# Assessment of support measures, policies and investments contributing to the decarbonisation in ETS2 sectors

November 12th 2025

# Housekeeping

- Please change your names in Webex to include your full name and organisation.
- If you have questions throughout, please put them into the chat and we will answer them during the Q&A section.
- We will only answer questions relevant to the measures in the study. This webinar will not focus on broader issues surrounding ETS2.
- We will aim to answer all relevant questions (time depending).

# Agenda

| Timing | Topic | Speaker |
|---|---|---|
| 14:00 – 14:05 | Welcome by the Commission – Introduction and context of the study | Mette Quinn (DG Climate Action) |
| 14:05 – 14:15 | Initial presentation with methodology, selection of measures, purpose, stakeholder involvement | Henry Groenen (Ricardo) |
| 14:15 – 15:50 | Sectoral discussions on measures for Road Transport | Florian Hacker (Oeko) and Aleix Pons (Ricardo) |
| 14:50 – 15:25 | Sectoral discussions on measures for Buildings | Tanja Kenkmann (Oeko) |
| 15:25 – 15:50 | Sectoral discussions on measures for Small emitters | Fabio Serpi (Ricardo) |
| 15:50 – 16:00 | Conclusive remarks | Mette Quinn (DG Climate Action) |

# Objectives

- The overall objective of the study relates to the assessment of supporting measures for decarbonisation in the sectors covered by ETS2, namely: road transportation, buildings, and a range of industries not covered by the ETS1.

- The focus is on measures which are **scalable, reproducible across other EU MSs,** potential to have a **short-term impact (3-5 years)** and are **sufficiently cost-effective**.

- These measures address **challenges and barriers and support strategic opportunities** to deliver energy and/or carbon savings in line with the ETS2 and effort sharing legislation.

- The study builds on national and EU experience with green measures to support the transition.

- Expands on the list of measures supported through the SCF by supporting a wider range of stakeholders, including **middle income** households.

- Identified measures support rapid decarbonisation including support for electrification of private transport, building renovation and incentives for energy efficiency investment.

# Methodological Overview

| STEP 1 | STEP 2 | STEP 3 | STEP 4 | STEP 5 |
|---|---|---|---|---|
| Identification of barriers and challenges in each sector/investment environment | Identification of supporting measures from cross-EU desk-based sources | In-depth review of the prioritised measures | Assessment of the prioritised measures for best practices | Identification of good practices for implementing support measures |

