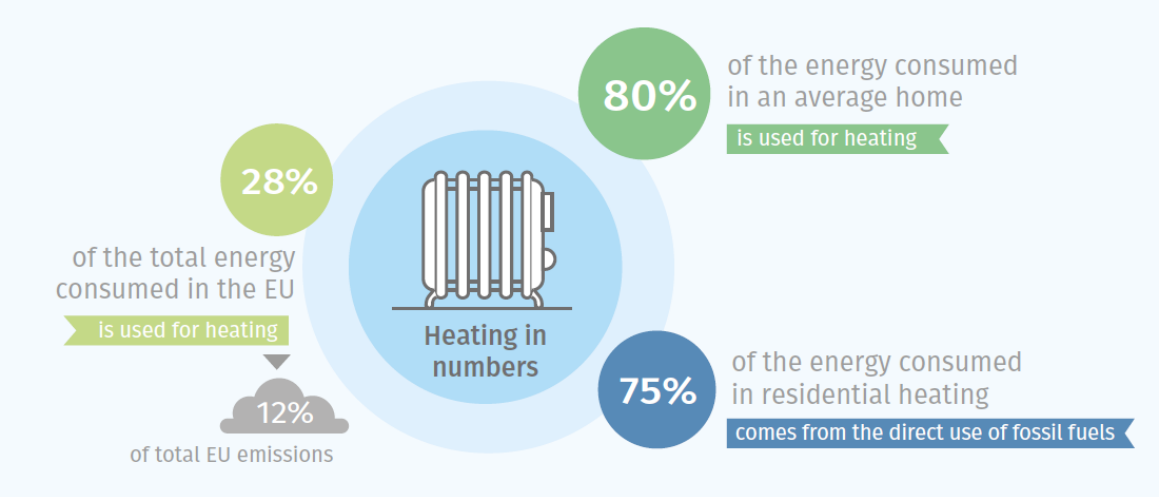
Member States' ambition to phase out fossil-fuel heating – an analysis

Background briefing | July 2021

28% of the total energy consumed in the EU is used in space and water heating. For the residential sector, more than 75% of the energy produced for heating currently comes from fossil fuels (gas, oil, and coal). As a result, CO_2 emissions from space and water heating represent 12% of the total EU emissions: as much as all cars in Europe combined[1]. Decarbonising heating is key if we are to meet our climate and emission reduction objectives.

This briefing showcases how certain national measures are, at this stage, more ambitious than the EU regulations when it comes to phasing out fossil fuels in the building sector from 2020 to 2050. If the Commission's ambition for the revision of the ecodesign and energy labelling regulations for space heaters remains low, it will not only compel countries wanting to achieve more and faster to align, but it will also endanger everyone's climate goals.



Source: 'FIVE YEARS LEFT - How ecodesign and energy labelling can decarbonise heating', ECOS, 2020.

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Introduction

In the impact assessment on the 2030 Climate Target Plan[1], the European Commission proposed different scenarios for the building sector. It is very clear that the use of oil and coal must end, and the natural gas consumption needs to be reduced by a staggering 40%.

In 2019, EU Member States were asked to deliver their National Energy and Climate Plans (NECPs), outlining their actions foreseen between 2021 and 2030, meant to lead them towards meeting the EU climate targets. While the ambition of these plans differs from one country to the next, the Council of the European Union, in their conclusions on the Renovation Wave[2], pointed to a clear rule-of -thumb: *ecodesign and energy labelling measures should facilitate the phase out of fossil-fuel operated appliances* (Conclusion 24). Consequently, the Council called on the Commission to *prepare the phasing out of the* [...] *gas and other fossil-fuel-operated heating appliances* (Conclusion 34).

Meanwhile, the European Commission is revising the ecodesign and energy labelling rules for space heaters. The rules currently in force were adopted in 2013 and, outdated as they are, prove to be counter-productive and actively undermining the realisation of the EU climate objectives. For instance, the current energy labelling rules for space heaters still hugely favour gas boilers, which are labelled A or A+ on an A+++ to D scale.

The European Commission is expected to put forward a proposal for revising these regulations later this month (July 2021), and we hope to see a level of ambition aligned with the climate objectives and the measures already taken by several EU Member States who have already started to take action to phase out certain types of fuel (oil or gas) in certain types of buildings (existing or new).

This briefing showcases how certain national measures are, at this stage, more ambitious than the EU regulations when it comes to phasing out fossil fuels in the building sector from 2020 to 2050. We have found that in 2026, more than half of the EU population (~222 500 000 inhabitants) will live in a country that has either entirely or partially phased out fossil fuel heating.

If the Commission's ambition for the revision of the ecodesign and energy labelling regulations for space heaters remains low, it will not only compel countries wanting to achieve more and faster to align, but it will also endanger everyone's climate goals. The European Commission must set a minimum ambition that is coherent with its own climate objectives, while giving a strong signal to manufacturers that some technologies need to disappear. Otherwise, the average result for the EU will be mediocre at best, with the least ambitious countries dragging the frontrunners down. The planet will foot the bill.

