

Legal Framework for the Decarbonization of Heating & Cooling

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Abstract

This *Fair-Heat* Research Brief provides a comprehensive overview of the legal and policy frameworks guiding the decarbonization of the heating and cooling sector in the European Union and Austria. It focuses on key EU instruments such as the Fit-for-55 package, the Effort Sharing Regulation, ETS2, the Social Climate Fund, and directives on energy efficiency, buildings, and renewable energy. These measures aim to reduce greenhouse gas emissions, promote energy efficiency, and increase the use of renewable energy while ensuring social fairness. At the national level, Austria has implemented laws such as the Renewable Heat Act and various subsidy programs to support the replacement of heating systems and the renovation of buildings. Regional initiatives by the federal provinces complement national efforts, but lead to policy fragmentation. The research highlights the importance of coordinated, inclusive legal structures to ensure a fair and effective energy transition, with particular attention to vulnerable groups and the long-term goal of climate neutrality.

1 Introduction

The transition to a climate-neutral economy has become one of the most urgent and defining challenges of our time. The European Union, alongside its Member States, has committed to ambitious decarbonization goals that are anchored in international agreements such as the Paris Agreement and reinforced through comprehensive internal legislation. Among the various sectors targeted for transformation, heating and cooling represent particularly complex and impactful areas, given their substantial share of energy consumption and greenhouse gas (GHG) emissions. Despite often receiving less public attention than electricity generation or transport, heating and cooling systems are at the very heart of the EU's climate strategy. They are also intimately tied to issues of social justice, energy poverty, and regional equity. In this context, the *Fair-Heat* project aims to assess and support a fair, inclusive, and effective legal framework for decarbonizing heating and cooling across Europe, with a particular focus on Austria.

This document, the first research brief in the *Fair-Heat* series, explores the legal and policy frameworks that underpin the decarbonization of the heating and cooling sector in the European Union and Austria. It provides an in-depth review of the most relevant EU directives, regulations, and policy packages, with a special focus on the Fit-for-55 legislative framework. It further examines how these EU-level measures are transposed into national law in Austria, including financial incentives, regional programs, and legislative initiatives. By analyzing both levels of governance, this document aims to provide a comprehensive perspective on the legal mechanisms available to support a fair energy transition.

2 Legal Framework: EU

In line with the Paris Agreement (UN, 2015), the EU aims at reducing its greenhouse gas emissions by 55% by 2030 compared to 1990 (EC, 2020) and at achieving climate neutrality by 2050 (EC, 2021). To achieve the 2030 target, a comprehensive package of energy and climate policy instruments has been put together with the Fit – for-55 package¹. The 55% reduction target is broken down in a 62% reduction target for sectors covered by the EU ETS (for emission-intensive industry, energy supply, internal aviation, and maritime shipping) and a 40% reduction target for the remaining sectors, the Effort Sharing sectors (see section 2.1), covering i.a. the buildings sector, which is the focus of the *Fair-Heat* project. While they are currently subject to national climate policies, the Effort Sharing sectors will be included in a newly established separate emissions trading system in 2027 (section 2.2). Other legislative documents of the Fit for 55 package that are relevant for a fair transition in the area of heating relate to the establishment of the EU's Social Climate Fund (section 2.3) as well as revisions of the Energy Efficiency Directive (section 2.4), the Energy Performance of Buildings Directive (section 2.5), and the Renewable Energy Directive (section 2.6).

¹ <https://www.consilium.europa.eu/en/policies/fit-for-55/>

2.1 The EU Effort Sharing Regulation

The EU Effort Sharing Regulation (ESR; EC, 2023a; for the period 2013 to 2020 Effort Sharing Decision) sets binding GHG emission reduction targets at Member State level for sectors not covered by the EU Emissions Trading System (EU ETS), i.e., domestic transport (excluding aviation), buildings, agriculture, small industry, and waste. At EU level and in Austria, these sectors account for approximately 60% of total GHG emissions as of 2022 (Eurostat, 2025).