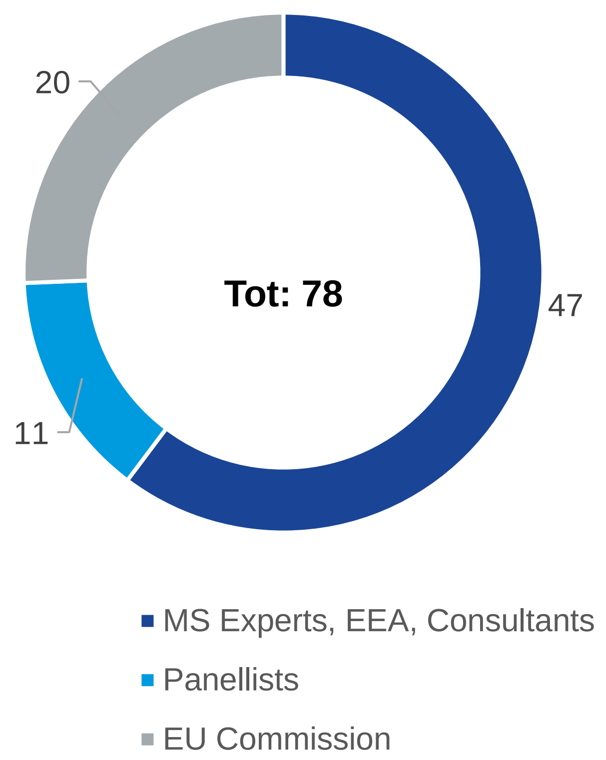
# Output

⇒ A concrete toolbox for Member States’ use …

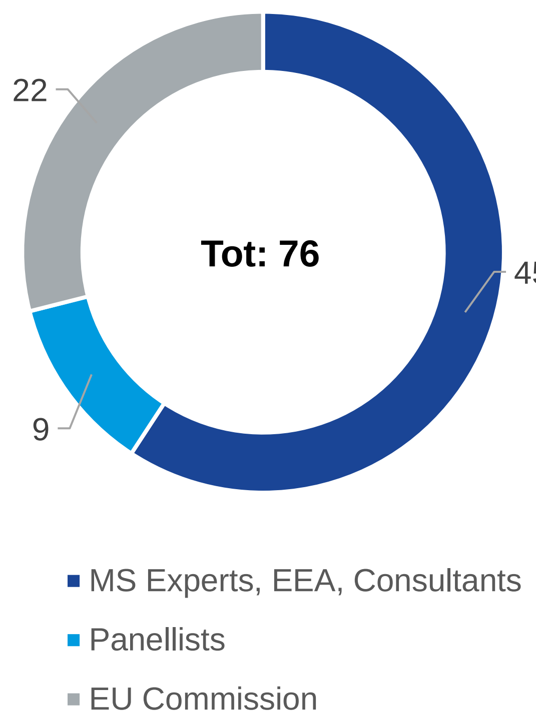
- Set of 21 ***ready-to-use***, short term, **high impact** measures
- **Tested and tried** in Member States across the EU
- **Widely consulted** with over 150 sectoral experts
- Delivering “**quick win” decarbonisation** in road transport, heating for buildings and industry
- Benefitting both **middle- and lower-income groups**

# 6th May Stakeholder webinar attendance

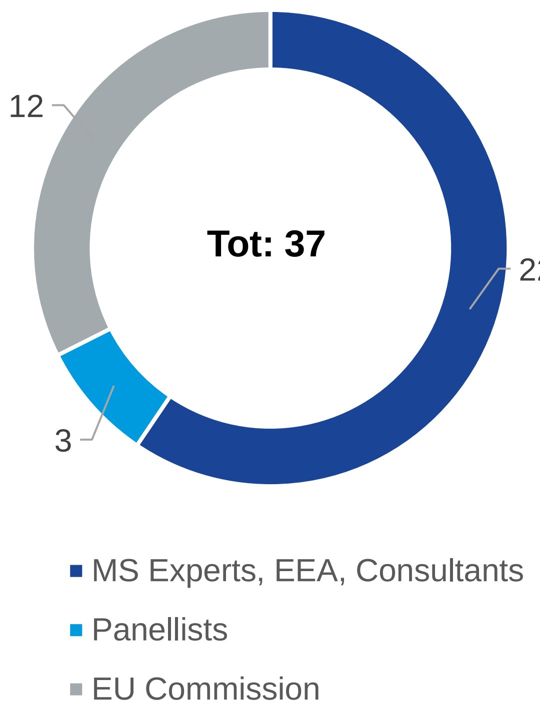
## Road transport




## Buildings




## Industry



# Road Transport: Overview of measures

| Measure | Addressed field of action | Addressed barriers |
|---|---|---|
| **Emission based taxes and tolls (bonus-malus). Tax advantages for ZEV and malus for ICEV** | Promote uptake of ZEVs | Financial barriers |
| **CO2-based tax deductibility for company cars** | Promote uptake of ZEVs | Financial barriers |
| **Price transparency for public charging** | Promote uptake of ZEVs | Informational barriers |
| **Reduced and simplified ticket pricing for public transport** | Promote modal shift | Financial barriers |
| **On-demand transport (ODT)** | Promote modal shift | Structural barriers |
| **Urban transport planning towards modal shift – Superblock Model** | Promote modal shift | Structural barriers |
| **Financial incentives for charging infrastructure for heavy-duty vehicles, including grid connection** | Promote uptake of ZEVs | Financial barriers |
| **Streamlining and harmonising administrative processes for grid connections public & private charging** | Promote uptake of ZEVs | Regulatory barriers |
| **Eurovignette – Truck tolling in favour of ZE HDVs** | Promote uptake of ZEVs | Financial barriers |

# Road Transport: Personal transport and modal shift

| Name | Emission based taxes and tolls (bonus-malus). Tax advantages for ZEV and malus for ICEV |
|---|---|
| **Description** | • **Increases acquisition cost of ICEVs**, while **reducing the financial burden for ZEVs through the introduction of $CO_2$-based charges**.<br>• Targets private and business customers purchasing and registering new vehicles.<br>• A CO2-based vehicle registration tax can be combined with a premium for zero-emission vehicles in order to implement a bonus-malus or 'feebates' system. |
| **Geographical Scope** | FR, NL, AT, DK, SE, BE, NO |
| **Rationale** | Bonus-malus schemes shift total cost of ownership in favour of ZEVs without burdening public budgets.<br>**Webinar feedback:** very important measure to incentivise ZEV uptake. |