[1] https://ec.europa.eu/clima/policies/eu-climate-action/2030_ctp_en
[2] https://data.consilium.europa.eu/doc/document/ST-8923-2021-INIT/en/pdf

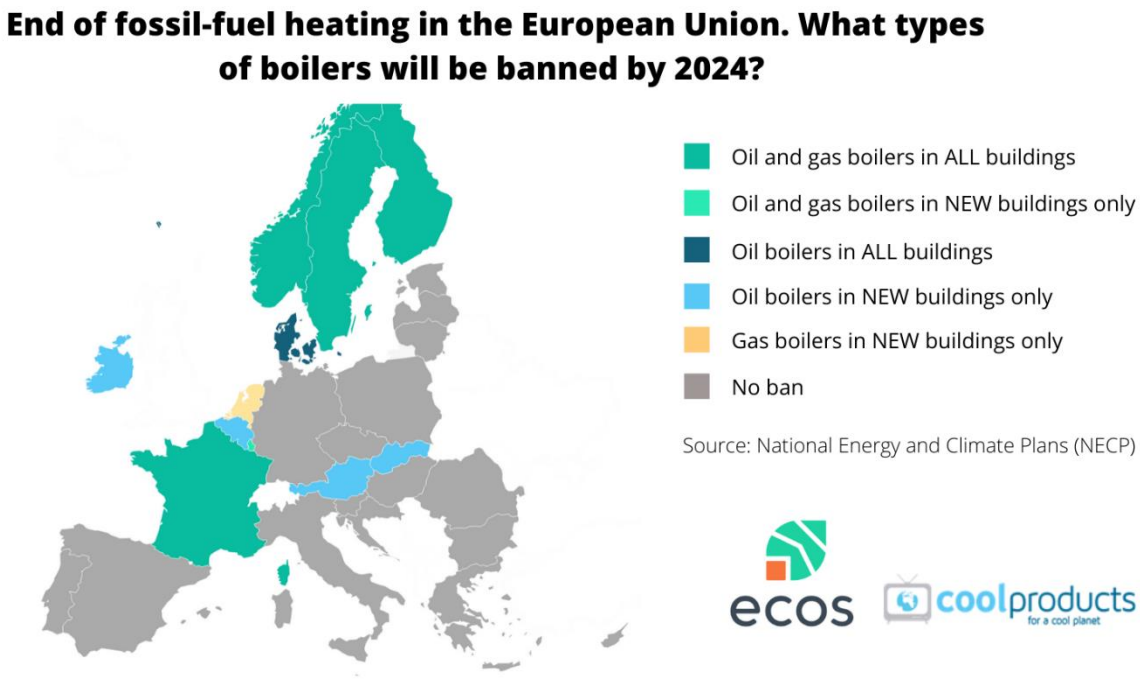
Heating (r)evolution: methodology, maps and conclusions

Our research was carried out in two parts: first, we looked into the National Energy and Climate Plan (NECPs) - and other sources when available – of each country to see whether they had a clear plan to phase out certain types of fossil fuel (oil or gas) in certain types of buildings (new or existing). The results of this research are detailed in the final section of this document.

We then built a series of maps providing an overview and allowing to compare the ambition of each country and its evolution between 2020 and 2050 when it comes to phasing out fossil fuels. Based on the NECPs from each country and a report by the Oeko-Institut (2020)[3], we have established a set of criteria allowing us to develop an overview of the evolution of phase-out measures between 2020 and 2050.

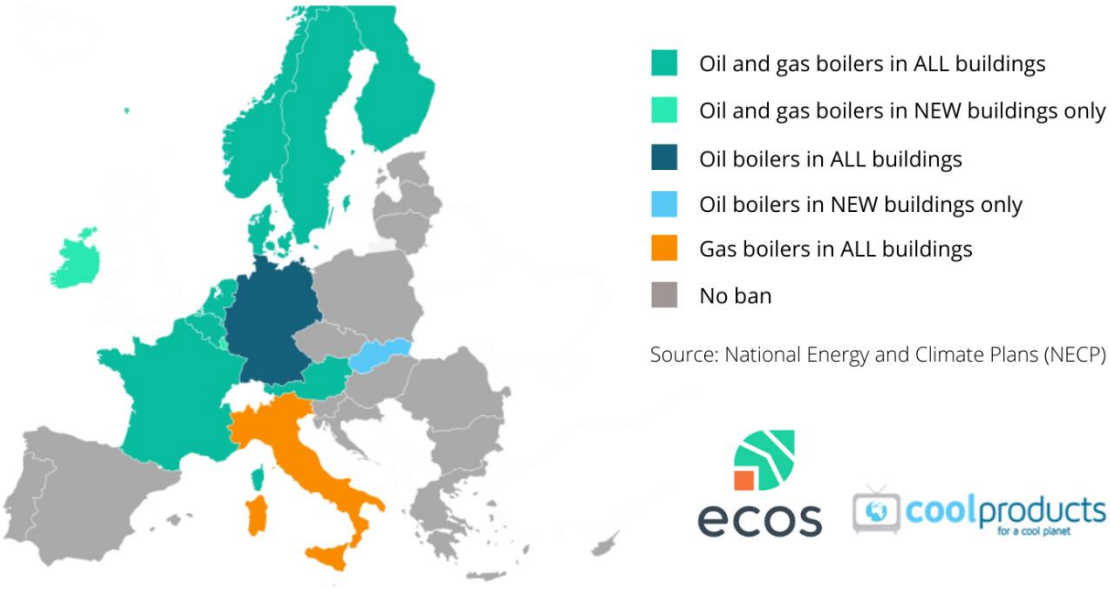
The two selected criteria are:

- the type of fuel that is banned (oil, gas,), and
- the type of infrastructure in which it is banned (new buildings, existing buildings, all buildings).