For the period up to 2030, the ESR was initially adopted in 2018, and revised in 2023 in line with the more ambitious overall EU-wide reduction target of 55% compared to 1990 levels. In ESR sectors, EU-wide emission reductions should amount to 40% by 2030 compared to 2005 levels (Art. 1). At Member State level, individual ESR emission reduction targets range between 10% and 50% (Annex I), reflecting mainly varying emission reduction capacities of Member States approximated by GDP per capita but also cost-effectiveness aspects regarding Member States with an above-average income (EC, 2023a). For Austria, a national emission reduction target of 48% applies.

In principle, Member States can decide which policy instruments and measures they implement to achieve their ESR emission reduction targets. However, EU legislation is increasingly influencing the achievement of targets in the ESR sectors. These include emission standards for vehicles in the transport sector (EC, 2024a), the Energy Efficiency Directive (EC, 2023b) or the Energy Performance of Buildings Directive (EC, 2024b), and most recently the new emissions trading system for buildings, road transport, and additional sectors.

2.2 The EU Emission Trading System for Buildings, Road Transport, and Additional Sectors

In the context of the 2023 revision of the Emissions Trading Directive (EC, 2024c), an additional emissions trading system was created for CO₂ emissions from fuel combustion in buildings, road transport, and additional sectors² (Art. 30a-30k). This new system, named ETS2, is separate from the existing EU ETS, which means that allowances cannot be exchanged between the two systems and that in turn two different price levels will prevail.

The aim of ETS2 is to reinforce the European Green Deal's existing policies within the designated sectors, thereby assisting Member States in achieving their emission reduction targets outlined in the ESR. So far, emission reductions in ESR sectors have not been aligned with the EU's 2050 climate neutrality objective. The carbon price established by the ETS2 is expected to incentivize investments in the areas of building renovations and low-emission mobility.

ETS2 is scheduled to become fully operational in 2027. As the existing EU ETS, it will be a "cap and trade" system, but will follow an upstream approach, i.e., under ETS2 fuel suppliers, rather than final consumers of fossil fuels (direct emitters), will be required to participate in the scheme. The emissions cap will be set to reduce emissions by 42% by 2030 compared to 2005 levels; therefore, a linear reduction factor of 5.15% will be applied to the cap in 2027, increasing to 5.43% p.a. in the period 2028 to 2030 (Art. 30c).

All emission allowances in ETS2 will be auctioned (Art. 30d). As for the EU ETS, quantity management provisions in the form of a market stability reserve are included. 'In the event of an excessive price increase' (Art. 30h), additional allowances from the market stability reserve shall be auctioned. Until 2030 a price of 45 €/t CO₂ is

² The additional sectors primarily consist of small industry that is not covered by the existing EU ETS.

aspired, in case auction prices exceed this target price for two consecutive months, 20 million allowances are to be released from the market stability reserve.

A certain share of ETS2 allowances will be auctioned to generate support for vulnerable households and micro-enterprises through the Social Climate Fund (Art. 30d(3,4)). The remaining ETS2 allowances are distributed among Member States for auctioning, according to their target emissions in EU effort sharing. Member States have to use the auction revenues for climate action and social measures (Art. 30h(6))³.

2.3 The EU's Social Climate Fund Regulation

The introduction of ETS2 will result in a higher price of fossil fuels that will be passed on to the final customers. Against this background, ETS2 was established alongside a Social Climate Fund (SCF) (EC, 2023c) that should reduce the burden of higher prices for customers particularly affected, i.e. vulnerable⁴ households, micro-enterprises and transport users (Art. 3), and most notably households in energy or transport poverty⁵. This fund has been created for the period from 2026 to 2032 to provide financial support to Member States for the measures and investments included in their Social Climate Plans (Art. 4). The Social Climate Plans have to be approved by the EC (Art. 16) and must include existing or new national measures⁶ and investments to mitigate the burden of ETS2 on vulnerable groups, aligned with the Member States' Integrated National Energy and Climate Plans. Provided that Member States achieve milestones and targets listed in their Social Climate Plans (related, e.g., to energy efficiency, building renovation, zero- and low-emission mobility and transport, greenhouse gas emission reductions, or reductions in the number of vulnerable groups), Member States can obtain financial support from the SCF (Art. 7-9).