# Road Transport: Personal transport and modal shift

| Name | CO2-based tax deductibility for company cars |
|---|---|
| Description | • Targets companies with commercially registered vehicles by **linking tax incentives to vehicle emissions**.<br>• Companies can claim higher depreciation for zero-emission vehicles (ZEVs), reducing taxable profits and thus lowering corporate or income tax. |
| Geographical Scope | BE |
| Rationale | **Encourages ZEV adoption by increasing deductibility** and phasing out ICEV deductibility. |

| Name | Price transparency for public charging |
|---|---|
| Description | • Targets charging point operators (CPOs) and mobility service providers (MSPs) to **ensure fair competition and transparent pricing in public charging**.<br>• Lack of transparency in ad-hoc charging prices remains the **key barrier to effective market competition**.<br>• In Germany, a national online service providing information on ad-hoc charging fees will be established in 2026. |
| Geographical Scope | EU, DE |
| Rationale | Increase in price transparency enhances competitions and ensures fair access, incentivising adoption of ZEV. |



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# Road Transport: Personal transport and modal shift

| **Name** | **Reduced and simplified ticket pricing for public transport** |
|---|---|
| **Description** | • KlimaTicket Ö, launched in Austria in 2021, is a nationwide, affordable public transport pass **covering rail transport nationwide**.<br>• It is backed by significant government investment in transport infrastructure and offers special pricing for specific groups.<br><br>• In the Netherlands, the OV-chipkaart has provided a **unified national fare system used by all major public transport operators on the Dutch mainland** since 2010. |
| **Geographical Scope** | AT, NL |
| **Rationale** | Unified payment, travel tracking and integration of ticketing systems, with links to complementary transport modes, such as OV-fiets, a nationwide bike-sharing system.<br>Austria's Klimaticket Ö offers unlimited nationwide travel for about €3 per day, lowering financial barriers and integrating all transport modes into one pass.<br>**Webinar feedback:** important to increase the focus on modal shift. |


Credits: Travelling with the OV-chipkaart | Travel information | NS

# Road Transport: Personal transport and modal shift

| Name | On-demand transport (ODT) |
|---|---|
| Description | • **Provides flexible mobility services that adapt to real passenger needs**, improving accessibility rural or underserved areas.<br>• **Bridges the gap between taxis and conventional public transport** by offering pooled, flexible-route and door-to-door options, through ride-sharing and asset-sharing services such as bikes, cars, or e-scooters.<br>• Demand-response transport (DRT) serves diverse user groups including low-income households, seniors, people with disabilities, students, tourists, and rural residents. |
| Geographical Scope | BE, DE, IE, ES, NL |
| Rationale | **Addresses the structural limitations of traditional fixed-route services**, which performs poorly in low density areas.<br>**Webinar feedback:** important to increase the focus on modal shift. |

# Road Transport: Personal transport and modal shift

| **Name** | **Urban transport planning towards modal shift – Superblock Model** |
| --- | --- |
| **Description** | • Superblocks are urban planning tools that **restrict car traffic in designated areas to prioritise public transport, cycling, and walking**.<br>• By reallocating space from cars to sustainable modes and community use, they reduce emissions, improve air quality, and enhance liveability. Implemented in cities like **Barcelona, Vienna, and Berlin**<br>• They limit vehicle access, remove parking, and improve public transport access.<br>• Their success depends on strong planning, public engagement, and integration with transport networks. |
| **Geographical Scope** | ES, AT, DE |
| **Rationale** | Addresses car-dominated urban design by reallocating space and **encouraging modal shift to sustainable transport**.<br><br>**Webinar feedback:** important to increase the focus on modal shift. |

Credits: [Barcelona's Superblocks and Green Axes]