[3] https://www.oeko.de/fileadmin/oekodoc/AGORA-EU-Ambition.pdf

End of fossil-fuel heating in the European Union. What types of boilers will be banned by 2050?



We produced evolutive maps to better showcase the progress of national measures to ban fossil-fuel heating systems in the EU. The colour code in the maps ranges from:

- grey, for unambitious Member States having no plan to ban any type of fossil-fuel boilers,
- two shades of blue where countries phase out oil boilers,
- yellow and orange indicating the ban of gas boilers,
- two shades of green highlighting the most ambitious national measures targeting both oil and gas boilers.

A telling example is the case of Austria. As part of the renovation initiative in 2019, the Federal Government planned to prioritise the phase-out of fossil-fuel powered heating systems, with a first ban in 2021 on the installation of oil heaters in new buildings. This way, Austria goes from grey (no ban) to light blue (ban of oil boilers in new buildings only) in the 2024 map. Based on the Austrian NECP, more measures are to come: a ban on the installation of gas heaters in new buildings is planned for 2025 and it will be updated for both oil and gas-fired heating systems in all buildings in 2035. The 2050 map shows this transformation with a shift from light blue to dark green.

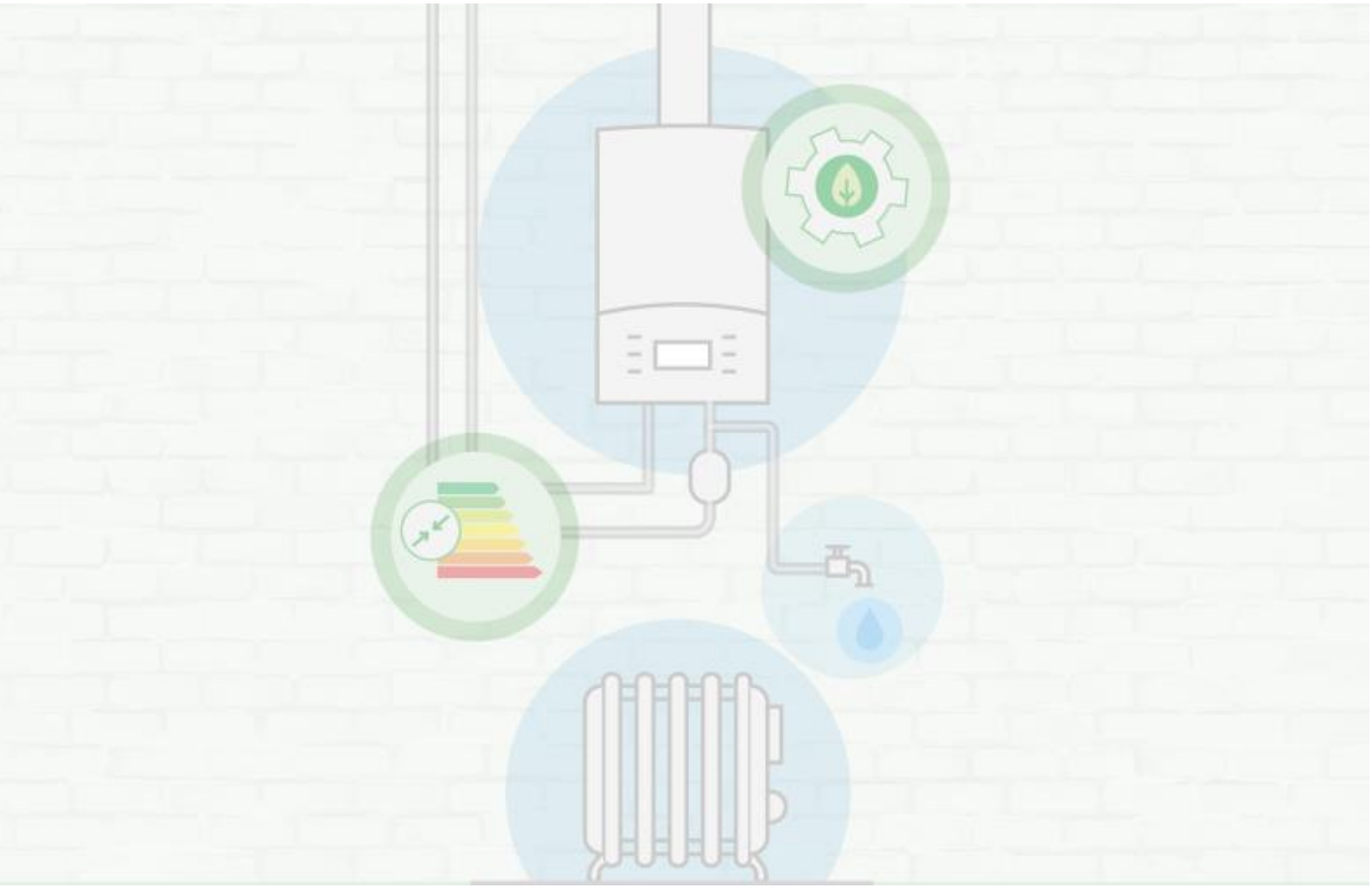
The Austrian example is representative of a number of ambitious EU Member States, which are planning to remove oil and gas boilers from their markets by 2050. The European Commission should consider this ambition shown by Member States when revising the ecodesign and energy labelling regulations for heaters in 2021.