Auction revenues from the EU ETS and ETS2 shall contribute up to 65 bn € to the SCF in the period from 2026 to 2032. The methodology for the calculation of the maximum financial allocation for each member state under the fund is laid out in Annex I of the Regulation. It considers the population at risk of poverty living in rural areas, CO₂ emissions from households' fuel combustion, the share of households at risk of poverty with arrears on their utility bills, and the Member State's gross national income (GNI) per capita. As a result, the lowest share of funds (0.1%) accrues to Luxembourg while the largest share applies to Poland (17.6%). For Austria, a share of 0.89% (about 580 m €) is eligible (Annex 2). However, Member States must contribute at least 25% of the estimated total costs of their Social Climate Plans (Art. 15).

³ Most notably, decarbonisation of heating and cooling of buildings; acceleration of the uptake of zero-emission vehicles; encouragement of a shift to public transport and improve multimodality; provision of financial support for low-income households in worst-performing buildings or low- and middle-income transport users; funding of social climate plans.

⁴ In the context of the SCF Regulation, 'vulnerable' entails a high cost impact and at the same time a lack of capital to invest in low-carbon technologies.

⁵ In the context of the SCF Regulation, 'energy poverty' is defined as a "household's lack of access to essential energy services that underpin a decent standard of living and health, including adequate warmth, cooling, lighting, and energy to power appliances, in the relevant national context, existing social policy and other relevant policies". 'Transport poverty' refers to "individuals' and households' inability or difficulty to meet the costs of private or public transport, or their lack of or limited access to transport needed for their access to essential socioeconomic services and activities".

⁶ Respective measures may include temporary direct income support to vulnerable households and transport users.

2.4 The Energy Efficiency Directive

The European Commission (EC) has recognized energy efficiency as a key area of action for achieving (long-term) decarbonization targets (EC, 2018a). The revised Energy Efficiency Directive (EED; EC, 2023b) has established ‘energy efficiency first’ as a key principle of EU energy policy (Art. 3) and significantly increased the EU’s energy efficiency efforts, stipulating that primary energy in the EU should not exceed 992.5 Mtoe by 2030 and final energy consumption should not exceed 763 Mtoe respectively (Art. 4)⁷.

EU Member States must set **indicative national energy efficiency contributions** in line with the overall targets based on a list of criteria (Art. 4(3)) reflecting the national context, such as the energy intensity of the economy, GDP per capita or energy savings potentials. The EC’s assessment of Integrated National Energy and Climate Plans (EC, 2023d) of September 2023 has shown that only few Member States proposed levels of either primary energy consumption (i.e., Germany and the Netherlands) or final energy consumption (e.g., Estonia and Romania), or both (i.e., Czech Republic, France, Italy, Lithuania) that are in line with the revised EED⁸.

The revised EED includes a substantial increase in the annual energy savings obligation (Art. 8(1)): Member States⁹ are obliged to achieve annual energy savings of 1.3% in the period 2024/25, 1.5% in the period 2026/27, and 1.9% in the period 2028/30. To achieve these savings, Member States have to implement energy efficiency obligation schemes (Art. 9) and/or alternative policy measures (Art. 10).

The EED includes measures for all sectors, from public procurement to industry. With respect to residential buildings, and heating and cooling, the revised EED includes the following key provisions:

- Member States must ensure that natural gas customers receive competitively priced individual meters that accurately reflect their actual energy consumption and provide real-time usage information when existing meters are replaced, a new connection is established, or buildings are comprehensively renovated (Art. 13). Regarding billing, Member States must ensure that natural gas billing is accurate and based on actual consumption where smart meters are not available, allowing for self-reading systems. Customers should have access to historical consumption data to facilitate self-checks. They must also receive clear billing information, including options for electronic billing and explanations for charges, especially when bills are estimated (Art. 17).
- For district heating and cooling, as well as domestic hot water, similar requirements apply. Meters must accurately reflect energy consumption, and in cases where heating is supplied from a central source, a meter must be installed at the point of delivery (Art. 14). In multi-apartment and multi-purpose buildings, individual sub-meters should measure consumption for each unit where feasible (Art. 15)¹⁰. With respect to billing accuracy and transparency, similar requirements as for gas apply (Art. 18).
- Member States must also submit a comprehensive heating and cooling assessment as part of their Integrated National Energy and Climate Plans (Art. 25(1)). These assessments must include a cost-benefit

⁷ This corresponds to a reduction of energy consumption of at least 11.7 % in 2030 compared to the 2020 EU Reference Scenario.

