



European landscape for the development of new nuclear

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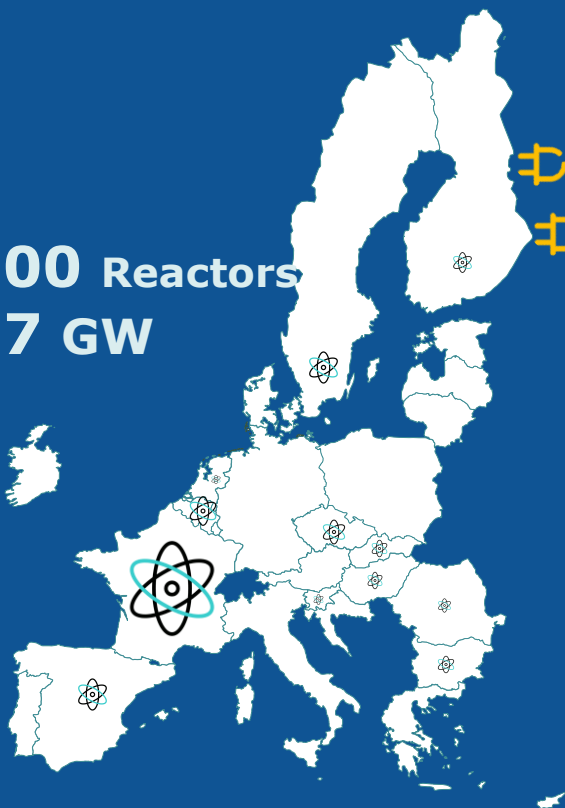
DG ENER

European Commission

St Vulbas, France - 24 May 2024

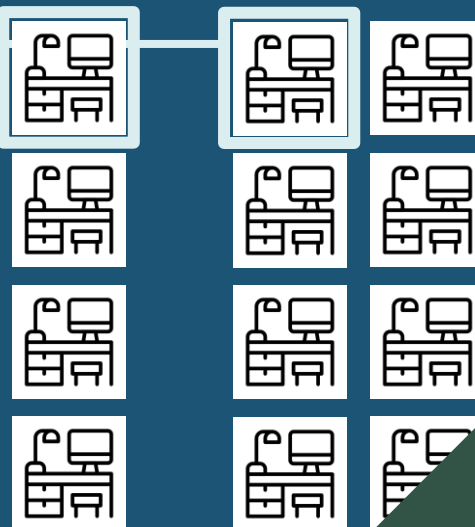
Nuclear Energy

100 Reactors
97 GW



Gross Electricity Generation

2020 **2050**



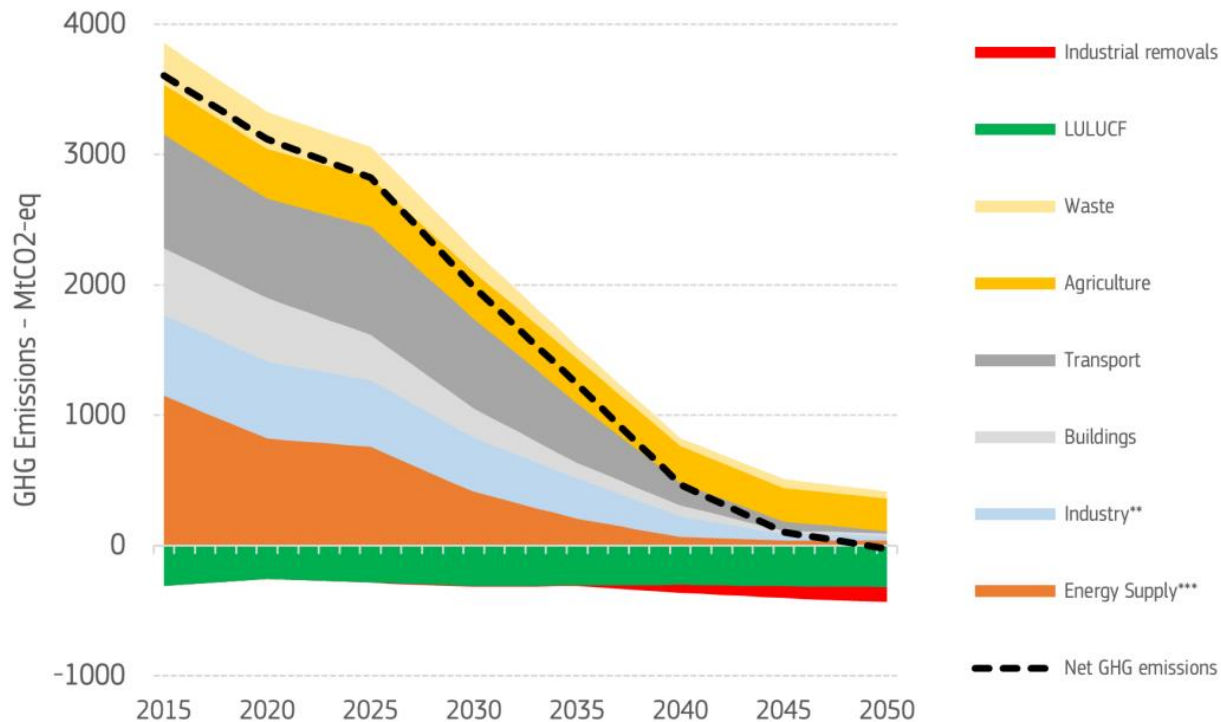
**12 g CO₂ eq /
kWh**

Policies to Protect

- **SAFETY of nuclear installations**
- **RADIATION PROTECTION of workers, people and environment**
- **SAFEGUARDS against unintended use of nuclear materials**
- **Safe and responsible management of RADIOACTIVE WASTE**

From 2030 Targets to 2040 Climate Target Plan

Greenhouse gas emissions in the period 2015-2050*



*Source: PRIMES, GAINS, GLOBIOM

**Excluding non-BECCS industrial removals

***Including Bioenergy with carbon capture and storage (BECCS)

Nuclear Safety - Waste Management

- Application of the **highest safety standards**
- The EU has the most coherent, comprehensive, and enforceable legal framework worldwide for nuclear safety
- This includes also new jurisdictions and technologies
- Increased attention to back-end:
 - Safe and responsible **management of spent fuel and radioactive waste**
 - Decommissioning as integral part of nuclear projects

Security of supply

- **Security of supply imperatives** reinforced by the current geopolitical situation and global context (climate change)
- Importance of supply **diversification**
 - **nuclear fuel manufacturing and services**
 - **spare parts and maintenance**
- Links to industrial policy considerations:
 - Need to keep EU technological leadership and continue building **strategic autonomy**
 - forward-looking EU policing also **investing in research and training of experts** in the nuclear sector
 - Active contribution of FR industry recognized and needed

SMRs

- SMRs as an opportunity to support high penetration of renewables and **contribute to the decarbonisation** of hard-to-abate sectors, as well as to **maintain workforce** and jobs in nuclear sector
- Importance of an **EU-based supply chain for all SMRs designs/vendors**
- **SMR Industrial Alliance launched** (6 February) to stimulate the development and deployment of the first SMR projects in the EU by the early 2030s.

EU traditional global leader in fusion



Public Engagement, Transparency

- **Euratom Treaty** to champion the peaceful application of nuclear energy and establish standardized safety measures
- **Environmental Impact Assessment (EIA) Directive** (2014/52/EU)
- **Public Participation Directive** (2003/35/EC, amended by 2011/92/EU)
- **European Nuclear Energy Forum (ENEF)** – 17th edition 30/09 - 01/10/2024 in Prague



Rome, March 25, 1957



European
Commission

Thank you