# Road Transport: Freight transport

| Name | Financial incentives for charging infrastructure for heavy-duty vehicles, including grid connection |
|---|---|
| Description | • Financial support for the installation of charging infrastructure for HDVs, including grid connection costs.<br>• France’s Advenir programme funds up to 50% of installation costs and grid connection for depot charging points.<br>• Spain’s MOVE III programme supports both public and private charging infrastructure, covering 20–50% of costs depending on company size and charger capacity. |
| Geographical Scope | FR, ES, DE, IT |
| Rationale | Reduces high upfront costs of depot and public charging infrastructure, especially grid connection, to accelerate fleet electrification and reduce investment risk |

| Name | Streamlining and harmonising administrative processes for grid connections public & private charging |
|---|---|
| Description | • Simplifies and speeds up permitting and connection procedures by setting clear timelines and reducing complexity.<br>• Fosters collaboration between energy and transport sectors, benefiting charging point operators, EV users, and private investors.<br>• They help accelerate EV charging roll-out, increase collaboration between key electricity network actors. |
| Geographical Scope | NL, UK |
| Rationale | Increasing transparency, providing guidance, centralising grid application support, and allowing independent providers to perform contestable works can streamline connections, reduce errors, and accelerate deployment. |

# Road Transport: Freight transport

| Name | Eurovignette – Truck tolling in favour of ZE HDVs |
|---|---|
| Description | • Reduced kilometre-based tolls for ZE HDVs compared to ICEVs, aiming to incentivize low-emission transport.<br>• Under the Eurovignette Directive, **ZE HDVs can be fully exempt from tolls until 31 December 2025** and receive a **50–75% discount on infrastructure charges thereafter**.<br>• ZE HDVs are not subject to external cost charges for $CO_2$ emissions, further increasing their cost advantage over ICEVs.<br>• Germany currently is the only country that applies the maximum possible discount for ZEVs. |
| Geographical Scope | DE, AT, BE, CZ, DK, EE, HU |
| Rationale | Reduces cost of ownership for electric trucks and increase costs for ICE trucks, incentivising fleet conversion. |


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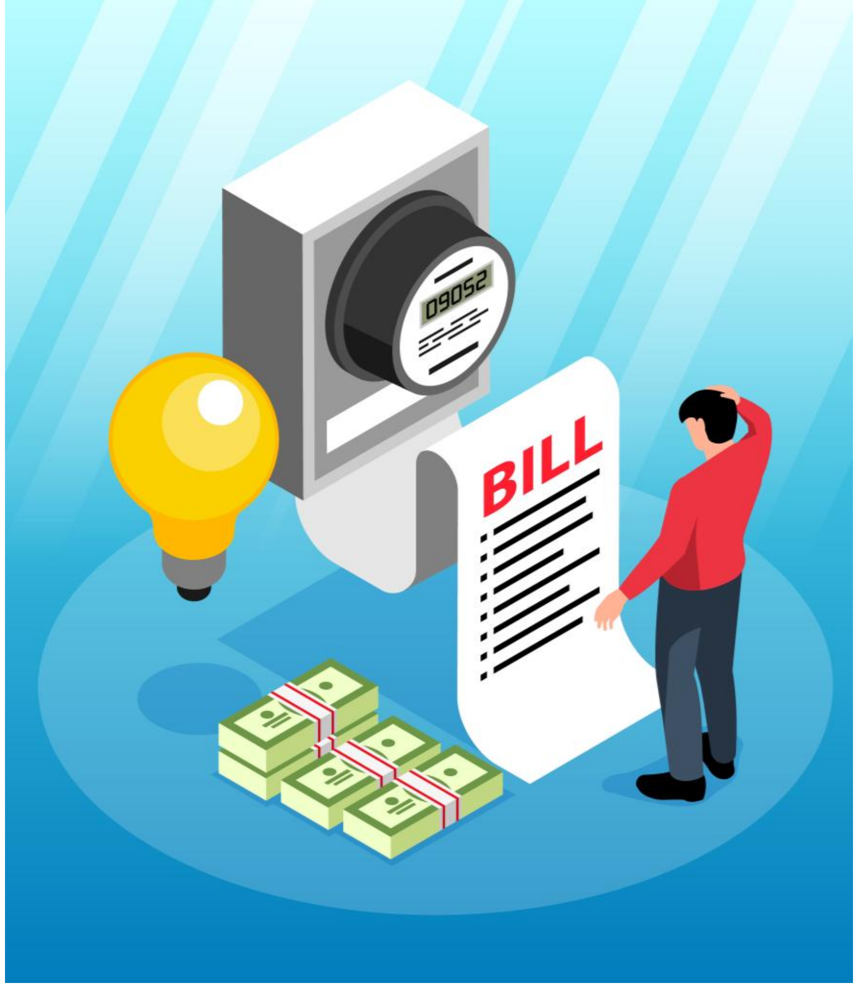
# Road Transport
# Questions and Answers

Type your questions in the chat and we'll do our best to answer.