⁸ The national contributions submitted by the Member States corresponded to an EU-wide final energy consumption amounting of 814.3 Mtoe in 2030, thereby substantially exceeding the 763 Mtoe stipulated in the revised EED.

⁹ Except for Cyprus and Malta.

¹⁰ Remote reading capabilities are required for newly installed meters and heat cost allocators, and existing meters must be upgraded by 1 January 2027, unless proven not cost-efficient.

analysis that considers climate conditions, economic feasibility, and technical suitability, which should help identify the most efficient solutions for meeting heating and cooling needs. For cases in which high-efficiency cogeneration or efficient district heating from waste heat is identified as cost-efficient, Member States must promote the development of the necessary infrastructure (Art. 25(4)).

- Member States must also ensure that local authorities prepare heating and cooling plans for municipalities with more than 45,000 inhabitants (Art. 25(6)). These plans should, i.a., estimate the respective energy efficiency potential (based on the national heating and cooling assessment), comply with the ‘energy efficiency first’ principle, and include strategies for utilizing identified resources. Furthermore, the plans must assess existing energy infrastructure, consider local community needs, and evaluate the role of energy communities. They should also analyze heating and cooling systems in local buildings, with a focus on improving energy efficiency, especially in poorly performing buildings and for vulnerable households.
- To ensure more efficient primary energy consumption and to increase the share of renewables in heating and cooling supply, efficiency criteria and minimum shares for renewable and waste heat are defined for efficient district heating and cooling systems (Art. 26).
- Additionally, Member States must ensure that gas and electricity transmission and distribution operators apply the ‘energy efficiency first’ principle in their planning and investment decisions. They should monitor network losses and improve efficiency, while also reporting on energy efficiency progress in their annual reports (Art. 27).
- Member States are obligated to take appropriate measures to empower and protect individuals affected by energy poverty, vulnerable customers¹¹, and those in low-income households, including residents of social housing (Art. 24). They are required to prioritize the implementation of energy efficiency improvement measures and consumer protection initiatives specifically for those affected by energy poverty.
- Member States are also responsible for establishing and promoting financing mechanisms for energy efficiency improvement measures (Art. 30). They are required to promote energy efficiency lending products, such as green mortgages and loans, ensuring they are widely available and accessible. They must also implement on-bill and on-tax financing schemes and inform financial institutions about opportunities for public-private partnerships in energy efficiency investments. Member States can also establish a national energy efficiency fund aimed at implementing energy efficiency measures. This fund can be created as a dedicated fund within an existing national facility that promotes capital investments and may be financed with revenues generated through allowance auctions in ETS².

2.5 Energy Performance of Buildings Directive

The Energy Performance of Buildings Directive (EPBD) aims to achieve a fully decarbonized building stock by 2050. The recast EPBD (EC, 2024b) introduces several new measures to support Member States in reaching this goal. These measures align with the Fit-for-55 package and broader EU strategies, providing a replicable model for legislative implementation. Key instruments introduced by the EPBD are:

- National Building Renovation Plan (NBRP)

¹¹ As defined in Directive (EU) 2019/944.

- Zero Emission Buildings (ZEB)
- Minimum Energy Performance Standards (MEPS)
- National Trajectories for Primary Energy Use (PEU) in Residential Buildings
- Building Renovation Passports (BRPs)
- Energy Performance Certificates (EPCs) (strengthened under the revision)

National Building Renovation Plan (NBRP)

Article 3 of the recast EPBD mandates that each Member State establishes a National Building Renovation Plan (NBRP) to ensure that all public and private buildings become highly energy-efficient and decarbonized by 2050. The NBRP builds upon and enhances the previous Long-Term Renovation Strategy, incorporating analyses and reporting on other EPBD instruments.

