



Role of complementary measures



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Complementary measures are essential to the success of ETS2, both in reducing emissions and ensuring a socially acceptable ETS2 price. Both the buildings and road transport sectors are distant from their necessary decarbonisation trajectories.

Fuel used in buildings and road transport is the cause of almost 40% of the EU's carbon dioxide pollution. The building sector accounted for 34% of total EU energy-related emissions in 2022 and is more than 40% off track for meeting key decarbonisation indicators, while road transport remains the EU's largest transport emitter, with emissions projected to peak at nearly 800 million tonnes of CO₂ in 2025.

Carbon pricing alone cannot deliver the rapid emissions reductions required in the buildings and road transport sectors. Structural barriers such as low price elasticity, limited investment capacity among vulnerable households, and a shortage of skilled workers limit the carbon price's ability to stimulate the necessary decarbonisation. Without complementary action, ETS2 risks being both less effective and socially regressive. A coherent and proactive policy mix is required to unlock the full decarbonisation potential, mitigate ETS2 price volatility, and ensure a just transition. It is therefore the responsibility of member states to put complementary policies in place as soon as possible, before ETS2 takes effect.

Building

The EU aims to cut emissions by 92% in the building sector by 2040. Yet, if effectively implemented, current policies are only expected to deliver a reduction of around 53%, ranging to 62% in the most optimistic outlook. Today, nearly 75% of the EU's building stock is energy inefficient, and with renovation occurring at a rate of around 1% per year, full decarbonisation of buildings would take centuries without significant intervention. Closing this gap requires full implementation of the EU's key legislative frameworks, particularly the Energy Performance of Buildings Directive (EPBD), Renewable Energy Directive (RED), and Energy Efficiency Directive (EED). These regulations set the foundation for a comprehensive transformation of the sector and are critical to keeping ETS2 price impacts manageable.

The 2024 revision of the EPBD has introduced several key measures to decarbonise the sector. It mandates a gradual phase-out of fossil fuel boilers, starting with a ban on

subsidies for stand-alone fossil heating systems from 2025, and introduces Minimum Energy Performance Standards (MEPS) for the worst-performing buildings. Member states have until May 2026 to transpose the provisions of the updated EPBD and successful implementation will be crucial.

The 2023 revision of the EED now includes higher annual energy savings obligations, rising to 1.9% from 2028, and a binding 3% annual renovation target for public buildings. But even with these stronger legislative tools, member states are far off track. No member state currently meets the renovation rate required to achieve the 2030 and 2040 targets. A strong ETS2 carbon price signal will help to deploy energy saving measures in the building sector at an increased pace.

To deliver on climate goals while containing the ETS2 price, member states must focus on two critical areas that have the highest potential to reduce CO₂ emissions and mitigate the cost burden on households.

First, increasing the rate and depth of renovations is essential for improving energy efficiency. Research shows that if all residential buildings in the EU were renovated to targeted efficiency standards, 44% of the final energy used for heating could be saved. By substantially lowering overall energy demand, deep renovations directly reduce the need for fossil fuel heating, thereby cutting emissions and the associated costs from carbon pricing under ETS2. Particular emphasis must be placed on renovating the worst-performing buildings, as this is both a highly cost-effective and socially progressive measure, targeting support where it is most needed. Vulnerable households are often the most exposed to energy poverty and the least able to invest in upgrades themselves, requiring the total cost to be subsidised. Programmes like France's 'MaPrimeRénov', which covers up to 90% of costs for modest-income households, and Belgian city Ghent's 'Gent Knapt Op', offering renovation grants repayable only upon resale, show how well-designed financial schemes can help to remove upfront barriers and ensure fair access to energy improvements.