The boldness shown by the Commission in its climate ambition risks clashing with the direction the EU is taking when regulating space heaters, putting at risk the capacity of Member States to

reach their own climate objectives. If the proposals are unambitious, it will penalise all EU Member States – both the frontrunners and the laggards.

Summary of the measures per country

Because the European countries (all EU States and Norway) who have planned to phase out fossil fuel fired heating technologies have done so at different times, we summarized the main national initiatives in the following table[4]. For every country, the date of a fossil fuel phase out is mentioned, depending on the fuel and infrastructure considered. The table on page 6 summarizes the source of the official document as well needed and some additional information.



[4] 'ECOS 2021. Own analysis of EU national initiatives on the phase-out of fossil fuel heating.

Country	Date of a fossil fuel phase out	Type of fossil fuels considered	Type of infrastructure considered	Type of legislation	Specificities
AT - Austria	2021 (oil, new installations) 2025 (gas, new buildings) 2035 (oil, all buildings) 2050 at the latest (milestone by 2030)	Oil-fired heating systems	Residential heating	National Energy & Climate Plan	Funding priority to phase out fossil-fuel powered heating systems in residential housing ('Oil Phase-Out Premium')
BE- Belgium	Flanders : 2021 for new constructions (oil, new buildings and major energy efficient retrofitting – under discussion) - 2035 for existing buildings Bruxelles (2025) Wallonie (2035)	Oil-fired heating systems (only the selling is banned, not the use of it yet)	Residential sector	Under the energy performance EPB scheme (for the Flemish Government) + Pacte Energétique Interfédéral (Accord de Gouvernement)	-
DE - Germany	2026 (oil, all installations) – when a low-carbon alternative is feasible	Oil-fired heating systems	All buildings	Climate Action Programme 2030 of the federal government	Under the EnEV34 law, standard oil-boilers older than 30 years are replaced. Under Ecodesign, a new (condensing) oil-boiler can be installed only in combination ('hybrid') with solar thermal panels and/or a heat pump.
DK - Denmark	2013 (oil, new buildings) 2016	Oil-fired boilers and natural gas heating New oil-fired boilers	New buildings Existing buildings	Danish Climate Policy Plan	Oil for heating purposes and coal are to be phased out by 2030, and electricity and heating supply is to be 100% covered by renewable energy by 2035
FI - Finland	Already	-	-	-	-
FR - France	1 July 2021 (new buildings) > 2022? 1 January 2022 (existing buildings) 1 January 2022 (mono-gas boilers in new single-family homes) 2024 (mono-gas boilers new collective housing)	Oil-boilers Gas boilers	Residential and tertiary (buildings for professional use - 1000 m²)	Draft Decree after the Public Consultation	A GHG threshold not to be exceeded + a gradual entry into force (2021, 2024, 2027 & 2030)

IE - Ireland	2020 (oil, new buildings) 2022 2025 (gas, new buildings)	Oil boilers Gas boilers	New buildings	Part L (Energy) of the ROI Building Regulations (2019)	-
IT - Italy	2050 (global date) 2025 (coal exit)	All 2025 (coal phase out) 2050 (exit from gas and other oil products)	All (gas plants, coal-fired plants)	National Energy Strategy PNIEC to be updated on the basis of new emission reduction targets PNRR introducing 51% emissions reduction	Legambiente's campaign to build a coalition of relevant stakeholders in Italy from the business community, local authorities, unions, and others to advocate for de-carbonization of residential heating At the moment no policy or target decided in Italy is particularly ambitious.
LU - Luxembourg	2023 (oil and gas, new buildings)	-	-	-	-
NL – The Netherlands	Unsuccessful for 2021 but over 90% of newly built dwellings, is not connected to the gas grid 2021 (gas, new buildings) 2050 (gas, all buildings)	Gas-boiler (fossil only)	New buildings	New Climate Package	For the time being there will be no ban on gas-fired central heating boilers (the Netherlands has no oil-boilers). After 2025 the necessity of banning gas-boilers will be revisited.
NO- Norway	2015 2020 (oil, all buildings)	Fossil-fuel boilers not allowed for new buildings and major renovations Fossil-oil boilers not allowed for existing buildings	Both new and old buildings and both private homes and the public space of businesses and state-owned facilities	Directive	-
SE - Sweden	Already	-	-	-	Relying on district heating combined with heat and power production. The policy pressure on the building and heating sector has been quite strong.
SK – Slovakia	2023 (oil, new buildings)	New oil-boilers	New buildings	National Energy and Climate Plan	To reduce the use of fossil energy sources, Slovakia plans a ban on the sale and installation of new fuel-oil boilers by 2023.

