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**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN  
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL  
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

**EU 'Save Energy'**

## 1. INTRODUCTION

Saving energy, i.e. reducing energy consumption through price signals, energy efficiency measures or voluntary efforts can often be the cheapest, safest and cleanest way to reduce our reliance on fossil fuel imports from Russia. Moreover, using less energy supports security of supply, facilitates storage requirements and underpins the clean energy transition.

Voluntarily reducing unnecessary energy consumption and fast-tracking energy efficiency measures will reduce the volume of gas and oil shortage in case of a disruption of flows from Russia. As such it is a critical element to stabilise markets and prevent further price volatility. Over the medium to long-term, energy savings would contribute to lower the prices of energy, help responding effectively to sudden price hikes and supply shortages.

Saving energy directly reduces our energy bills and makes our economy more resilient. High prices for fossil fuel-based energy already hurt households and all industrial sectors, from services to manufacturing and from agriculture to transport. For the energy poor, vulnerable households, micro, small and medium-sized enterprises and for energy intensive industries, they force uncomfortable choices about forgoing energy use. Higher energy prices also affect the relative competitiveness of firms with possible knock-on effects on employment and incomes.

Last year, as part of the ‘Fit for 55’ package and delivering on the European Green Deal, the Commission proposed an increase of the energy efficiency ambition by the end of this decade. While primarily framed to support the decarbonisation of the EU economy, the proposal also implied other substantial benefits such as higher energy security and lower GHG emissions, air pollution and natural resources depletion.

Implementation of the full “Fit for 55” package would lower our gas consumption by 30% (equivalent to 100 bcm) by 2030. More than one third of this would come from meeting the EU energy efficiency target put forward in the Energy Efficiency Directive (EED) recast proposal. The target would be delivered by the implementation of the relevant energy efficiency policy proposals such as the recast EED itself, the recast of the Energy Performance of Buildings Directive (EPBD), Ecodesign and Energy Labelling legislation, as well as other policy instruments with an impact on energy consumption such as the CO<sub>2</sub> emission standards for new vehicles, the EU Emission Trading System (ETS) and the proposed new ETS for buildings and road transport.

Implementing these policies would deliver a structural reduction in energy use. In the wake of the Russian invasion of Ukraine, those changes should now happen even faster to increase the EU’s resilience and energy independence at greater speed.

At the same time, significant energy savings driven by voluntary choices can be achieved relatively quickly. The latest IPCC report<sup>1</sup> highlights that changes to our lifestyles and behaviour can help significantly lower our energy consumption. Choosing to reduce heating temperatures, drive more economically and shift to more public transport and

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<sup>1</sup> IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change

active mobility, use household appliances and air-conditioning more efficiently and switch off the lights can deliver substantial, short-term savings<sup>2</sup>.

Therefore, this EU ‘Save Energy’ plan takes a two-pronged approach:

- (1) Achieving immediate energy savings through voluntary choices; and
- (2) Accelerating and strengthening structural, mid- to long-term energy efficiency measures.

Both approaches will need to be supported by an effective financial framework and governance structure.

## **2. ACHIEVING IMMEDIATE ENERGY SAVINGS THROUGH PERSONAL CHOICES**

In view of the current geopolitical and market situation, we cannot afford to wait until the important structural energy efficiency measures are in place. It is vital to look for immediate opportunities to reduce energy consumption while the current crisis endures. In the shorter term, most of those opportunities would come from voluntary choices, some of which could also last into the mid-to-long term if they lead to changes in habits.

These choices should primarily focus on where the greatest savings in gas and oil consumption can be achieved. Natural gas plays the largest role in heating, accounting for around 42% of energy used for space heating in the residential and household sectors. Oil is the next most important fossil fuel for heating accounting for 14% while coal accounts for around 3%. Fossil fuels use in transport represent 288 million tonnes of oil equivalent per year, or 93% of the transport sector energy needs. Air transport and shipping are almost entirely dependent on fossil fuels, while fossil fuels provide 93% of the energy use in road transport and 23% of the energy use in rail. Around 25% of passenger car activity takes place in the urban mobility environment.