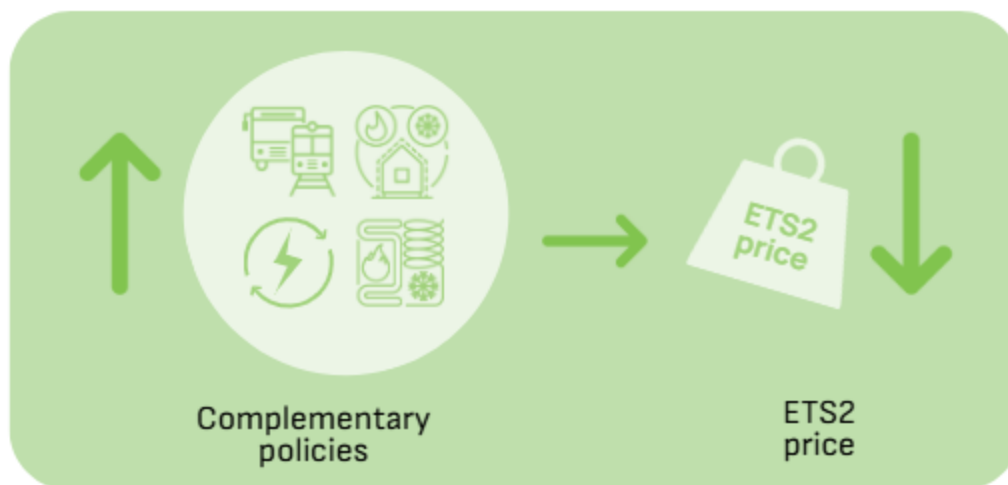
Second, accelerating the deployment of renewable heating systems, such as heat pumps and decarbonised district heating, is crucial. The REPowerEU plans to deploy 30 million heat pumps by 2030 compared to 2020, yet this ambition could be scaled up further. A recent EEB study shows that dedicating just one third of the SCF could subsidise the

installation of 20 million heat pumps by 2032, enough to reach 65% of EU energy-poor households and cut EU gas demand by 11%, nearly as much as was imported from Russia in 2024.

However, as this would still leave many households uncovered, tapping into broader ETS2 revenues would help to close the gap. Transitioning to zero-emission buildings will require stricter rules for new construction and retrofits, alongside a clear strategy for reaching renewable heating and cooling targets.

Replacing fossil-fuel-based heating and cooling with clean alternatives can effectively eliminate the emissions priced by ETS2, shielding households from rising fuel costs. However, this shift must also account for social and technical realities. Around 15% of EU citizens live in poorly insulated homes, and many of these buildings cannot support clean heating systems like heat pumps due to their high energy demand. In these cases, electrification without renovation risks being wasteful and regressive. That's why renewable heating deployment must go hand-in-hand with targeted housing upgrades. Energy communities also represent a great opportunity in this regard: they can provide access to clean electricity for neighbourhoods, benefit from economies of scale, facilitate collective renovation projects, and often include dedicated support for vulnerable households. Here again, EU legislation plays a role: the EPBD requires consideration of vulnerable groups in renovation requirements and promotes their access to funding, while the EED mandates member states to identify and prioritise vulnerable consumers in energy efficiency programmes.

Figure 8. The stronger the complementary policies, the lower the ETS2 price



Going further, binding fossil fuel phase-out plans in national renovation strategies in the next EPBD revision cycle, coupled with stringent MEPS for residential buildings, would secure long-term progress towards decarbonisation. With only 6% of EU households using heat pumps in 2021, additional measures are needed. Heat pump subsidies could be deployed in many forms, such as a support mechanism like the ‘Heat Pump Grant System’ in Ireland, or government-backed heat pump leasing schemes that lower upfront costs, particularly in early-stage markets, and offer flexible packages that cover maintenance options to make clean heating more accessible.

To unlock greater renovation rates, the tenant-landlord split must also be addressed. Legal frameworks enabling cost-sharing, fiscal incentives for landlords, and safeguards against eviction or energy disconnection post-renovation can provide a fair foundation for upgrading the housing stock. For example, Germany has introduced a scheme that covers rental increases linked to renovation costs for tenants receiving basic income support, paying landlords directly via existing welfare channels. In parallel, member states must address less visible but significant drivers of building emissions, like growing floor area and underused buildings. Repurposing existing buildings, curbing floor area growth and promoting more effective use of existing stock are critical strategies, given the slow pace at which the existing stock can be decarbonised.

Together, these measures can significantly cut building-sector emissions, contain ETS2 price impacts, and deliver real, lasting improvements in people's lives – warmer homes, cleaner heating, and lower energy bills.