Zero Emission Buildings (ZEB)

Article 11 defines Zero Emission Buildings (ZEB) as structures that produce no on-site carbon emissions from fossil fuels. Where technically and economically feasible, ZEBs must also be capable of adjusting energy use, generation, or storage in response to external signals. The directive requires ZEB energy demand to be at least 10% lower than the threshold set for nearly Zero-Energy Buildings (nZEB) as of May 28, 2024, thereby promoting advanced energy efficiency technologies.

Key Instruments for Renovating Existing Buildings

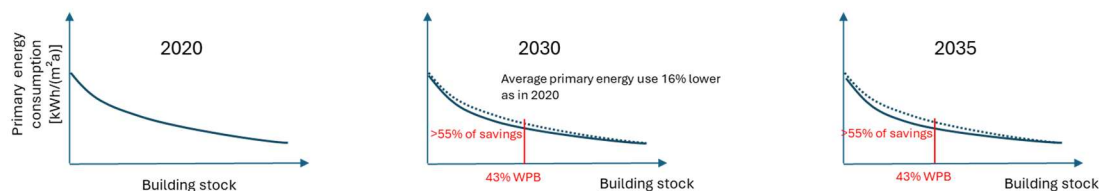
The **Minimum Energy Performance Standards (MEPS)** and **National Trajectories for Primary Energy Use (PEU)** (Art. 9) are crucial for increasing renovation rates, particularly for the worst-performing buildings.

National Trajectories for Residential Buildings

Member States must establish **progressive national targets** to reduce the average primary energy use of residential buildings:

- at least 16% reduction by 2030;
- 20% to 22% reduction by 2035; and
- continued reductions every five years through 2050.

Figure 1 National trajectories for residential buildings



Additional requirements are:

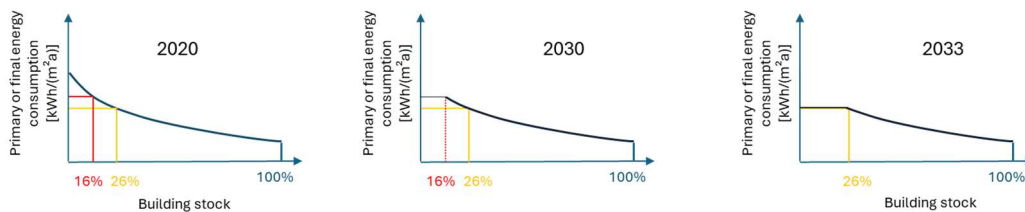
- The trajectory must align with national roadmaps and 2030, 2040, and 2050 targets.
- Member States must quantify the number of buildings, units, and floor areas to be renovated annually, prioritizing the worst-performing buildings.
- Energy poverty must be addressed through financial and technical support for vulnerable households (Art 6).
- Implementation of MEPS must be monitored, with enforcement mechanisms in place (Art. 7).

Minimum Energy Performance Standards for Non-Residential Buildings (MEPS)

Member States must introduce regulations to renovate the **worst-performing** non-residential buildings:

- 16% of non-residential buildings by 2030
- 26% of non-residential buildings by 2033

Figure 2 Minimum requirements for non-residential buildings



Additional requirements are:

- Thresholds can be expressed in either primary or final energy use.
- The maximum energy performance threshold will be determined based on 2020 data.
- Differentiation between building types and categories is allowed.
- Member States may define additional indicators for renewable and non-renewable primary energy use.

Certain buildings, such as those used for religious activities, historical sites, agricultural purposes, and military use, may be exempt from MEPS, provided clear criteria and equivalent energy performance improvements are ensured.

Building Renovation Passports (BRP)

As defined in Article 2 of Directive (EU) 2024/1275, a **Building Renovation Passport (BRP)** is a tailored roadmap outlining an optimal step-by-step approach for deep renovation, significantly enhancing a building’s energy performance.

These measures collectively support the EU’s vision for a sustainable, decarbonized built environment by 2050.