Therefore, the key sectors for significant short-term savings are heating in households and services, and transport and mobility, with some additional short-term potential in industry sectors. Actions to immediately reduce gas consumption are particularly important as any savings that can be made early will help in refilling storage and thus reduce the supply risks over the winter season. At the same time, it is also important to save electricity as gas, oil and coal are also used for power generation. The main reductions in oil use are likely to be achievable by reducing private car use and air travel, as well as more efficient driving for trucks.

These choices can reduce energy demand that can help to reduce fossil fuel imports and avoid more serious shortages and consequently the imposition of curtailment measures with all their ensuing economic and social consequences.

Change is, of course, already driven by current high market prices as households and businesses seek out ways to curb the increase in their energy bills. Such market-driven savings, however, may fall short for various reasons. Actors may not be aware of the best

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<sup>2</sup> Analysis of behaviour change due to electricity crisis: Japanese household electricity consumer behaviour since the earthquake; Murakoshi et al, 2013. Can Rationing Affect Long Run Behavior? Evidence from Brazil; Costa, 2012. See also Policies for energy conservation and sufficiency: Review of existing policies and recommendations for new and effective policies in OECD countries: Bertoldi, 2022 (<https://doi.org/10.1016/j.enbuild.2022.112075>)

savings opportunities. Coordination may be necessary to achieve the best results. Fairness and solidarity are also not necessarily guaranteed: the wealthier may or may not adjust their behaviour. Others, especially the most vulnerable, may instead be forced to take painful measures. Finally, market prices will not necessarily lead to an appropriate effort from the point of view of the REPowerEU objectives.

The types of support actions that can be taken can therefore be divided into:

- **Information actions** – to ensure the different types of energy users understand the importance of reducing energy demand and know what they can do to contribute.
- **Incitement and supporting actions** –to help energy users in their efforts to reduce energy consumption, for example by offering rebates on the purchase of the most efficient appliances.

The key advantage of change driven by this sort of measures is that their impact on energy consumption is immediate, no (or very little) up-front investment is required, and only a small change of habit is needed, with no or a very limited impact on welfare as only those who want and can make such choices will do.

Such measures will mainly be voluntary and rely on goodwill, and on the effective communication to energy users of the most effective steps they can take. Since the main uses of gas and oil are relatively limited (primarily heating for gas and transport for oil) the messages can be relatively well targeted.

Delivering targeted information to citizens is crucial for them to make informed choices. The right messages need to be delivered at the right time. This is likely to mean a small number of broadly targeted measures underpinned by accessible information.

These actions need to be taken by trusted bodies that have a good understanding of local circumstances and are able to engage a broad section of the population in concrete action. Member States often are best placed to promote these types of energy saving actions at the appropriate time and in view of their local circumstances. Local authorities, through e.g. local, regional and national energy agencies, the Covenant of Mayors and the 100 Climate-neutral and Smart Cities Mission have a key role to play.

Information actions may also be reinforced by including energy savings related skills in school curricula and promoting skills acquisition in the sectors which are crucial for achieving the ambitious targets of the REPowerEU plan.

Quite a few Member States have already taken actions to address the potential for short term energy savings<sup>3</sup> but more could be done. To support these efforts, the joint Commission - IEA '*Playing my part*' campaign provides simple information on some key steps that individuals and companies can take voluntarily when possible to contribute to reducing our energy imports from Russia.

In addition, to support consumers in choosing more efficient appliances, the Commission is launching the consumer interface of the European Product Registration for Energy Labelling (EPREL) database<sup>4</sup>. The Commission is also working on an information

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<sup>3</sup> For example, the Belgian government has launched the 'J'ai un impact / ik heb impact' campaign aiming to achieve short term energy savings in view of the Ukraine crisis. Italy has announced a decision to limit heating and cooling temperatures in public buildings.

<sup>4</sup> For more information see: <https://eprel.ec.europa.eu/screen/home>

campaign to provide awareness raising information and materials to be used for communication to individuals by other bodies. Member States should also make full use of the opportunities available to them to promote energy efficiency such as reduced VAT rates for high efficiency heating systems, ensuring energy pricing encourages switching to heat pumps and encouraging purchase of more efficient appliances. Member States will be best placed to identify the most effective and fairest ones for their own circumstances

Many specific immediate recommendations can be envisaged and an illustration of the types of measures, including indicative estimated savings potentials, is provided in the annex and the most significant ones are summarised in the table below<sup>5</sup>.

	Oil savings (Mtoe)	Gas savings (bcm)
<b>Gas saving measures</b>		
Savings from turning down heating, turning off heating in unused rooms, block draughts etc.	≈1.5	≈6
Providing information about keeping condensing boiler temperatures below 60 degrees and encouraging people to check theirs.		≈3
Information about servicing boilers, simple insulation measures, draught proofing, fitting Thermostatic Radiator Valves and heating controllers and encouragement to act.	≈0.3	≈1
Consider modifying the energy pricing and introducing progressive tariff structures and other solutions to encourage energy savings and switch from gas to electricity.		≈1
<b>Industry</b>		
Incentivise energy audits and implementation to avoid heat losses from high temperature processes, supporting switching away from fossil energy.		≈2
<b>Transport measures</b>		
Recommending reducing motorway speeds.	≈8	
Encouraging walking, cycling, public transport, micro-mobility in urban areas.	≈5	
Encouraging train transport.	≈2	
<i><b>Illustrative potential</b></i>	<b>≈16</b>	<b>≈13</b>

The IEA estimates that these types of short-term gas-related measures could achieve a **5% reduction in (final) gas use (around 13 bcm)** over a year. Similarly, and depending on the Member State and its overall transport demand, measures could achieve up to a **5% reduction in (final) oil use (around 16 mtoe)**, while not preventing necessary journeys.

**In support of these efforts, the Commission will:**

<sup>5</sup> The indicated estimated energy savings are based on a range of sources and are dependent on a wide range of factors including the degree to which individuals respond to publicity and information campaigns and other incitements. In view of this, they should be understood as purely indicative of the possible relative magnitude of effect at EU level. In addition, the impacts of the measures can overlap.

- Develop a campaign in the context of the EU response to the effects of Russia’s war against Ukraine and high energy prices, intended to raise awareness and provide materials for use by other bodies.
- Disseminate information on the ‘Playing my part’ campaign on energy saving actions for individuals and work with stakeholder groups to increase the reach of these information measures and create the greatest impact.
- Launch the European Product Registration for Energy Labelling (EPREL) database consumer interface to support consumers and procurers choosing more efficient appliances.

### **3. ACCELERATING AND STRENGTHENING STRUCTURAL, MID- TO LONG-TERM ENERGY EFFICIENCY MEASURES**

The current EU’s energy efficiency targets significantly contribute to the EU’s climate ambitions. The 20-20-20 targets and the 2030 climate targets set under the Climate Law are clear examples where energy efficiency measures have allowed growth and reduced energy consumption to go hand in hand and played an important role for achieving the greenhouse gas reduction target. As confirmed by research<sup>6</sup>, energy efficiency policies also provided wider benefits in terms of that can be monetised to differing degrees. These include aspects such as reduced energy poverty, increased health and welfare, increased business competitiveness and enhanced energy security.

Member States have established the necessary frameworks and institutional arrangements to deliver on their previous and current energy efficiency targets. A governance structure is in place through the National Energy and Climate Plans (NECPs) to ensure that these ambitions are consistent with the overall EU objectives. There is now an urgency to accelerate these energy efficiency improvements to increase the EU’s resilience. With higher energy prices reducing the pay-back period of energy efficiency investment, there is a need for a renewed effort to remove the liquidity and information constraints holding back such profitable investment.

Because of the work that has been done over the past decade, this ramping up of effort should not require the creation of new structures or bodies. For example, all Member States have long-term renovation strategies, large businesses are required to carry out energy audits every four years and efforts have gone into adequate training and quality assurance. Increasing the rate of energy efficiency improvements may however require existing levels of resourcing to be strengthened, for example for providing advice and information as well as mechanisms to enable more private investments.

The current EU rules on ecodesign and energy labelling have resulted in 10% lower annual energy consumption by the products in their scope, significantly reducing EU primary energy demand and saving costs to consumers. The Commission proposal for a Regulation on Ecodesign for Sustainable Products<sup>7</sup> extends the scope of the Ecodesign framework to cover the broadest possible range of products. As the use of materials in

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<sup>6</sup> See for example <https://combi-project.eu/>

<sup>7</sup> COM(2022) 142 final

products has an important energy footprint, this new framework will significantly increase energy savings through boosting both energy and material efficiency.

### 3.1. Indication of a higher EU energy efficiency target

The Commission's EED recast proposal of July 2021 includes a higher energy efficiency target of 9% by 2030 (compared to the 2020 reference scenario).

In 2021, the Commission also undertook a study on energy savings potentials of energy efficiency measures, which showed that the economic saving potential for 2030 could be as high as 13% of FEC (752 Mtoe) if the EU intensifies funding and efforts for energy efficiency. According to the same study<sup>8</sup>, the technical potential for energy savings could be as high as 19% of FEC (696 Mtoe).

Following the REPowerEU communication of 8 March, further modelling of the REPowerEU<sup>9</sup> scenario with structurally higher gas prices also results in a cost-effective energy efficiency target of 13% in 2030.

### 3.2. Possible strengthening of energy efficiency measures

In view of the need to speed up the Union's independence from fossil fuel imports, Member States should consider fast-tracking existing, and implementing additional, energy efficiency measures. Each Member State will know best where to focus its efforts and in addition there are clear areas at the EU level where a common approach can bring added value.

In the ongoing co-decision processes on different elements of the 'Fit for 55' package the co-legislators may strengthen the regulatory framework for energy efficiency in the short term and to deliver more energy savings in the mid- to long-term in the context of REPowerEU, including:

- **Increasing the ambition of national energy savings obligation.**
- Introducing **obligations to ensure that in key sectors**, energy efficiency will be increased, subsidies for fossil fuel technologies will be stopped, renewable energy technologies are consistently promoted and energy savings technologies and equipment are quickly developed.
- Strengthening the **implementation of energy audit results** to ensure that cost-effective measures are implemented and that companies (in particular SMEs) and other entities such as public bodies that are not subject to the energy audit obligation are incentivised to undertake such audits and act on its results. Data centres and the use of waste heat should also be addressed in this context.
- **Introduce additional Minimum Energy Performance Standards** for buildings to boost renovations that encompass also heating (and cooling) systems, with sufficiently ambitious timelines and **setting a pathway to upgrade worst-performing buildings** in the Energy Performance Certificate "G class" up to "D class".

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<sup>8</sup> <https://op.europa.eu/en/publication-detail/-/publication/511bb328-f8b9-11eb-b520-01aa75ed71a1/language-en>

<sup>9</sup> **Insert reference to modelling results**

- **Phase out Member States' subsidies for fossil fuel-based boilers in buildings** as of 2025 as a minimum (noting that in most situations such incentives are contrary to Article 7(2) of the Energy Labelling Regulation) and encourage redirection to incentivise support schemes for heat pumps instead.
- **Strengthen national energy (and resource efficiency) requirements of new buildings** through heating system requirements and introducing zero-emission standards before 2030 (before 2027 in the case of public buildings).
- **Tighten national heating system requirements for existing buildings** addressing major renovations and boiler replacements and connection to efficient district heating systems in densely populated areas. This would work hand in hand with the setting of stricter ecodesign limits for heating systems at EU level, implying 2029 as an end date for 'stand-alone' fossil fuel boilers being placed on the market and parallel rescaling of energy labels (by 2025/2026) that will result in boilers and other fossil fuel-based appliances ending up in the bottom energy classes. Such EPBD and ecodesign and energy labelling measures will incentivise the roll-out of heat pumps and will contribute to the goal of doubling the rate of installation of heat pumps.
- **Introduce national bans for boilers based on fossil fuels in existing and new buildings by setting requirements for heat generators based on greenhouse gas emissions or the type of fuel used.** Whilst the EPBD recast introduces a clear legal basis for such national bans to address current legal uncertainty, it is already possible under the existing legislative framework to go ahead with such measures, which are already being introduced by several Member States.

In the mid- to long-term it will also be **important to further increase energy efficiency in transport** with a view to reduce oil consumption, encourage the switch to efficient renewable alternatives and increase transport energy efficiency, for example through:

- Aerodynamic retrofitting of heavy-duty vehicles and facilities to plug refrigerated trailers; longer trucks with eco-design such as aerodynamic devices on their trailers;
- including further eco-design requirements or higher energy efficiency targets for vehicles and trailers the upcoming revision of the CO<sub>2</sub> performance standards for newly sold heavy-duty vehicles, due in December 2022;
- incentivising the uptake of zero-emission heavy-duty vehicles and boosting the energy saving potential of longer and heavier trucks to drive cross-border within the European Union in the upcoming revision of the Weights and Dimensions Directive;
- boosting the use of combined transport generating energy savings in the upcoming review of the Directive on Combined Transport;

**In view of this, the Commission:**

- **Proposes to increase to 13% the binding target in the Energy Efficiency Directive;**
- Invites the Parliament and Council to consider, during the ongoing negotiations, the relevant measures outlined above to enable additional savings and energy efficiency gains in buildings through the Energy Performance of Buildings Directive and the Energy Efficiency Directive;



- Invites the Parliament and Council to uphold the ambition of the Commission proposal for a Regulation on Ecodesign for Sustainable Products<sup>10</sup>, the rapid deployment of which will lead to further energy savings through improved energy and resource efficiency of a broad range of products;
- Will consider a legislative initiative to increase the share of zero emission vehicles in public and corporate car fleets above a certain size;
- Put forward a legislative package on greening freight transport

The Commission also urges Member States to speedily adopt the reform of the Single European Sky Regulation on the modernisation of air traffic management in Europe in view of the significant gains in reduced fuel burn this would generate through higher flight efficiency.

#### 4. FINANCING

As regards financing for energy efficiency and building renovations, the investments put forward in the national Recovery and Resilience Plans (RRPs) are a good starting point, with more than 67 billion euro having been committed to such investments under the Recovery and Resilience Facility (RRF). The major share of the funding support was dedicated to building renovations (mainly residential and public buildings), followed by the construction of energy efficient buildings, with energy efficiency in SMEs, industry and in tertiary buildings, often being less frequent. The REPowerEU discussions that are currently taking place with all Member States are a good opportunity to strengthen the RRP in these areas.

The EU Emissions Trading System (ETS) including the Modernisation Fund and the proposed new ETS for buildings and road transport and the related Social Climate Fund are also expected to provide overall revenues of at least a similar order of magnitude, with energy efficiency investments being a key objective for revenue use. In addition, within the current Multi-Annual Financial Framework under the cohesion policy funds (ERDF, Cohesion Fund and Just Transition Fund), will provide significant support for energy efficiency and sustainable transport. In particular, the **InvestEU Programme** will mobilize private finance to support a wide range of investments in energy efficiency, by sharing risks with implementing partners, including the EIB Group. In addition, the Common Agricultural Policy, Horizon Europe and the LIFE programme all provide support for investments in energy efficiency. In total, under these instruments at EU level, financial resources allocated to climate related spending amount up to 626 billion euros for the 2021-2027 MFF and NextGenerationEU (although these resources address several policy areas beyond energy efficiency).

Measures involving State aid are subject to State aid rules. The Climate, Energy and Environmental Protection State aid Guidelines (CEEAG) provide ample opportunities for support to energy efficiency projects. Despite significant EU- and national, regional and local-level public financing going to energy efficiency, such funding alone will not be sufficient to cover energy efficiency investment needs and, therefore, scaling up private investments is essential to achieve these objectives. Further funding needs stem from necessary up- and re-skilling of workers to counter the shortage of skilled labour to implement many of the planned measures, including but not limited to the installation of

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<sup>10</sup> COM(2022) 142 final.

energy saving tools, efficient appliances, or renewable electricity generation, as well as building and renovation measures.

This means, on one side, to make the most cost-effective use of public financial support based on financing instruments and innovative financing schemes. To achieve this, the Commission will continue to promote technical assistance for energy efficiency investments, the uptake of energy efficiency innovative financing schemes (such as on-bill and on-tax recovery, energy performance contracting and performance-based models), and financial products (such as energy efficiency mortgages and green loans and financing schemes for acquisition of transport zero-emissions fleets).

In view of the importance of developing financing schemes for energy efficiency, by combining financial instruments and grants, the Commission, with the support of the European Investment Bank, provides a model<sup>11</sup> to support Member States with developing Energy Efficiency Financial Instruments and increase the uptake of these schemes under the Cohesion Policy Funds.

On the other side, it is key to strengthen the cooperation with financial institutions on energy efficiency investments and to mobilise their active commitment toward the achievement of the REPowerEU and the European Green Deal objectives. In this regard, the Commission, in cooperation with Member States, continues to strengthen the work of the successful Energy Efficiency Financial Institutions Group (EEFIG), for example with a view to transforming it into a high-level European Energy Efficiency Financing Coalition with the financial sector. Additionally, the Commission will examine additional ways to trigger further private investments, e.g. through mortgage portfolio standards or pay-for-performance schemes.

**In view of the need for increased private financing for energy efficiency, the Commission will:**

- launch, in cooperation with Member States, a high-level European Energy Efficiency Financing Coalition with the financial sector, based on the successful Energy Efficiency Financial Institutions Group (EEFIG);
- examine possible additional measures to trigger further private investments, e.g. through mortgage portfolio standards or pay-for-performance schemes.

## **5. GOVERNANCE AND PARTNERS**

Member States, and their regional and local authorities and organisations, are best placed to reach out to EU citizens and business to encourage them to take energy saving measures or to invest in energy efficiency measures. The Commission will complement such efforts by identifying and sharing expertise among Member States on the most effective actions, where possible through existing structures, for example the Concerted Actions on the EED and EPBD, local initiatives, etc. Under the Technical Support Instrument, the Commission is helping Member States to identify reforms and investments to phase out fossil fuel imports from Russia, including for the acceleration and strengthening of energy efficiency measures. The Commission is keen to work with

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<sup>11</sup> <https://www.fi-compass.eu/resources/factsheets-and-brochures/model-for-a-financial-instrument-with-a-grant-component>

all relevant national, regional and local actors to provide the greatest support and sharing of information.

Cities and towns represent three quarters of the EU's population and have the biggest potential to support urgent energy savings actions. They also have deep knowledge about, and interface with, people facing or at risk of energy poverty. Within this context, the Covenant of Mayors and the 100 Climate-neutral and Smart Cities Mission are key partnerships for action. An important aspect to ensure that all consumers can play their role is strengthening the existing networks with local and regional governments, and networks of experts and stakeholders active at these levels. At international level the Global Covenant of Mayors provides an established channel to reach 11 000 cities, including in Ukraine that can be integrated into similar action after the conflict.

There are specific aspects to be addressed in different business sectors and the Commission intends to explore whether specific energy savings partnerships could be created with appropriate stakeholders in relevant sectors (e.g. transport, industry, agri-food, ICT including data centres, water, and energy). Other existing initiatives, for example, the Clean Islands initiative, the initiative on Coal Regions in Transition, could be used to provide a framework to households, enterprises and services.

In times of urgency, deep local knowledge and tailor-made hands-on support is needed to advise people how to best combine renewable energy use and energy efficiency measures, or how to become members of a renewable energy community. It must be ensured that all citizens have the necessary information to take decisions. Even urgent actions must ensure inclusiveness, equality and non-discrimination.

**In view of this, the Commission will:**

- continue bringing together the relevant stakeholders, energy savings partnerships, consumer organisations, skills partnerships and alliances, the Committee of the Regions, local and regional networks, and Member States central authorities, to allow for the sharing of best practices on energy savings measures across the board and follow-up on the impacts of the energy saving measures toward next winter;
- continue providing dedicated technical assistance on energy efficiency, such as through the Technical Support Instrument, cohesion policy and ELENA, which will help authorities and stakeholders removing bottlenecks to the deployment of energy efficiency programmes;
- convene Member States to report by 1 July on the actions that they have taken to achieve short-term demand reduction. They will also be invited to set out what further actions they envisage and the expected impact from them, including on data centres and industrial waste heat.

## **6. CONCLUSION**

Energy efficiency is a key element of the European Green Deal and the Union's strategy to achieve a decarbonised economy by 2050 in a cost-effective way. The currently high energy prices and the war in Ukraine have given renewed impetus to the need to save energy to ensure the European Union becomes independent from Russian fossil fuel imports as soon as possible.

As indicated in this plan, this requires both mid- to long-term, structural energy efficiency measures as well as immediate changes. It will require appropriate price signals, smart use of scarce public funding and more private investments, and further

support along with accompanying policies for concrete action on the ground. It will require stronger involvement of citizens, local and regional authorities and actors to ensure strong ownership and quick deployment of the needed energy savings actions.

Implementing the recommendations and actions set out in this EU Save Energy communication will make it possible for everyone to save energy and thereby contribute to Europe's energy independence.

## Non-exclusive toolbox of measures to achieve immediate energy savings

The below table introduces a non-exhaustive list of targeted measures able to generate significant energy savings in the short-term (over a one-year period). The indicated estimated energy savings are dependent on a wide range of factors including the degree to which individuals respond to publicity and information campaigns and other incitements. In view of this they should be understood as purely indicative of the possible magnitude of effect at EU level.

In addition, the impacts of the measures can overlap. For example, the same energy savings might be achieved by the information campaign measures or by the increasing the roll-out of EPCs and targeted energy checks. In view of this, it is not possible to sum the estimated impacts to arrive at an overall energy saving figure.

<i>Possible measures</i>	<i>Description of measures</i>	<i>Estimated impacts in one year (Mtoe)</i>
<b><i>Cross-cutting energy services and financing measures</i></b>		
<b>Information campaign on multiple energy wastage in households and small businesses</b>	Targeted information campaign, inciting citizens to turn down heating and boiler temperature, avoid consumption at peak hours, close doors, turn off heating in unused rooms, switch-off lights, block draughts, lower energy use in retail shops. This should also include advice services, such as one-stop-shops or energy efficiency kits, for citizens and SMEs.	11 Mtoe
<b>Certification and maintenance</b>	Free-of-charge advice, inspection, energy audits and energy performance certificates to create awareness and provide recommendation on energy savings, as well as spot checks in thermal heating systems and fast-track maintenance to reduce wastage	3.5 Mtoe
<b>Modify energy pricing to encourage lower energy use and fuel</b>	Remove preferential treatment of fossil fuels and flat rates for energy. Introduce progressive tariffs and other solutions to foster savings and encourage switch from gas to electricity	2.4 Mtoe
<b>Encourage purchase of more efficient appliances</b>	Member States to provide information and incentives. The EPREL consumer interface provides readily accessible comparable information.	
<b>Roll-out of innovative financing practices and further support ESCOs</b>	Fast-track innovative financing schemes and financial products can support the increased uptake of energy efficiency measures and generate energy savings in the short-term (on-tax and on-bill financing schemes, energy efficiency	0.7 Mtoe

	mortgages, ESCOs financing)	
<b>Smarter control practices in district heating sub-stations</b>	Introduce smart control and monitoring of centralised district heating sub-stations, which are unequipped to ensure control and eliminate supply temperature fluctuations and the increase flow of hot water to radiators	2.5 Mtoe
<b>Buildings</b>		
<b>Heating and air-conditioning use in buildings</b>	Default settings on condensing boilers can often be adjusted to increase efficiency and save up to 8% of the energy used to heat rooms and water.	2.5 Mtoe
<b>Speedy heat pumps roll-out through dedicated financing incentives</b>	Activate financing and fiscal incentives for fast-tracked heat pumps roll-out, for example through VAT reduction and energy efficiency obligation. Bonus grants to replace fossil-fuel based boilers to direct offset natural gas demand.	1.5 Mtoe
<b>Building automation and energy management systems</b>	Encourage fitting of Building automation and control systems (BACS) that monitor and automatically adjust energy use in buildings.	1.5 Mtoe
<b>Provide information on easy to install insulation measures in buildings</b>	Address easy to install insulation measures in attics and roofs, and through high performance windows and double-glazing	1.5 Mtoe
<b>Industry</b>		
<b>Energy audits and actions to address heat loss</b>	Incentivise heat loss audits and actions to avoid heat losses from high temperature processes. Encourage SMEs to carry out audits.	2.5 Mtoe
<b>Accelerate and financially support the replacement of fossil fuel systems with renewables</b>	Incentives, such as tax breaks or subsidies, to accelerate the replacement of fossil fuel systems with renewables, particularly in existing buildings with boilers more than 12 years old.	5 Mtoe

As regards transport, various ‘win-win’ measures could be taken at local, regional or national levels as illustrated in the table below, in line with the Sustainable and Smart Mobility Strategy and particularly the new urban mobility policy framework. These actions can be quickly put in place or accelerated by public authorities, transport operators and employers or other agents (individually as per measure) can be quickly put in place or accelerated.

<b>Possible measure</b>	<b>Potential impact</b> (depending on the specific design)	<b>Description of the measure</b>

Reinforce the adoption of electric and more efficient cars, vans, trucks and buses	High	<ul style="list-style-type: none"> <li>Continued/extended public support for sustainable vehicle purchase</li> <li>Dedicated support schemes for specialized and captive fleets (taxis, shared fleets, logistic fleets, buses)</li> <li>Investment in publicly accessible recharging and refueling infrastructure (public and private market actors)</li> <li>Support for the deployment of private recharging infrastructure (at home/in offices/in businesses) by means of subsidies or tax incentives</li> <li>Investment in zero emissions public transport infrastructure with the aim of reducing private car usage (metro, tram, metropolitan trains, trolleybus)</li> </ul>
Encourage reducing speed while driving	Medium to high	<ul style="list-style-type: none"> <li>Reducing motorway speeds</li> <li>Recommend reduced-speed zones in urban areas</li> </ul> <p>Develop car-free zones to facilitate soft mobility</p>
Reduce the price of public transport and rail	Medium to high	<ul style="list-style-type: none"> <li>Price reduction for public and rail transport based on public support to operators</li> </ul>
Incentivize walking, cycling and micro-mobility in cities	Medium to high	<ul style="list-style-type: none"> <li>Support for free bike sharing and other micro-mobility solutions</li> <li>Incentivizing bike purchases through bike purchase subsidies or tax/VAT reductions</li> <li>Incentives/rewards for employees that use public transport or active modes for commuting to work</li> <li>Investing in new bike lanes in and around/towards cities</li> <li>Promoting/incentivizing last-mile delivery by cargo bike or smaller delivery e-vehicles</li> <li>Increasing possibilities to travel on public transport (train, metro) with a bike</li> </ul>
Promote more efficient driving and operation of freight vehicles and delivery of goods	Medium	<ul style="list-style-type: none"> <li>Ensuring better/full loading of heavy-duty vehicles through better planning/data</li> <li>Optimising multi-modal delivery solutions, including through last-mile zero-emission solutions and pick up stations</li> <li>Offering eco-drive training</li> <li>Accelerating rollout of ITS services</li> </ul>
Car free days	Low to medium	Organizing car free days in cities
Adapt existing road	Low to	Road charging schemes reducing congestion during peak times and/or incentivizing more sustainable

charging schemes	medium	vehicles
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