nuclearеurope
Supporting a sustainable future

ENERGY SOVEREIGNTY KEY TO INDUSTRIAL COMPETITIVENESS

NUCLEAR

- IS A LOW-CARBON ENERGY SOURCE
- ENSURES SECURITY OF SUPPLY
- IS ENVIRONMENTALLY, ECONOMICALLY AND SOCIALLY SUSTAINABLE

EU NUCLEAR INDUSTRY IN NUMBERS

- ACCOUNTS FOR **25%** OF ELECTRICITY
- ALMOST **50%** OF LOW-CARBON ELECTRICITY
- SUPPORTS AROUND **1Mn** JOBS
- TURNOVER OF **100bn** PER YEAR

January 2025

We welcome the announcement by the new European Commission of a Clean Industrial Deal which represents a vital step in helping to address the declining competitiveness of Europe's industries. It is important that energy forms a key component of the proposal to ensure energy sovereignty and industrial competitiveness.

Current geopolitical tensions, in particular Russia's war of aggression in Ukraine, have crystalised the necessity for Europe to further develop its strategic autonomy and energy security capacity. It is vital that European industries have constant access to affordable and dispatchable European sources of net zero energy in order to ramp up their competitiveness whilst at the same time meeting the 2050 climate neutrality target.

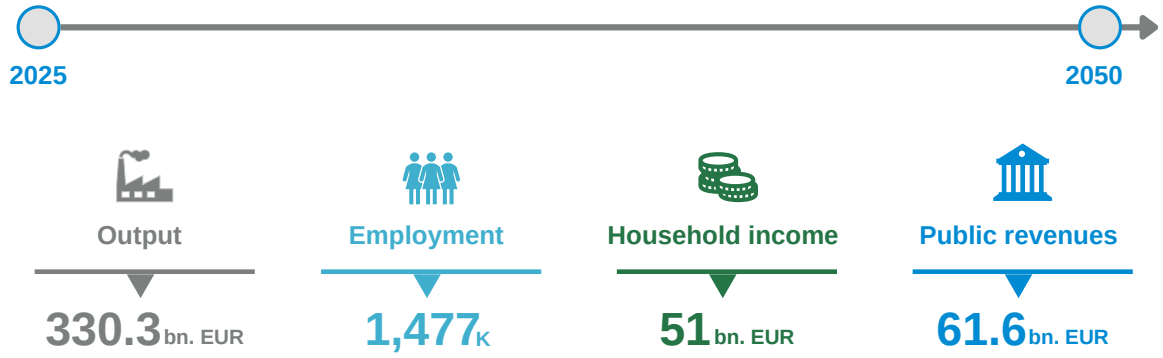
With this in mind, nucleareurope calls on policymakers to ensure technology neutrality and a level playing field between all net zero energy technologies, including nuclear and renewables.

The challenge is massive: Europe needs 24/7 access to clean and affordable energy sources. Therefore, the contribution of all net zero technologies is essential. Nuclear, renewables, hydrogen, storage, and grid infrastructure – all of these will be key to ensure that Europe's industries have access to the energy they need, when they need it. In addition, the focus should be on producing as much net zero energy as possible in Europe to meet the urgent increase in electricity demand (due to, for example, the AI revolution), whilst at the same time pushing for rapid electrification of energy intensive industries. We must reduce our dependence on energy imports and work to strengthen Europe's energy sovereignty. To deliver on all of this, we recommend the following