# Buildings: Overview of measures

| Measure | Addressed field of action | Addressed barriers |
|---|---|---|
| **Acting to reduce electricity prices for specific technologies (e.g. heat pumps)** | Switch to low carbon heating | Financial barriers |
| **Information about heat pumps and tools** | Switch to low carbon heating | Informational barriers |
| **On-bill-financing schemes** | Energy demand reduction<br>Switch to low carbon heating | Financial barriers |
| **State guaranteed and interest-free loans for energy efficiency measures** | Energy demand reduction | Financial barriers |
| **Energy efficiency information programmes and tools** | Energy demand reduction<br>Switch to low carbon heating | Informational barriers |
| **Financing support for building renovation** | Energy demand reduction<br>Switch to low carbon heating | Financial barriers |
| **Tax deductions for energy efficiency renovations and renewable heating systems / VAT reductions** | Energy demand reduction<br>Switch to low carbon heating | Financial barriers |

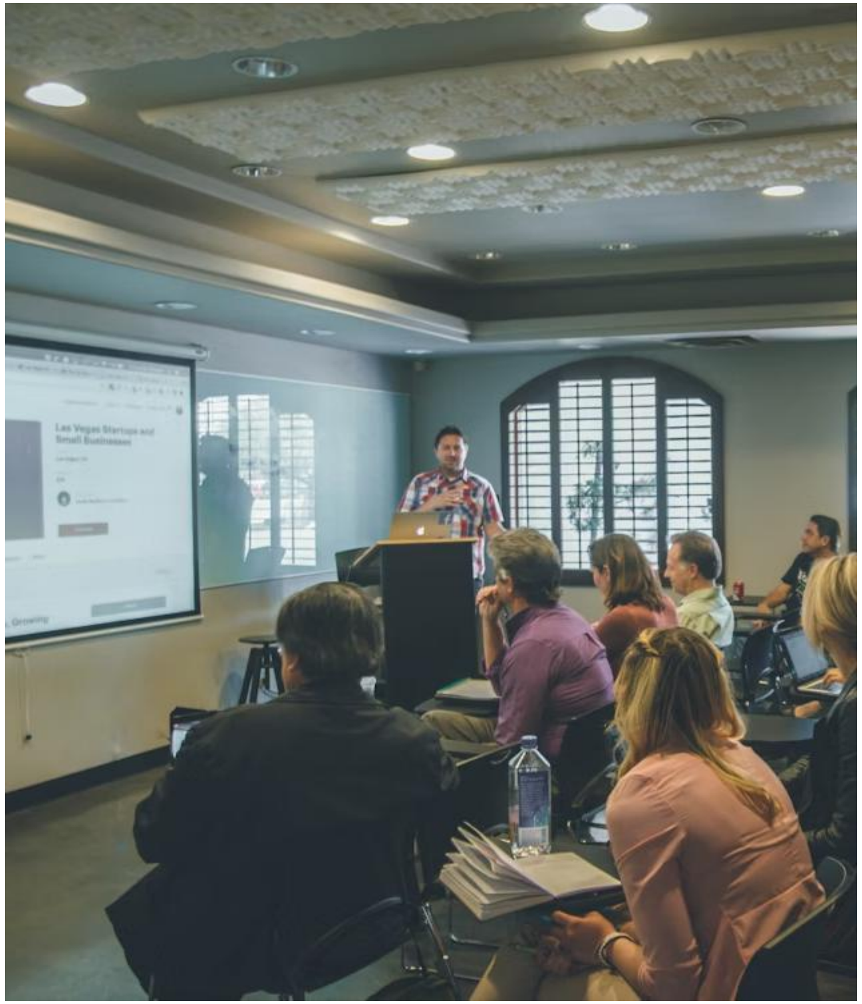
# Buildings: Renewable-based and renewable-ready heating technologies




| Name | Acting to reduce electricity prices for specific technologies (e.g., heat pumps) |
|---|---|
| Description | • **Reduced VAT or energy taxes** on electricity used by heat pumps, as allowed under the Energy Taxation Directive, and **flexible, regulated tariffs** designed specifically for heat pump use, supported by standards and regulations to incentivise adoption. |
| Geographical Scope | BE, GR, IE, LU, CR, MT, ES, HR, IT, FI, DE |
| Rationale | • Reduces running costs of heat pumps, making heat pumps more financially attractive and encouraging a shift from fossil-based heating systems.<br>• **Webinar feedback:** Be specific about how prices will be lowered and whether this is technology specific, ideally electricity prices should be lowered with respect to gas. |

