European Commission

REPowerEU with Clean Industry

MAY 2022

The Russian invasion of Ukraine highlighted the need to accelerate the reduction of our fossil fuel dependencies from Russia. **Replacing coal, oil and gas in industrial processes** will help cut this dependency, while transitioning to cleaner energy sources, strengthening industrial competitiveness and supporting international technology leadership. **Energy intensive industries** can significantly contribute to and benefit from RePowerEU efforts.

HOW TO BOOST THE DEVELOPMENT OF CLEANER INDUSTRIAL PROCESSES

Electrification, energy efficiency and uptake of renewables could allow industry to save **35 bcm** of **natural gas by 2030** beyond Fit for 55 targets

Largest reductions in gas, almost **22 bcm** could be made from **non-metallic minerals, cement, glass and ceramics, chemicals** production and refineries

THE SHIFT TO CLEAN INDUSTRY:

- Electrification of industrial processes
- Renewable hydrogen deployment
- Circular use of materials
- Use of alternative biobased or renewable inputs
- Waste valorisation
- Energy efficiency

Around **30%** **of EU primary steel production** is expected to be decarbonized on the basis of renewable hydrogen by 2030

SECURING THE SUPPLY OF CRITICAL RAW MATERIALS:

- Intensify work on the supply of critical raw materials and prepare a legislative proposal
- Establish new partnerships in Africa, Latin America and Oceania
- Additional support for research and innovation

BOOSTING SKILLS FOR RENEWABLE ENERGY PRODUCTION:

- Support the creation of a large-scale skills partnership among renewable energy stakeholders under the Pact for Skills
- Support skills for hydrogen through ERASMUS + and the Joint Undertaking on Clean Hydrogen

CASE STUDY: CIRCULAR MATERIAL USE IN THE PAPER INDUSTRY

Circular innovation can be a big driver of industrial energy consumption reduction. In the paper industry, transforming paper machines to produce output from recycled fibres has led to a lower electrical consumption and greenhouse gas emissions from the mill.

CASE STUDY: ELECTRIFICATION OF THE GLASS INDUSTRY

The glass industry uses considerable amounts of natural gas to melt raw materials. Using electricity instead of natural gas could halve the amount of energy needed and contribute to energy savings.

EXPANDING EU'S CLEAN ENERGY TECHNOLOGY MANUFACTURING CAPACITY

The industrial sector will also play a key role in scaling up the production of equipment and components necessary to quickly transform our energy system.

SOLAR PANELS

Produce at least **20 GW of solar photovoltaics production capacity** by 2025

WIND ENERGY CAPACITY

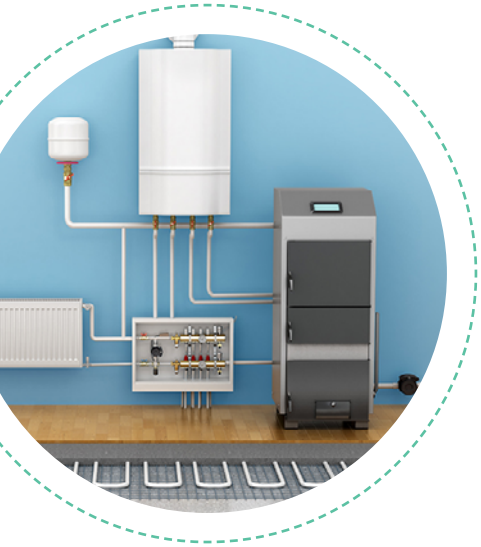
Ensure equipment to allow an **acceleration** in wind capacity deployment

HEAT PUMPS

Secure capacity to **double** heat pump installation this year and reach **10 million units** until 2025

HYDROGEN ELECTROLYSERS

Increase annual electrolyser manufacturing capacity **tenfold**



BOOSTING HEAT PUMP PRODUCTION:

Heat pumps are the most efficient form of heat electrification and can deliver three times more thermal energy than the electrical energy consumed. Given they can easily replace gas boilers, they play an increasingly important role in heating residential and commercial buildings as well as in district heating. The EU is a global leader in heat pump technologies.

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