Detail of the policies per country

Austria

The Austrian Climate Plan 2021-2030, foresees abandoning fossil fuels, especially oil (with the slogan 'Weg vom Öl'), and increase the use of indigenous renewable energies, particularly biomass (wood). Austria plans to phase out oil-fired heating systems in the long-term (by 2050 at the latest) – with a milestone by 2030, when oil and gas will be banned in new buildings.

As part of the renovation initiative in 2019, the Federal Government, in cooperation with the provinces, introduced a funding priority to phase out fossil-fuel powered heating systems in residential housing ('Oil Phase-Out Premium'). In 2019, 62.7 million euro was made available for the 'Oil Phase-Out Premium', including the renovation check and thermal renovation measures in buildings used for commercial purposes.

References:

- https://www.derstandard.at/story/2000125962466/bund-und-laender-einig-heizen-kuenftig-ohne-oel-gas-unde
- Austria NECP

Belgium

The new (2019) Flemish government has announced that as from 2021, no oil-fired boilers will be allowed in new dwellings/buildings and energy renovations (under the energy performance EPB scheme). In addition, if there is a gas pipeline in the street, it will not be allowed to replace an existing oil boiler with a new oil boiler. For collective space heating (apartment buildings or clusters of houses), from 2021 it will no longer be allowed to use the gas-grid except for CHP (Combined Heat & Power) or if combined with a significant renewable energy share. At the federal (Belgium) level, and in order to comply with the Paris Agreement, the federal government has decided to ban the sales of oil-fired boilers by 2035. Despite a federal ban as from 2035, the regions are free to decide on the date:

- Flanders: In 2021 for new buildings and heavy renovations (with building permit), in 2035 for existing houses
- Brussels Capital Region: 2025
- Wallonia: not before 2035

References:

- Législation chauffage belgique Archieven - Le blog des experts en chauffage (heatingexpertise.be)
- https://www.vrt.be/vrtnws/nl/2021/03/23/8-pioniersgemeenten-pleiten-voor-ambitieus-vlaams-warmtebeleid-o/
- VERS LA FIN DU CHAUFFAGE AU MAZOUT EN BELGIQUE ? (lecobel-vaneau.be)
- https://ec.europa.eu/energy/sites/default/files/documents/be_final_necp_parta_en.pdf
- https://ec.europa.eu/energy/sites/default/files/documents/be_final_necp_partb_en.pdf

Bulgaria

There is no plan to ban fossil-fuel heating systems in Bulgaria, only to transition from coal to natural gas and introduce an increasing share of renewable sources in heating and cooling.

References:

- https://ec.europa.eu/energy/sites/default/files/documents/bg_final_necp_main_en.pdf

Croatia

There is no plan to ban fossil-fuel heating systems in Croatia.

References:

- https://ec.europa.eu/energy/sites/default/files/documents/hr_final_necp_main_en.pdf

Cyprus

There is no plan to ban fossil-fuel heating systems in Cyprus.

References:

- https://ec.europa.eu/energy/sites/default/files/documents/cy_final_necp_main_en.pdf

Czech Republic

There is no plan to ban on fossil-fuel heating systems. However, Czech Republic has a plan starting in 2022 to ban solid fuel boilers of the 1st emission class (with an efficiency of <66%) and 2nd emission class (with an efficiency of <66-73%). The act sets minimum standards for solid fuel boilers that are not with a rated thermal input of 300 kW or less that does not meet the emission requirements.

References:

- https://ec.europa.eu/energy/sites/default/files/documents/cs_final_necp_main_en.pdf

Denmark

Since 1 January 2013, the installation of oil-fired boilers and natural gas heating is banned in new buildings in Denmark. Since 2016, the Danes have also banned the installation of new oil-fired boilers in existing buildings in areas where district heating or natural gas is available. To support the transition from fossil-fired appliances and renewably sourced ones, Denmark is investing 42 million Danish crowns (~ € 5.6 million) for existing buildings. The Danish government aims to phase out oil for heating purposes and coal by 2030 and make electricity and heating supply fully covered by renewable energy by 2035 (Danish Climate Policy Plan).

Denmark has achieved the highest reduction in CO_2 emissions intensity from residential heating measured in gCO_2/kWh, from 244 gCO_2/kWh in 1990 to 118 gCO_2/kWh in 2015, also by reducing oil and coal consumption and switching to a high degree of biomass consumption.

References:

- Denmark puts the brakes on heating costs with new legislation | Renewable Energy World
- Denmark prohibits oil and gas heaters | Sun & Wind Energy (sunwindenergy.com)
- The Danish climate minister closing down the oil industry for good | Denmark | The Guardian
- danishclimatepolicyplan_uk.pdf (ens.dk)
- https://ec.europa.eu/energy/sites/default/files/documents/dk_final_necp_main_en.pdf

Estonia

There is no plan to ban fossil-fuel heating systems in Estonia.

References:

- https://ec.europa.eu/energy/sites/default/files/documents/ee_final_necp_main_en.pdf

Finland

Fossil fuels (coal, natural gas, oil) used in heat production are taxed in Finland based on their energy content and CO_2 emissions. Finland heavily relies on district heating. The remaining heat demand (around 10%) is covered either by oil or electricity. Most users who have stopped using oil heating have moved to district heating or geothermal heating, and this trend will likely continue. The Energy and Climate Strategy (Ministry of Economic Affairs and Employment 2016) assumes that the proportion of oil heating in individual heating will drop to 40% in existing commercial and service buildings, and the use of oil in residential buildings will end by 2050. The objective of the Finnish Government is to reduce the use of imported oil for domestic needs by 50% in the 2020s. This objective also supports the phasing out of oil heating by 2035.