# Buildings: Renewable-based and renewable-ready heating technologies

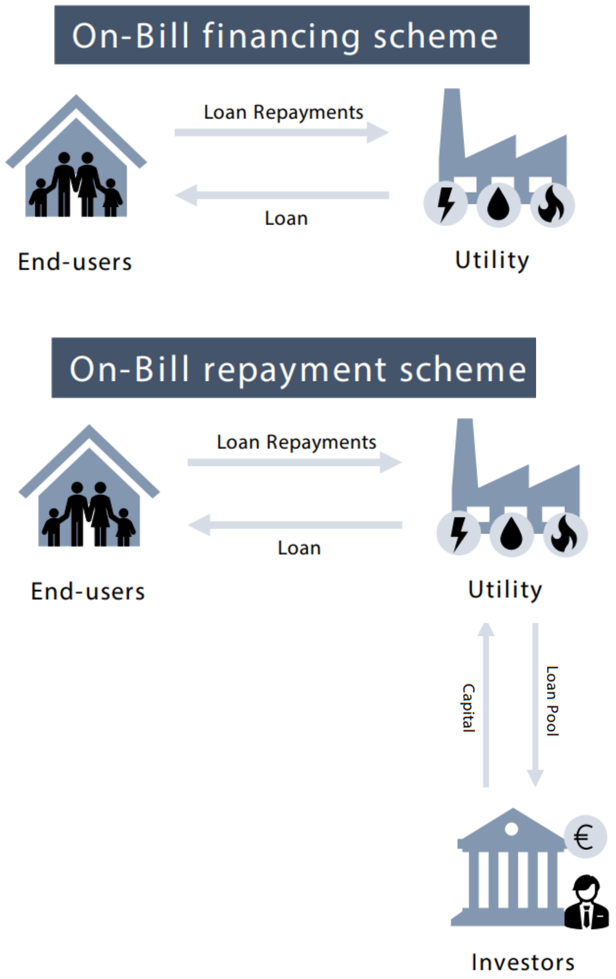
| Name | Information about heat pumps and tools |
|---|---|
| **Description** | • **Targeted information campaigns** to increase building owners' knowledge and acceptance of heat pumps.<br>• Strategies include online videos and tools, print materials, events, workshops, and advisory services. |
| **Geographical Scope** | LU, PL, IT, FR, SE, DE |
| **Rationale** | Information campaigns improve building owners' understanding of heat pumps, **dispel myths about their performance** (especially in cold climates), and **clarify building suitability, system requirements, and potential cost savings**.<br><br>Best practices, online tools, and guidance on system integration with low-temperature heating, solar, or storage, increase confidence, support informed decisions, and help overcome barriers related to poor reputation and lack of knowledge. |



Credits: unsplash.com

# Buildings: Energy demand

| Name | On-bill financing |
|---|---|
| **Description** | • On-bill financing enables homeowners or tenants **to implement energy efficiency or renewable energy renovations without upfront costs**, **repaying the investment through their regular energy bills**, with energy savings ideally offsetting all or part of the payments.<br><br>• Schemes can be utility-funded (On-Bill Financing, OBF) or involve third-party lenders such as banks or public funds (On-Bill Repayment, OBR), and repayment can be structured as loans tied to the customer or tariffs tied to the meter or property.<br><br>• **Utilities typically collect repayments through existing billing systems**, and the design of schemes needs to be adaptive, reflecting the regulatory context, characteristics of the country, and the specific needs of target groups, as encouraged by the recast EPBD. |
| **Geographical Scope** | FR, IT, NL, ES, LT |
| **Rationale** | On-bill financing reduces upfront costs and mitigates long payback periods by allowing repayments through energy bills, often offset by savings, and linking obligations to the property rather than the individual. This makes energy efficiency renovations, such as heat pumps or insulation, more accessible and attractive. |