Road transport

Road transport accounts for almost all greenhouse gas (GHG) emissions from domestic transport, and is a growing emitter. Current projections forecast the decrease in transport emissions by 2050 at only 22%, far behind current ambitions of 90%. The sector's transformation requires a robust policy framework, including upgrading the existing transport system, shifting transport activity to lower emission modes, and avoiding unnecessary journeys.

Large-scale electrification of road transport is identified as the fundamental factor for decarbonising domestic transport, reducing GHG emissions through a direct shift from fossil fuels to electricity.

The most impactful policy is the current 2023 CO₂ regulation for cars and vans, which mandates a 100% emissions reduction for new models by 2035. This single regulation is expected to reduce transport emissions by 57% in 2040 compared to 2015. For Heavy Duty Vehicles (HDVs), the emission standards provisionally agreed for 2030, 2035, and 2040 are equally critical. Future revisions should further tighten these post-2030 standards to maintain a positive trajectory.

Accelerating the electric vehicle (EV) uptake in corporate fleets is another important lever. Corporate vehicles tend to have higher mileage and turnover rates, making them ideal for early electrification. According to Transport and Environment, company fleets account for six out of ten new cars sold every year and over 73% of new-car emissions. Modelling indicates that achieving 50% EV sales in corporate fleets by 2027 and 100% by 2030 would significantly boost overall EV adoption and help reduce emissions covered by ETS2. Moreover, electrified corporate fleets would increase the number of used EVs on the second-hand market, improving access for lower-income households.

Despite these measures, internal combustion engine (ICE) vehicles will remain on the road for decades, making e-retrofits and scrappage schemes essential given that 73 million ICE vehicles are projected to remain in circulation by 2050. These tools offer affordable and

rapid emissions cuts for low-income households, especially in Eastern Europe. Policies to reduce the residual value of ICE vehicles such as zero-emission zones, congestion charges, higher parking fees, export restrictions, and ICE sales bans can further support this transition, but policymakers must be aware of the risks they pose towards social inclusion and address this proactively.

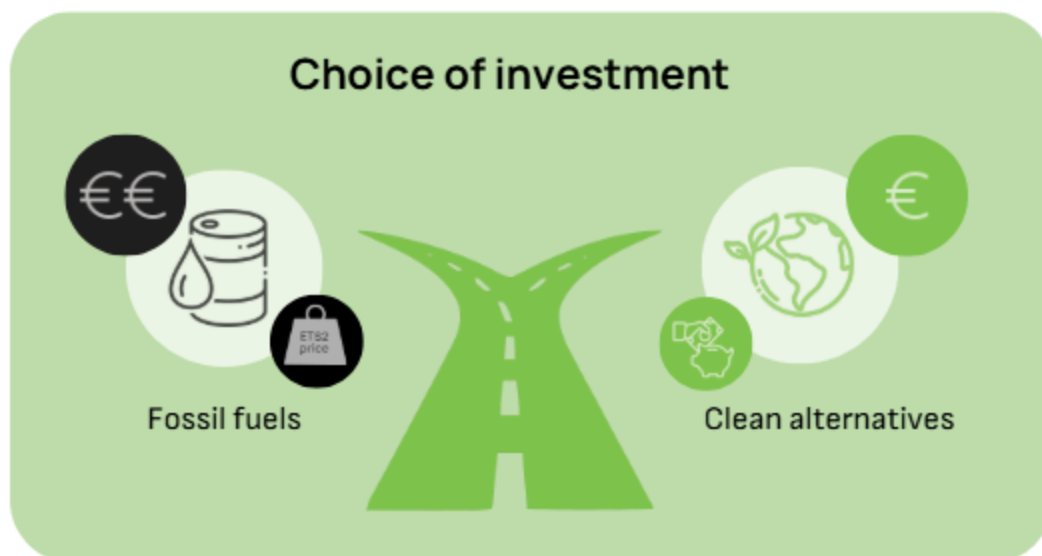
At the same time, the electrification of transport must be backed by major infrastructure expansion, including charging stations and grid development. Thus, to complement electrification, energy efficiency targets for EVs should be introduced. While EVs don't emit, they will use a lot of electricity, and there are currently no rules on how efficient they must be. Introducing energy efficiency standards as well as demand-determined flexible pricing for EV charging, will ease pressure on the electricity grid, lower energy costs, and support smoother decarbonisation.