References:

- https://www.euractiv.com/section/energy/news/finland-confirms-coal-exit-ahead-of-schedule-in-2029/
- https://ec.europa.eu/energy/sites/ener/files/documents/fi_final_necp_main_en.pdf
- https://www.hel.fi/static/liitteet/kaupunkiymparisto/julkaisut/julkaisut/HNH-2035/Carbon_neutral_Helsinki_Action_Plan_1503019_EN.pdf
- https://www.hel.fi/static/kanslia/energy-challenge/heating-system-in-helsinki.pdf

France

The environmental regulation (RE2020) will enter into force on 1 January 2022 for gas fired heating systems and two situations must be distinguished:

- For single-family homes, where non-fossil fuel solutions are common and perfectly mastered (notably for heat pump or biomass heating), the threshold will be set at 4 kgCO2/m2/year from the entry into force of the RE2020 and will de facto exclude systems using only gas (measured during performance audits).
- For collective housing, the transition will occur between 2022 and 2025. The threshold will initially be set at 14 $kgCO_2/year/m^2$, still leaving the possibility of installing gas heating if the dwellings are very energy efficient. Then, from 2025, the threshold will be reduced to 6.5 $kgCO_2/m^2/year$.

Gradual entry into force: the years 2021 to 2024 will be a learning period: a carbon threshold will be set for the construction phase from 2021. The threshold will become increasingly demanding over time, in 2024 corresponding to a 15% reduction in emissions compared to the current level, and -25% in 2027. Finally, in 2030, "the maximum threshold in kgCO2/m2 will be lowered to between 30% and 40% of the current reference level".

Furthermore, the RE2020 plans to discourage the use of electric (resistance) radiators, because their operating costs are high, and they capture a significant share of the considerable grid capacity. Possibly installing solar panels could be a condition for their continued use.

References:

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- http://www.carbone4.com/analyse-chaudieres-gaz-climat/
- https://www.franceculture.fr/emissions/la-question-du-jour/fin-du-chauffage-au-gaz-un-pas-vers-la-transition-energetique
- https://www.lesechos.fr/politique-societe/societe/la-facture-de-chauffage-a-frole-1700-euros-par-foyer-lan-dernier-1281024
- Le décret qui interdit l'installation de chaudières au fioul (fioulmarket.fr)
- Décret tertiaire : obligations, sanctions et calendrier 2021 | Opéra Énergie (opera-energie.com)
- RE2020 : l'Etat programme la fin du chauffage gaz en logement et offre un tremplin au bois (batiactu.com)
- Fin du chauffage au gaz et au fioul : ce qui va changer pour vous (cacheclimatisation.com) PM210218-DP_RE2020_EcoConstruire_0.pdf (politico.eu)
- https://ec.europa.eu/energy/sites/default/files/documents/fr_final_necp_main_en.pdf

Germany

The German government in its German Buildings Energy Act has decided to ban the installation of oil-fired heating systems from the year 2026 in new and existing buildings where more climate friendly alternatives are available – opting out of an outright ban (after 2026 mono-fuel boilers cannot be used in renovation). To make this economically easier on consumers, a "swap-premium" for replacing old oil-fired heating systems has been introduced, reimbursing up to 40% of the costs for a new and more efficient system (the funding strategy "Energy Efficiency and Heat from Renewable Energies"). As of 2026 it will no longer be allowed to fit mono-fuel oil boilers in buildings in which it is possible to install a more climate-friendly heating system.

References:

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- https://energypost.eu/no-energiewende-without-warmewende-making-germanys-heating-emissions-climate-neutral-nearly/
- Heating 40 million homes – the hurdles to phasing out fossil fuels in German basements | Clean Energy Wire
- https://www.erneuerbareenergien.de/archiv/germany-bans-oil-heaters-requires-renewable-heat-150-437-92667.html
- Klimaschutzprogramm 2030 (bundesregierung.de)
- https://www.bmi.bund.de/EN/topics/building-housing/building/energy-efficient-construction-renovation/buildings-energy-act/buildings-energy-act-node.html
- https://ec.europa.eu/energy/sites/default/files/documents/de_final_necp_main_en.pdf

Greece

For heating and cooling, the share of renewables should increase from 30% in 2020 to 43% in 2030, but there is no concrete plan to phase out fossil fuel heating systems.

References:

- https://ec.europa.eu/energy/sites/default/files/el_final_necp_main_en.pdf

Hungary

There is no plan to ban fossil-fuel heating systems in Hungary and the NECP reveals that the country would need approximately HUF 50 000 billion (approximately €142 billion) to implement carbon neutral power generation, fully phase out the use of natural gas and to fully electrify transport.

References:

- https://ec.europa.eu/energy/sites/default/files/documents/hu_final_necp_main_en.pdf

Ireland

From June 2019, oil and gas boilers have gradually started to be banned from new builds, according to the Republic of Ireland government's Climate Action Plan. Oil boilers will be banned from new builds by 2022, gas by 2025. However, the existing buildings, it seems, will continue to be able to install gas or oil boilers.