2.6 Renewable Energy Directive

The Renewable Energy Directive (RED) is the European Union’s primary legal instrument for promoting renewable energy sources. Both Directive (EU) 2018/2001 (RED II) (EC, 2018b) and its revised version, Directive (EU)

2023/2413 (RED III) (EC, 2023e), contain specific provisions to foster the uptake of renewable energy in the heating and cooling (H&C) sector, which is essential for achieving the EU's climate neutrality goals.

Below key elements of RED II and RED III related to facilitate the uptake of renewables in heating and cooling are listed and explained:

1. Annual Increase Targets for Renewable Heating and Cooling (Article 23)

To drive progress in the heating and cooling sector, Article 23 of RED II has set a mandatory annual increase in the share of renewables: *“Each Member State shall endeavour to increase the share of renewable energy supplied for heating and cooling by an indicative 1.1 percentage points annually...”* (RED II, Art. 23(1)). This target was made more ambitious under RED III, with a binding annual increase of 0.8 to 2.2 percentage points depending on the Member State's GDP per capita and energy mix: *“Each Member State shall ensure that the share of renewable energy in the heating and cooling sector increases by at least 0.8 to 2.2 percentage points as an annual average calculated for the periods 2021 to 2025 and 2026 to 2030.”* (RED III, Art. 23(1)). The increased ambition reflects the need for faster decarbonization in this energy-intensive sector.

2. Promotion of Waste Heat and Cold (Article 23(4))

The Directive also recognizes the potential of waste heat and cold as a renewable-compatible source of energy: *“Member States may count waste heat and cold in the achievement of the annual increase... provided that the waste heat or cold is used in an efficient district heating and cooling system...”* (RED II, Art. 23(4)). This provision incentivizes the recovery of heat from industrial processes, data centers, and other urban sources.

3. District Heating and Cooling Systems – Efficiency and Access (Article 24)

Article 24 lays out a framework for modernizing district heating and cooling systems, aiming to open up the market and increase renewables: *“Member States shall take the necessary measures to develop efficient district heating and cooling infrastructure to promote heating and cooling from renewable energy sources and from waste heat and cold...”* (RED II, Art. 24(1)).

It also includes a right to disconnect from fossil-based networks: *“Final customers who are connected to a district heating or cooling system shall be allowed to disconnect... where they can demonstrate that they can achieve a significantly better energy performance...”* (RED II, Art. 24(2)). This is designed to empower consumers and stimulate competition in the renewable heating market.

4. Consumer Empowerment and Energy Communities

RED II and RED III emphasize consumer participation and empowerment: *“Member States shall ensure that information on energy performance and the share of renewable energy in heating and cooling is provided in an accessible, transparent and comprehensive manner...”* (RED II, Recital 66). Energy communities and prosumers are supported through links with the Electricity Market Directive (EU) 2019/944 (EC, 2019), promoting the decentralized uptake of renewables including in heating (e.g., solar thermal, microgrids).

5. Support Schemes and Market Integration (Articles 4–6)

Support mechanisms are key to scaling renewable heating technologies. Article 4 requires Member States to design transparent and cost-effective support schemes: *“Support schemes for renewable energy shall be designed in a way that encourages the integration of electricity from renewable sources in the electricity market...”*

(RED II, Art. 4(1)). In the heating and cooling sector, support mechanisms must not discriminate between technologies. Furthermore, they must allow renewable producers access to DHC networks.

6. The Role of the Public Sector (Article 7 and Energy Efficiency Directive)

The public sector is expected to take a leading role, demonstrating certain approaches or technologies: *“Member States shall ensure that, in their buildings and energy use, public bodies at national, regional and local levels fulfil an exemplary role in the deployment of renewable energy...”* (RED II, Recital 66, and linked to the Energy Efficiency Directive (EC, 2023b)). This includes using renewable energy in public buildings and integrating it into renovation plans.

7. Sustainability of Biomass and Other Fuels (Article 29)

Biomass is commonly used for renewable heating. However, RED II sets strict sustainability and greenhouse gas (GHG) criteria: *“Biofuels, bioliquids and biomass fuels shall be eligible... only if they meet the sustainability and greenhouse gas emissions saving criteria...”* (RED II, Art. 29(1)). This aims to ensure that biomass use contributes to emissions reduction goals and avoids negative environmental impacts.