Equally important are demand-side measures to limit overall road traffic. This involves stopping new road construction, promoting modal shifts to zero-emission public transport, active mobility (walking, cycling), and rail for longer distances, and increasing car occupancy (e.g., carpooling). Shifting just 5% of car trips to public transport throughout the EU could reduce oil demand by around 7.9 million tonnes, equivalent to 25 million tonnes of CO₂. According to the ESABCC, previous attempts to promote public transportation at the member state level lacked ambition and consistent implementation. To drive meaningful change, member states should prioritise strategic infrastructure investment such as upgrading rail and public transport networks. Urban planning can increase the livability of cities, reduce car dependency, and reallocate space for walking, cycling, and green areas.

Promoting shared mobility, on-demand services, and fair pricing or free transport passes for low income groups will ensure a just transition that benefits all citizens. Luxembourg offers a good example by choosing in 2020 to make all public transport free. The policy cut road transport CO₂ emissions by about 8.3%, with car use falling by roughly 6.8% and public transport use rising by around 38%. By removing fares, Luxembourg has not only cut fuel consumption and associated emissions, but also promoted fairer access to mobility and better quality of life with less traffic congestion and air pollution.

Addressing transport poverty requires tackling both the affordability of EVs and ensuring access to sustainable mobility. Social leasing schemes can help make EVs accessible by removing the upfront cost barriers. New targeted financial tools should also be examined to support low-income households and small and medium-sized enterprises in accessing greener mobility, with support tailored to location and needs. For example, some programmes chose to target rural low-income households. A just transition also depends on better urban and regional planning.

Figure 9. The ETS2 price signal makes clean alternatives more economically attractive



Shifting the focus from mobility to accessibility – by promoting shorter trips, and less car dependency – can deliver both climate and social benefits. Expanding public transport, cycling, and shared mobility options, especially in rural or urban areas underserved by access and availability, will improve quality of life and ensure that no one is left behind in the shift to cleaner transport.

It's vital to develop measures to avoid distorting the ETS2 price signal. Within the road transport sector, ETS2 also provides a levelling effect, as EVs are already exposed to the ETS1 price signal via electricity, whereas ICE vehicles will only now face a carbon price with

ETS2. The goal must be to make cleaner options cheaper than polluting ones. Yet fossil fuel subsidies and misaligned energy prices continue to work in the opposite direction.

Price signal

In 2023, EU fossil fuel subsidies reached €111 billion, with over 60% concentrated in Germany, Poland, and France, the largest buildings and road transport emitters. Actions in these countries are pivotal to stabilising the ETS2 price. Almost half of these subsidies have no planned end date, and many measures resulting from the energy price crisis of 2022 – sparked by Russia’s invasion of Ukraine – remain in place despite falling fossil fuel prices. Equally damaging is the imbalance in how energies are taxed. In most member states, households pay more than twice as much for electricity as for fossil gas. This distortion stems largely from levies to fund the energy transition being loaded into electricity bills, while fossil gas production remains lightly taxed. Electricity prices are also inflated by Europe’s continued dependence on fossil fuels, which exposes consumers to volatile global fuel markets. In Belgium, electricity is nearly six times more expensive per unit of energy than gas, and in countries like Germany or Denmark, taxes and levies on electricity are more than €0.14/kWh higher than on gas. Such price structures discourage the shift to electric systems, undermining decarbonisation efforts. Once renewable energy systems are scaled up, together with storage and demand-side response, electricity prices will decline, making electrification both clean and affordable.

Member states can reinforce the ETS2 price signal and make it less regressive by removing harmful subsidies, taxing windfall fossil fuel profits, applying progressive levies on high-emission sectors, and ensuring fair contributions from the wealthiest. Revenues should be channelled into protecting vulnerable households and accelerating clean energy investment.

Publishing information

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