References:

- http://ireland2050.ie/past/heat/
- New regs must ban oil and gas boilers to meet carbon targets, says expert - Selfbuild
- Draft regs focus on quality control - Selfbuild
- The installation of oil boilers in new homes will be banned from 2022 and gas boilers from 2025 – What's next? - Master Therm Heat Pumps
- https://www.oeko.de/fileadmin/oekodoc/AGORA-EU-Ambition.pdf
- https://ec.europa.eu/energy/sites/default/files/documents/ie_final_necp_main_en.pdf

Italy

Italy has fixed its phase-out date for all fossil fuels in all types of infrastructures (new and existing buildings) in heating in 2050 (National Energy Strategy). The Legambiente's campaign gained popularity in Italy, building a coalition of relevant Italian stakeholders from the business community, local authorities, unions, and others to advocate for decarbonisation of residential heating.

References:

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- https://ec.europa.eu/energy/sites/default/files/documents/it_final_necp_main_en.pdf

Latvia

Latvia states that its NECP contains an objective to use non-fossil gas, whilst simultaneously failing to include a goal for phasing phase out fossil gas.

References:

- https://ec.europa.eu/energy/sites/default/files/documents/lv_final_necp_main_en.pdf

Lithuania

There is no plan to ban fossil-fuel heating systems in Lithuania.

References:

- lt_final_necp_main_en.pdf (europa.eu)

Luxembourg

Luxembourg stopped the flood of public money going into fossil-fuel heating and according to a report from the Oeko-Institut, both oil and gas will be banned from heating systems in new buildings in 2023. The combination between building insulation (roof, walls, windows, basement) and the phasing-out of fossil fuel heating systems should help make the building renovation strategy a success. This will be complemented by a fuel oil substitution programme and the establishment of low-temperature heating networks fed by waste heat from industry and renewable energy sources (deep geothermal energy, heat pumps, sustainable wood). The country, however, does not have a specific plan to ban fossil-fuel operated appliances.

References:

- https://www.fedil.lu/fr/positions/luxembourgs-national-climate-and-energy-plan/?pdf
- https://www.oeko.de/fileadmin/oekodoc/AGORA-EU-Ambition.pdf
- https://ec.europa.eu/energy/sites/default/files/documents/lu_final_necp_main_en.pdf

Malta

There is no plan to ban fossil-fuel heating systems in Malta.

References:

- mt_final_necp_main_en.pdf (europa.eu)

Netherlands

A measure in the new climate package (Klimaatakkoord 2030) specifies that 75% of all new dwellings built by the end of 2021 shall not have a connection to the natural gas grid (this objective is already achieved, now over 90%). If that is not possible, the builders must take extra measures to facilitate the transition to a 'gas-free' dwelling in the future, e.g. through extra insulation, or solar panels in combination with a heat pump. In 2017, this percentage was around 35-40%. This is a success story, where the transition has gone smoothly after the legislation was put into place (not a lot of resistance).

Legislative change led from prioritising a gas connection (old legislative situation) to only connecting a new dwelling to the gas grid if alternatives were proven to be impossible (new legislative situation). Buyers of new builds can take out government loans (Nationaal Energiebespaarfonds) to make their dwelling 'gas-free'. The previous plan to phase out gas boilers

in 2021 was unfortunately not successful and the plans of the new government coalition should be published this year. After 2025, the need to ban gas boilers will be revisited.

References:

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- https://www.solarthermalworld.org/news/dutch-approach-transforming-heating-sector
- Call to ban gas heating boilers in Netherlands by 2021 | NL Times
- https://energeia.nl/energeia-artikel/40091302/in-2020-kreeg-86-van-de-nieuwbouw-geen-gasaansluiting-meer
- https://www.natuurenmilieu.nl/wp-content/uploads/2020/08/Rapport-Gasmonitor-2020-.pdf
- https://ec.europa.eu/energy/sites/default/files/documents/nl_final_necp_main_en.pdf

Norway (as part of the European Economic Area – EEA)

Norway is famous for being the 'oil country' but has now become the first country in the world to ban the use of oil to heat buildings (into effect in 2020). The Ministry of Climate and Environment specified that the ban was applied to both new and old buildings and cover both private homes and the public space of businesses and state-owned facilities. Norwegian homeowners had to replace their oil boilers before 2020.

References:

- Norway – First Country in the World to Ban Use of Gas to Heat Buildings - Daily Scandinavian
- Norway to ban the use of oil for heating buildings by 2020 | The Independent | The Independent
- https://www.ecoboiler-review.eu/downloads/20200214_WG1_Heating-in-Norway_presentation-2019.pdf
- Norway bans use of heating oil in buildings - Digital Journal
- Norway stops oil boilers - News (Ekot) | Sveriges Radio

Poland

Decarbonisation and especially ban on fossil-fuel heating is a complicated topic in Poland. Due to the country's dependence on coal for heating as well as for electricity generation, decarbonisation is a real challenge. Most of district heating systems, which are popular in Poland, are supplied with heat from coal (cogeneration or heat only boilers) and rapidly growing prices of CO_2 put Polish citizens in a difficult position. While it is theoretically feasible to phase out coal from individual heating systems before 2030, district heating systems end electricity will still depend on coal, even if the Government announced agreement with the coal industry to close the coal mines (steam coal only) before 2049. Nevertheless, it should be noted that coal was not considered in our analysis, as solid fuel boilers are covered by a different regulation than gas and oil boilers.