Credits: On-bill schemes |

# Buildings: Energy demand

| Name | State guaranteed and interest-free loans for energy efficiency measures |
|---|---|
| **Description** | • Guaranteed and interest-free loans help households and businesses overcome financial barriers to energy efficiency investments by reducing borrowing costs and providing protection against default.<br>• Programmes support renovations such as insulation, ventilation, and high-performance heating systems. |
| **Geographical Scope** | BE, SI |
| **Rationale** | Government guarantees reduce the perceived risk for lenders and make loans more accessible to households with lower budgets or older homeowners who would otherwise not qualify. **Webinar:** A good measure, but loan options should be made clear for consumers and individuals – attention needed on implementation within condominiums. |
| **Name** | **Energy efficiency information programmes & tools** |
| **Description** | • Addresses lack of awareness through various information tools and media like consultations, TV, print, social media, and online platforms to educate and motivate action.<br>• Other tools such as energy performance certificates and renovation passports help visualize energy use and guide improvements. |
| **Geographical Scope** | LV, CZ, SI, FR, DE |
| **Rationale** | • These programmes aim to inform, motivate, and guide stakeholders toward energy-saving renovations by offering accessible, tailored, and often free information and advice, making energy efficiency more accessible to older homeowners. |

# Renewable-Based & Renewable-Ready heating technologies & Energy Demand

| Name of Measure | Financing support for building renovation |
| --- | --- |
| **Description** | • National programmes offering grants and soft loans to support energy-efficient renovations in residential and public buildings. Examples include Estonia's support for full apartment building reconstructions and heating upgrades; France's MaPrimeRénov' for decarbonisation and major renovations; and Slovenia's Eco-Fund targeting vulnerable households. |
| **Scope** | EE, AT, FR, DE, SI |
| **Rationale** | • Reduces upfront costs of renovations, making them accessible to more households; targeted support addresses energy poverty. **Webinar feedback:** Tax deductions are better for middle-income households while direct grants and subsidies for lower income households. |


| Name | Tax deductions for energy efficiency renovations and renewable heating systems / VAT reductions |
| --- | --- |
| **Description** | • National tax incentive schemes that reduce the cost of energy efficiency renovations through VAT reductions, income tax deductions, or tax credits. |
| **Geographical Scope** | AT, BE, BG, CY, CZ, DE, EE, EL, FI, FR, IR, IT, LT, LU, LV, NL, PL, PT, RO, SI |
| **Rationale** | • Reduced VAT, and/or relief on other tax via a tax credit for energy efficiency measures offsets the high cost, reducing the financial burden on households.<br>• **Webinar feedback:** Caution required to ensure benefits do not go to the installer |

# Additional promising measures for the building sector

| Name | Leasing of Heat Pumps |
|---|---|
| **Description** | • Incentivises the adoption of heat pumps by removing the initial financial burden for the consumers and allowing the installation costs to be spread over time. The leasing contract is flexible, adapting to customer preferences. |
| **Geographical Scope** | N/A |
| **Rationale** | Heat pumps can be expensive and this allows lower income households to implement heat pumps and payback gradually**. Webinar feedback –** This measure has a lot of potential |
| **Name** | **Carbon Dioxide Sharing Act** |
| **Description** | • Implemented in Germany in 2023, this mechanism allocates the additional heating and hot water costs from carbon pricing on fossil fuels between landlords and tenants based on building energy efficiency.<br>• For inefficient buildings, a larger share of carbon costs falls on landlords to encourage renovations, while for efficient buildings, a larger share is assigned to tenants to promote energy-saving behaviour. |
| **Geographical Scope** | DE |
| **Rationale** | The measure addresses split incentives between tenants and landlords.<br>**Webinar feedback:** Minimum energy performance standards for worst performing buildings in rental sector should be considered |

# Buildings
# Questions and Answers

Type your questions in the chat and we'll do our best to answer.