8. Monitoring, Reporting and Planning (Governance Regulation)

Progress in renewable heating and cooling must be tracked through integrated national energy and climate plans (NECPs): *“Each Member State shall include in its NECPs a trajectory for the share of renewable energy in heating and cooling...”* (Governance Regulation, Art. 4(d)(2)) (EC, 2018c). Biennial progress reports further ensure accountability.

3 Legal framework: Austria

3.1 Austria's Regulatory Framework for Promoting Renewable Energy in Heating and Cooling

Austria has committed to ambitious climate goals, including a fossil-free building sector by 2040. To support this transition, Austria has introduced a combination of national legislation, financial incentives, and regional programs, with a strong focus on decarbonizing heating and cooling—a sector that accounts for a significant share of energy consumption and greenhouse gas emissions.

1. Renewable Heat Act (Erneuerbare-Wärme-Gesetz, EWG)

The Renewable Heat Act (BGBL, 2024) entered into force on February 29, 2024, and bans the installation of new fossil fuel-based heating systems in new buildings. Originally envisioned as a broader tool to phase out all fossil heating, the final version only applies to new constructions, with no immediate measures for existing systems. The Renewable Heat Act is part of Austria's pathway towards climate neutrality by 2040. The Act marks a clear step toward decarbonization but has been criticized for falling short of its original ambition. It excludes the existing building stock, which represent most of the fossil-fuel use in the heating sector. Without parallel efforts targeting this building stock, Austria's long-term climate targets could be at risk (IEA, 2024).

2. Financial Support Programs at Federal Level

As a measure to support the existing building stock, subsidies were increased as part of the renovation program 2024 ('Renovierungsoffensive') to support the voluntary replacement of fossil-fuel heating systems. In 2025 the program was suspended. From 2026 to 2030 a yearly budget of € 360 million will be allocated to the renovation program, totaling € 1,8 billion. In 2026, the voluntary replacement of fossil-fuel heating systems will be supported with grants varied by technology, e.g.:

- € 7,000 for heat pumps
- € 6,500 for district heating connections
- € 8,500 for biomass heating system
- € 2,500 for thermal solar installation
- € 5,000 for drilling/geothermal energy in combination with heat pumps

A maximum of 30% of the total investment costs can be subsidized.

Low-income households can receive up to 100% cost coverage of the respective technology-specific upper cost limit with the 'clean heating for all' subsidy program ('Sauber Heizen für Alle').

These incentives are generous and well-targeted but administrative complexity and varying application processes have been cited as barriers to access, particularly for vulnerable groups and rural households.

3. Support by the Bundesländer (Federal Provinces)

Austria's nine federal provinces (Bundesländer) have significant autonomy and supplement national efforts with their own funding schemes, regulations, and pilot programs. Burgenland, Styria, and Upper Austria, for example, offer additional subsidies for heat pumps, biomass boilers, and solar thermal installations. Lower Austria and Salzburg have home renovation programs that include heating system replacement. In Carinthia and Tyrol,

district heating networks, especially in alpine communities, are additionally promoted. Vienna has designated climate protection zones where only renewable heating systems or district heating may be used in new buildings. Vorarlberg has been a particularly progressive federal state that combines renewable energy incentives with architectural and energy efficiency standards.

The decentralized approach allows tailored regional strategies that reflect local conditions (e.g. climate, grid access, biomass availability). However, it also leads to inconsistencies in access and complexity for households and businesses that operate across province borders. Austrian stakeholders have called for better coordination between federal and provincial levels.

4. Renewable Energy Expansion Act (Erneuerbaren-Ausbau-Gesetz, EAG)

The EAG (BGBl, 2021) is the central instrument for promoting the expansion of renewable energies in Austria. It regulates financial support for plants that generate electricity from renewable sources such as hydropower, wind power, solar energy and biomass. For buildings, investment subsidies for renewable systems including PV, storage, and district heating infrastructure are relevant. Additionally, the EAG supports the formation of Renewable Energy Communities (RECs) that allow local production and sharing of energy, including for heating (e.g., via solar thermal microgrids or bioheat cooperatives) (Forvis-Mazars, 2022). The support for decentralized energy systems is progressive, but bureaucratic hurdles and regulatory uncertainties have slowed the emergence of RECs in the heating sector.

5. Overall Evaluation

Austria has established a multi-level governance system for promoting renewable heating and cooling, combining legislative bans (e.g. EWG), subsidies and modernization grants and federal-provincial coordination. While these efforts are commendable, critical challenges remain. The exclusion of existing buildings from mandatory fossil fuel phase-out delays deep decarbonization. Furthermore, regional variations in incentive programs can hinder clarity and accessibility. Continued coordination and simplification of regulatory instruments therefore will be essential for a just and effective energy transition.

4 Summary

Central to the discussion is the EU's commitment to climate neutrality by 2050, as outlined in the European Green Deal and the Fit-for-55 legislative package, which aims to reduce greenhouse gas emissions by 55% by 2030 compared to 1990 levels. This package introduces several interlinked regulations and directives that target emissions reductions in sectors not covered by the main Emissions Trading System (ETS), such as buildings and transport.

A pivotal element of the EU's strategy is the Effort Sharing Regulation (ESR), which assigns binding national emission reduction targets for non-ETS sectors. Austria, for example, is required to reduce emissions in these sectors by 48% by 2030 compared to 2005 levels. To enhance effectiveness, a new emissions trading system – ETS2 – will be implemented in 2027, targeting fuel combustion in buildings and road transport. Unlike the existing ETS, this system will apply an upstream approach, regulating fuel suppliers rather than end-users, and is expected to drive investment in building renovations and cleaner mobility options.

Recognizing the potential social burden of higher fossil fuel prices under ETS2, the EU has created the Social Climate Fund. This fund aims to support vulnerable households and transport users by financing national Social

Climate Plans. Austria is eligible for approximately € 580 million, though Member States must co-finance a portion of their plans. These efforts reflect a broader push to ensure that the green transition is both equitable and inclusive.

Energy efficiency is another cornerstone of the EU’s legal framework, as reflected in the revised Energy Efficiency Directive. It strengthens the principle of ‘energy efficiency first’ and sets ambitious energy savings targets. Member States are required to implement detailed planning and monitoring mechanisms, particularly in the heating and cooling sector. Specific measures include accurate metering and billing, obligations to assess district heating systems, and support for vulnerable consumers through dedicated financing instruments.

Complementing these efforts is the Energy Performance of Buildings Directive, which envisions a fully decarbonized building stock by 2050. It introduces tools such as Zero Emission Buildings, Minimum Energy Performance Standards, and Building Renovation Passports. Member States must establish national renovation plans and targets, prioritizing the worst-performing buildings and addressing energy poverty through financial and technical support.

The Renewable Energy Directive further supports this transformation by mandating annual increases in the share of renewables used in heating and cooling, promoting the use of waste heat, and requiring modernization of district heating infrastructure. It emphasizes consumer empowerment and the development of energy communities, while also ensuring the sustainability of biomass and other renewable fuels.

Austria’s national framework reflects these EU ambitions but also highlights some challenges. The Renewable Heat Act, which bans new fossil fuel heating systems in newly constructed buildings, represents a significant step forward but has been criticized for excluding existing buildings. To encourage the voluntary replacement of fossil-based systems, Austria has launched a robust subsidy program that covers up to 100% of costs for low-income households. Additionally, Austria’s nine federal provinces offer supplementary programs tailored to regional needs, though the decentralized approach has led to inconsistencies and administrative complexity.

Further support comes through the Renewable Energy Expansion Act, which promotes decentralized energy systems and community-based initiatives. Despite the progressive intent, implementation has been hindered by bureaucratic and regulatory obstacles. Overall, while Austria has made notable progress in aligning with EU climate goals, significant gaps remain, particularly in addressing the existing building stock and streamlining governance across federal and regional levels.

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