References:

- https://foresightdk.com/polish-coal-boiler-phase-out-an-inspiration-for-clean-heat/
- https://ec.europa.eu/energy/sites/default/files/documents/pl_final_necp_part_1_3_en.pdf
- https://ec.europa.eu/energy/sites/default/files/documents/pl_final_necp_part_4_en.pdf
- https://ec.europa.eu/energy/sites/default/files/documents/pl_final_necp_part_5_en.pdf

Portugal

There is no plan to ban fossil-fuel heating systems in Portugal. Nonetheless, the country plans to reduce the carbon intensity of buildings, consume energy more efficiently, promote greater

electrification in the sector and substitute fossil fuels with renewable energy sources. These measures, addressing the decarbonisation of the building sector, do not indicate the phase-out of fossil fuel appliances but assume the need to reduce the use of these appliances and focus on incentives towards electrification and renewable energy sources.

References:

- https://ec.europa.eu/energy/sites/default/files/documents/pt_final_necp_main_en.pdf

Romania

There is no plan to ban fossil-fuel heating systems in Romania.

References:

- https://ec.europa.eu/energy/sites/default/files/documents/ro_final_necp_main_en.pdf

Slovakia

Slovakia is planning on phasing out the consumption of coal: by at least 30% by 2030, and the decision to phase out coal consumption in Slovakia is in line with the principles of just transition by 2021. To reduce the use of fossil energy sources, Slovakia plans a ban on the sale and installation of new oil boilers by 2023.

References:

- sk_final_necp_main_en.pdf (europa.eu)

Slovenia

There is no plan to ban fossil-fuel heating systems in Slovenia.

References:

- si_final_necp_main_en.pdf (europa.eu)

Spain

Spain has no plan to phase out fossil fuel heating systems at national level, but it must be noted that some of the 17 regions and 8,000 municipalities have taken measures in that direction. We have not analysed the situation in such depth.

References:

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Sweden

By relying on district heating (based on wood, peat and other biofuels, household waste, deep thermal heat, recycled heat from industries) combining heat and power production, municipalities in Sweden fuel their cities from renewable energy sources. In the case of Sweden, the policy

pressure on the building and heating sector has been quite strong. Overall, district heating represents about 60% of heating in Sweden. In fact, 85% of all multi-dwelling houses and all public buildings are connected to district heating. Today all towns in Sweden have district heating networks, which have enabled the Swedish heating sector to become almost completely fossil-free.

They use mainly biofuels like wood and peat, but also burn household waste. The main reason to invest in district heating in Sweden was to create a healthy environment in Sweden's cities. Sweden has the lowest average CO_2 intensity of residential heating of the EU-27, at 29 gCO_2/kWh due to a high concentration of biomass, nuclear and renewables in their heating sector. In 1990 from the CO_2 intensity was 112 gCO_2/kWh due to a decrease in oil and coal consumption. The ban on individual appliances is not that relevant for Sweden though, because of the country's reliance on district heating.

References:

- https://www.mdpi.com/1996-1073/13/8/1894
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- https://www.euroheat.org/news/swedish-district-heating-reducing-nations-co2-emissions/
- https://ec.europa.eu/energy/sites/default/files/documents/sweden_draftnecp.pdf

United Kingdom (not included on the map)

The 'Future Homes Standard' is designed to ensure that an average home built using the guidelines will produce 75-80% less carbon emissions than one built to current energy efficiency requirements. Amongst the proposals is a ban on fossil fuel heating systems (2019), such as gas boilers (and all other forms of fossil fuel heating), from new homes by 2025. Gas is not the only fuel being banned – in fact, all fossil fuel boilers will be banned going forward. The government has indicated it will phase out installations of conventional gas boilers for home heating by the mid-2030s as part of efforts to decarbonise the UK's economy.

References:

- https://greenallianceblog.org.uk/2020/05/13/net-zero-is-nowhere-in-sight-for-uk-clean-heat-policy/?utm_campaign=Carbon%20Brief%20Daily%20Briefing&utm_medium=email&utm_source=Revue%20newsletter
- https://energypost.eu/uk-heating-plan-still-means-120-gas-boilers-installed-for-every-low-carbon-system/
- Government set to Ban Fossil Fuel Heating in New Homes from 2025 | Tansun
- The UK Gas Boiler Ban: Everything You Need to Know | The Eco Experts
- Conventional gas boilers to be phased out by mid-2030s | E&T Magazine (theiet.org)

About this briefing

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About ECOS

ECOS - Environmental Coalition on Standards is an international NGO with a network of members and experts advocating for environmentally friendly technical standards, policies and laws. We ensure the environmental voice is heard when they are developed and drive change by providing expertise to policymakers and industry players, leading to the implementation of strong environmental principles.
www.econstandard.org

About Coolproducts

Co-led by ECOS and the European Environmental Bureau (EEB), Coolproducts is a coalition of NGOs working to ensure better products for consumers and the planet.
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