nuclearеurope
Supporting a sustainable future

BUILDING A TECHNOLOGY NEUTRAL POST 2030 CLIMATE & ENERGY FRAMEWORK

NUCLEAR

IS A LOW-CARBON ENERGY SOURCE

ENSURES SECURITY OF SUPPLY

IS ENVIRONMENTALLY, ECONOMICALLY AND SOCIALLY SUSTAINABLE

EU NUCLEAR INDUSTRY IN NUMBERS

ACCOUNTS FOR
24%
OF ELECTRICITY

ALMOST
50%
OF LOW-CARBON ELECTRICITY

SUPPORTS AROUND
0.9Mn
JOBS

TURNOVER OF
100bn
PER YEAR

March 2026

The agreement on an ambitious climate target of a 90% reduction in greenhouse gas emissions by 2040, compared to 1990 levels, is an important step towards climate neutrality by 2050. It will also provide investment certainty for the European nuclear industry, provided that the framework to reach it remains technology neutral.

The European Commission is currently in the process of consulting on the Energy Union governance architecture as well as post-2030 energy target structure. Both will be essential in supporting the achievement of the EU's 2040 climate target. Political decision making should be guided by the following principles:

- A pragmatic, technology neutral approach - recognising the complementarity between net-zero energy sources such as renewables and nuclear- is crucial to decarbonise faster
- •Adoption of an energy system approach which recognises the importance of dispatchable capacities for decarbonisation, security of supply and competitiveness.
- Ensuring investment certainty by avoiding retro-active changes

Nucleareurope specifically calls for:

- An overarching, clean energy target
- A flexible, enabling electrification framework
- Policies which are based on robust, technology neutral impact assessments

Introduction

Today, the EU faces a set of closely linked challenges: cutting emissions, securing a reliable energy supply, and maintaining industrial competitiveness in a volatile global context. The most effective way to address these challenges is through providing affordable and reliable, fossil free electricity for industry and households, fueling accelerated electrification of the economy. High climate ambition provides the certainty needed to drive investment at scale and strengthen Europe's competitive position.

As the EU moves towards its 2040 climate target, nuclear energy plays a key role in delivering stable, large scale electricity, supporting system resilience, and enabling competitive electrification across industry and society. Furthermore, the nuclear sector will deliver significant investments in the coming years: based on the National Energy and Climate Plans (NECPs) submitted by the EU Member States, installed nuclear capacity could reach just below 150 GW by 2050, up from around 100 GW today.

It is essential that when adapting its current legislation (e.g. Governance of the Energy Union & Climate Action Regulation) to the post 2030 climate framework, the European Commission bases its legislative proposals on robust impact assessments, supports the deployment of all clean technologies and avoids undermining industrial competitiveness. A technology-neutral approach is critical to support the uptake of key clean energy sources such as nuclear energy, strengthen the resilience of Europe's energy system, and minimise its overall cost, ultimately maintaining the EU's industrial base and attractiveness for investors.

An overarching clean energy target for 2040

To succeed, Europe needs to harness the potential of all clean technologies, including nuclear. A technology neutral framework should be pursued, that leverages regional differences and ensures energy security through a diverse mix of clean technologies.

The contribution of nuclear is clear: it provides clean, firm and dispatchable electricity and heat, with the ability to provide baseload supplies. Furthermore, as fossil fuels are phasing out, nuclear will play a major role in ensuring the stability of the grid and help mitigate system costs. In particular, SMRs, when combined with large-scale nuclear energy sources, can facilitate grid stability by effectively supporting load balancing. Aiming for 150GW of installed nuclear capacity by 2050 has the potential to drive down electricity prices throughout the energy transition. This, combined with a more cost-efficient energy system, could save around €310 billion (Bn) in total energy system costs.

As mentioned by the PINC and the Strategy for the development and deployment of Small Modular Reactors (SMRs) in Europe, an optimised mix of intermittent, firm and dispatchable capacity, particularly nuclear power, reduces the overall cost of the EU energy system. For example, co-locating SMRs with data centres, possibly even "behind-the-meter", may alleviate grid constraints by delivering on-site electricity, reducing dependence on congested transmission networks, costly grid upgrades, and associated fees. An overarching clean energy target will allow for all energy sources to contribute to this balanced mix, without unfairly distorting the market towards certain energy generation technologies and reflecting Member States specificities.

However, such a target should fall within a long-term strategy which provides for an energy system which will remain resilient well after 2050 in ensuring energy security, autonomy and industrial competitiveness.

Nuclearеurope therefore calls for an overarching, technology neutral, clean energy target, which encompasses all clean technologies, including nuclear.

A flexible, enabling electrification framework

Affordable, fossil-free energy is Europe's only path to lasting competitiveness, currently suffering from fossil fuel dependency. While it is clear that electrification is one of the most powerful tools for Europe to decarbonise and reduce its reliance on energy imports, the actual pace of electrification in the EU has stagnated over the past decade and progress on the electrification of uses remains too slow.

By encouraging a swift uptake of electrification, the EU can make the most of its power generation capacity, reduce energy imports and reinforce its energy security and independence.

Electrification of uses is also the best lever for encouraging investment in future capacities. A credible policy framework incentivising the electrification of industries can unlock the current catch 22 and drive economic growth. However, some sector-specific adjustments are needed for industries which cannot cannot directly electrify or be flexible.

The EU should develop an electrification framework, including an electrification KPI, and encourage Member States to adopt an electrification target. The maximum level of flexibility should however be provided for Member States to reach such a target, for example on defining how an electrification target should be allocated across sectors, based on national specificities.

The achievement of the 2040 target through a clean energy objective and an electrification objective will only be possible with effective and stable economic signals, efficient electricity markets and support for the decarbonisation and electrification of industry.

- The European electricity market design must i) preserve short-term marginal pricing - commonly referred to as the "merit order and ii) long-term instruments such as Power Purchase Agreements (with physical delivery) designed to improve price predictability, particularly for industrial consumers.
- The EU ETS should remain an essential climate tool to supporting investment decisions and ensuring an effective shift from fossil fuels to clean electricity. An efficient use of ETS revenues by Member States is paramount for the transition of the EU economy and targeted support of industry sectors engaging in decarbonisation investments.
- Member States should also provide appropriate measures, including alignment of energy taxation and targeted financial support, to actively help consumers and industry switch towards electricity, in particular a more systematic indirect carbon cost compensation and using the flexibility provided by the CISAF.
- The Decarbonisation Bank announced in the Clean Industrial Deal should be swiftly established with a budget of 100bn€ to build on the successful first pilot auction supporting the electrification of industrial heat production, and must uphold the principle of technological neutrality. Under the current draft rules for the IF25 Heat Auction, new nuclear technologies (AMRs/SMRs) are excluded, as the mechanism is designed solely for market-ready solutions. This effectively prevents next-generation nuclear from accessing the Bank's instruments and risks setting a negative precedent for future auctions.
- The MFF and the Competitiveness fund should also be aligned with the needs of a competitive transition.

A post 2030 framework based on robust, technology neutral impact assessments

To allow that the proposals for both the Governance regulation as well as energy policy framework are science and data driven policies which take multiple factors into account, it will be crucial that they are complemented by dedicated impact as well as system needs assessments. Only then can it be ensured to have informed policies which put forward achievable objectives, and realistic projections for net-zero technologies.

About us

nucleareurope is the Brussels-based trade association for the nuclear energy industry in Europe. The membership of nucleareurope is made up of 17 national nuclear associations – active across Europe – and the companies that they represent, and 19 Corporate Members. Nearly 3,000 companies are represented, supporting 900 000 jobs, from Europe's (and the world's) largest nuclear utilities and nuclear fuel cycle companies, to other undertakings engaged in the transport of nuclear materials and the management of radioactive waste.

nuclear europe

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