1. Significant increase in electrification: One of the best ways of reducing our CO_2 emissions and shifting away from fossil fuel imports is by electrifying all processes where possible. If Europe's economy is not electrified rapidly enough, this will lead to delays in reaching net zero, make the transition more expensive and jeopardise energy sovereignty. This must go hand in hand with support for the significant deployment of nuclear and renewable capacity on European soil, whilst at the same time ensuring that taxation policies do not discriminate against technologies which contribute to electrification, and removing unfair taxes and levies, which hamper the competitiveness of the European industry as well as exacerbate the EU´s competitiveness gap with its competitors. In addition, all system costs need to be taken into account to ensure the most affordable approach.
2. Ramp up the nuclear supply chain: The European Union's (EU) nuclear supply chain is critical to ensuring the long-term sustainability, security, and competitiveness of nuclear energy within Europe. However, the supply chain faces several challenges that need to be addressed to maintain a reliable and resilient nuclear energy sector. Therefore the EU needs to put in place policies which will support the rapid expansion of manufacturing capacity, including fuel cycle facilities where the EU has a real asset, to increase security of supply in Europe. This aligns closely with the need to establish a clear, long-term vision for the nuclear industry. To reduce its reliance on external imports Europe must ensure a secured, diversified, and sustainable supply of nuclear materials and fuel. The fuel supply chain is a strategic European asset and long-term policy certainty regarding third country market access will provide European actors with the certainty and stability needed to invest in domestic capacity.
3. Cost efficient balancing of the electricity system: This is key to lowering system costs and thereby prices. Develop a portfolio of fossil free, firm and dispatchable assets to meet fluctuations with different frequency and duration. To reduce both electricity costs and prices, demand side flexibility, storage and nuclear should be used as balancing technologies.
4. Encourage clean hydrogen production in the EU: For those sectors which cannot electrify, low-carbon hydrogen can play a role. In this respect, the Commission needs to ensure support for all clean hydrogen sources, including nuclear, in order to render this hydrogen more affordable. Furthermore, counting on hydrogen imports will not help solve the problem of Europe's dependence on energy imports.

5. Enable sufficient financing: The EU must put forward a long-term vision which shows support for all technologies capable of meeting current challenges (decarbonisation, security of supply and affordability). Investors in capital intensive projects need investment certainty, and such a long-term vision will help in this respect. The European nuclear sector as a whole (including the supply chain) must be eligible for all relevant EU funds (such as InvestEU, the Just Transition Fund and future funds under the next Multiannual Financial Framework) as well as financing mechanisms (e.g. stronger support from the European Investment Bank) as this will help leverage private financing for projects. Nuclear should also be put on an equal footing with renewables in the upcoming Clean Energy Investment Strategy. Furthermore, given the diversity of projects and technologies, different tools and mechanisms may be required, such as contracts for difference (CfDs) and subsidised loans geared towards optimal risk-sharing and minimising costs for society. To make this manageable, there is a pressing need to streamline state aid procedures, accelerating the time it takes the European Commission services to assess the appropriateness and proportionality of the state aid foreseen.
6. Tackle the skills issue: Many European industries are struggling due to the lack of a skilled workforce in Europe. It is therefore vital that the Commission work to implement horizontal actions which will ensure that young people have the right basic skills, and which encourage them to consider a career in nuclear industry.

2050 impact under #150GW scenario



In 2024, nuclear was the primary source of electricity production in the EU accounting for around a quarter of total electricity generation and nearly half of all the low-carbon electricity produced. This demonstrates that it is a significant asset for the entire European electricity system, contributing to security of supply, energy sovereignty and industrial competitiveness. In addition, the European nuclear sector is strong and represents one of very few energy technologies where the EU can be less reliant on third countries, be largely self-sufficient and even globally dominant. More nuclear in the EU energy system will

- Bring down costs.
- Enhance energy reliability.
- Enable the greater integration of renewables in the system.
- Kick-start the hydrogen economy.
- Power the fourth industrial revolution.

We therefore urge EU policymakers to recognise the value of nuclear and ensure it is included throughout the legislative framework.

About us

nucleareurope is the Brussels-based trade association for the nuclear energy industry in Europe. The membership of nucleareurope is made up of 15 national nuclear associations and through these associations, nucleareurope represents nearly 3,000 European companies working in the industry and supporting around 1.1 million jobs.

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