# Industry: Overview of measures

| Measure | Addressed field of action | Addressed barriers |
|---|---|---|
| **Financing schemes supporting energy efficiency investments** | Support energy efficiency investment | Financial barriers |
| **Voluntary energy efficiency agreements** | Support energy efficiency investment | Financial barriers<br>Regulatory barriers |
| **Energy audits** | Support energy efficiency investment | Financial barriers<br>Informational barriers |
| **Provision of external support** | Support energy efficiency investment<br>Awareness raising | Informational barriers<br>Financial barriers |
| **National investment funds supporting R&I and demonstration projects** | Support low-carbon innovation | Financial barriers<br>Innovation barriers |

# Industry: Willingness

| Name | Financing schemes supporting energy efficiency investments |
| --- | --- |
| Description | • A wide range of national financial support programmes including **grants, tax credits, soft loans, and guarantees to incentivise energy efficiency investments**. These schemes target **SMEs and large companies across sectors**. |
| Geographical Scope | AT, FI, DE, IT, LV, HU, NL, PL, ES |
| Rationale | Reduces financial barriers to energy efficiency by covering investment costs through direct support or favourable financing conditions. |

| Name | Voluntary energy efficiency agreements |
| --- | --- |
| Description | • Voluntary agreements between governments and industries provide a flexible, non-regulatory framework for improving energy efficiency.<br>• Companies commit to tailored energy-saving measures, often supported by audits and incentives. In Belgium, large energy users must adopt energy management systems or ISO 50001, while SMEs receive targeted support. Finland's approach includes multiple sectors and municipalities, backed by subsidies. |
| Geographical Scope | BE, FI |
| Rationale | Incentives and co-defined goals encourage participation and ownership. These agreements drive innovation, lower emissions, and strengthen public-private collaboration. |



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# Industry: Feasibility

| Name | Energy Audits |
|---|---|
| Description | • National programmes offering subsidised or voluntary energy audits to SMEs and large companies. |
| Geographical Scope | AT, FI, IE |
| Rationale | • Audits raise awareness of energy use and identify opportunities for efficiency improvements, often paired with financial or technical support.<br>• Measures like this help provide enterprises and responsible authorities with a regular review of the energy performance of buildings, operating processes and industrial/commercial facilities. |


Credits: [Industrial Energy Audit]

| Name | Provision of external support |
|---|---|
| Description | A range of national programmes offering **technical assistance, training, and advisory services to businesses and professionals**. These **initiatives aim to build internal capacity**, **promote knowledge sharing** (through workshops or energy efficiency networks), and **support the implementation of energy-saving measures**. |
| Geographical Scope | AT, CY, FI, IE, SE, FR |
| Rationale | Such programmes providing training, audits, and expert advice **help overcome the lack of internal expertise and technical knowledge**.<br>**Webinar feedback:** external support may depend on national budget constraints, and language of support is still a relevant barrier. |

# Industry: Feasibility

| Name | National Investment Funds supporting R&I and demonstration projects |
| --- | --- |
| **Description** | • National programmes that fund research, development, and deployment of innovative decarbonisation technologies in industry.<br>• France 2030 targets hydrogen, biomass heat, electrification, and CCUS.<br>• Germany’s programme supports development and market launch of low-emission technologies. Ireland’s RD&D programme funds cross-sectoral energy research.<br>• The Netherlands’ DEI+ scheme supports industrial investments with long payback periods. These funds bridge the gap between innovation and market uptake.<br><br>National investment funds **complement EU-level funding instruments like Horizon Europe or the Innovation Fund** by supporting earlier-stage technologies, while EU funds focus on projects with European added value and higher technology readiness levels. |
| **Geographical Scope** | FR, DE, IE, NL |
| **Rationale** | • Targeted financial support programmes de-risk investments and accelerate technology deployment with flexibility to focus on early-stage innovation or near-market solutions.<br><br>• **Webinar feedback:** important to focus on supporting the deployment of mature technologies. |

# Industry
# Questions and Answers

Type your questions in the chat and we'll do our best to answer.

# Conclusions

When Member States look to implement measures, they can use this list as a guide to use as they see fit. This could include:

1. Replicating and implementing the measures in their own MS

2. Taking specific elements that can be adapted and used to improve existing measures within the MS

3. Using the measures as inspiration to create completely new measures for decarbonisation in ETS2 sectors.

It is beneficial for Member States to implement decarbonisation measures as soon as possible to have the largest impact on ETS2 decarbonisation

# Final remark

The full report was published in September and it is available here: New study provides toolbox for early decarbonisation in ETS2 sectors - Climate Action, or by scanning the QR code below: