

## Investments in energy efficiency and renewables to deliver energy sovereignty for Europe by 2027

Agora Energiewende proposes 15 actions for RePowerEU to reduce fossil gas dependency and help achieve the climate targets at the same time. Key element is a new 100 billion euro Energy Sovereignty Fund to massively scale up energy efficiency and renewables in the EU Member States.

**Brussels, 24 March 2022.** A concerted crisis effort to improve energy efficiency in buildings and industry and scale up renewable energy could permanently reduce fossil gas demand in the EU by 1200 terawatt hours in the next five years, a new Agora study finds. This would allow the EU to avoid 80% of today's Russian gas imports by 2027 and enable a 100% displacement of these imports when combined with alternative supplies such as LNG. Proposed priority actions for the RePowerEU plan would reduce 480 terawatt hours of fossil gas use in buildings through energy efficiency, district heating and a heat pump revolution, 223 terawatt hours in industry, particularly through electrification in low and medium temperature heat processes, and 500 terawatt hours in the power sector by ramping up system flexibility and wind and solar PV in the next five years. These savings amount to a permanent reduction of overall gas consumption by around 32% by 2027, saving the EU between 127 - 318 billion euros on gas imports within that period. "The necessary measures to permanently reduce fossil gas consumption go hand in with what's needed to meet the EU's climate targets", says Matthias Buck, Director Europe of Agora Energiewende. "The EU now needs to make sure that RePowerEU accelerates energy efficiency and renewables expansion to achieve energy sovereignty by 2027."

As a key element for delivering RePowerEU, Agora Energiewende proposes a new EU Energy Sovereignty Fund. Equipped with an initial amount of 100 billion euros until 2027, it should only support investment needs not covered by existing EU funds, and especially bolster fiscally fragile Member States. "Achieving EU Energy sovereignty requires solidarity in shouldering the necessary public funding", says Buck. "Commitments around the establishment of a new Energy Sovereignty Fund framework should ensure that existing EU funds are repurposed wherever possible, and that governments smartly combine price signals and the protection of industry and low-income households."

### **A heat pump revolution is needed for buildings in Europe**

According to the Agora study that builds on modelling done by Artelys, TEP Energy and Wuppertal Institute, fossil gas consumption in the buildings sector (residential and tertiary) could be reduced by 480 terawatt hours by 2027 from the current 1400 terawatt hours. This can be done via measures such as improving the efficiency of existing gas boilers or replacing them with heat pumps, prioritizing the training of installers, rapidly scaling up

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building renovations to make them more efficient, and connecting more homes to district heat networks.

If gas heating systems older than 15 years are quickly replaced with heat pumps, district heating and, to a limited extent, biomass, gas use in buildings can be reduced massively by 312 terawatt hours until 2027. "EU governments need to ban the installation of new gas boilers and increase financial support to unleash a heat pump revolution", Buck says. Viable measures include subsidised loans, a temporary elimination of the VAT on heat pumps and an accelerated depreciation of heat pump investment costs for businesses.

### **Electrification in industry can save at least 223 terawatt hours of gas by 2027**

Industry is responsible for around 20.5% of annual EU fossil gas use as energy, and 25% if feedstock is included. The study finds that it is possible to reduce fossil gas demand in industry by at least 223 terawatt hours by 2027. Actions to achieve these savings include accelerating the uptake of heat pumps, expanding direct electrification and hybrid RES-fossil fuel systems for low and medium-temperature industrial heat as well as rapidly scaling material efficiency and enhanced recycling of energy-intensive material. The short-term savings potential is particularly large in low-temperature heat applications which make up 40% of industrial gas use.

### **Ramping up wind and solar PV is key for achieving energy sovereignty in Europe**

The renewable energy parts of the Fit-for-55 package would see Europe reach 427 GW installed wind power capacity and 383 GW installed solar power capacity by 2030. RePowerEU raises the ambition level by a further 90 GW, aiming for 480 GW of wind and 420 GW of solar capacity by 2030, with 80 GW earmarked for additional green hydrogen production. The new targets imply a 2.5 times increase of installed capacity within the next eight years.

With current deployment rates much lower across Europe, an immediate and comprehensive push is needed: "To regain energy sovereignty, Europe must scale renewable energies as fast as possible, pulling all stops", says Matthias Buck. While for wind onshore and offshore, the proposed increase in ambition is in line with what industry can deliver, for solar PV, market analysts and the solar industry indicate up to 600 GW by 2027 would be feasible. "Scaling up faster should be combined with efforts to increase manufacturing of wind turbines and solar PV in Europe", Buck says. Fully implementing EU laws to increase power system flexibility, investing in grids, and striking a balance between direct electrification and green hydrogen production will be further important levers, the Agora study finds.

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### **Immediate actions to reduce fossil fuel consumption by winter 2022/23**

The Agora study also outlines some of the immediate actions that can be taken to reduce fossil fuel consumption in the run-up to winter 2022/23. These short-term actions include fuel switching in the power sector, in district heating and in buildings, short-term operational efficiency improvements to increase wind and biomass power generation, and investments in low-cost energy savings measures such as insulation. Also, the EU should encourage citizens and businesses that heat with gas to save energy via various methods, one of them being a communication campaign to inform on energy saving potentials.

Another action is to incentivize industry to save and substitute fossil gas in low-temperature heat applications. A recent analysis by Agora Energiewende and Prognos estimated that between 158 and 262 terawatt hours in fossil gas can be saved by using such short-term measures in Germany alone.

### **Requirement for a collective European effort**

All efforts to regain energy sovereignty will require solidarity and a collective European effort based on joint commitments. "It is crucial that RePowerEU is rooted in a robust political framework, steered by EU heads of state, to ensure full implementation of all actions", Matthias Buck says. One concrete action should be to help Ukraine build back its destroyed energy infrastructure after the war.

The impulse entitled "Regaining Europe's Energy Sovereignty: 15 Priority Actions for RePowerEU" was written by Agora Energiewende. The 40-page publication outlines actions that the EU can take in order to regain energy sovereignty and reduce dependence on imported fossil fuels. It is available for free download at [www.agora-energiewende.org](http://www.agora-energiewende.org).

### **About Agora Energiewende**

Agora Energiewende develops scientifically sound, politically feasible ways to ensure the success of the energy transition – in Germany, Europe and the rest of the world. The organization works independently of economic and partisan interests. Its only commitment is to climate action.

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