



The importance of education and training for the future of the nuclear industry

15th Anniversary of the European Nuclear Education Network (ENEN)

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What does nuclear contribute to Europe's economy?



127

NUCLEAR REACTORS
IN OPERATION IN THE EU



70

€ BILLION/YEAR



800,000

JOBS



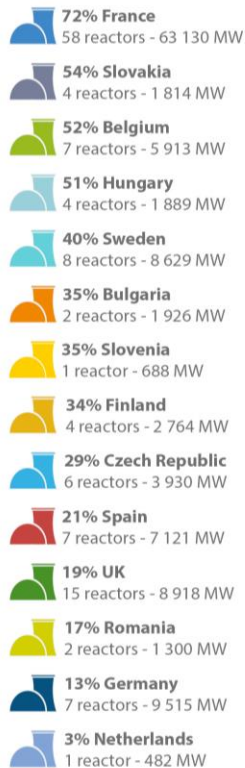
27%

ELECTRICITY PRODUCTION

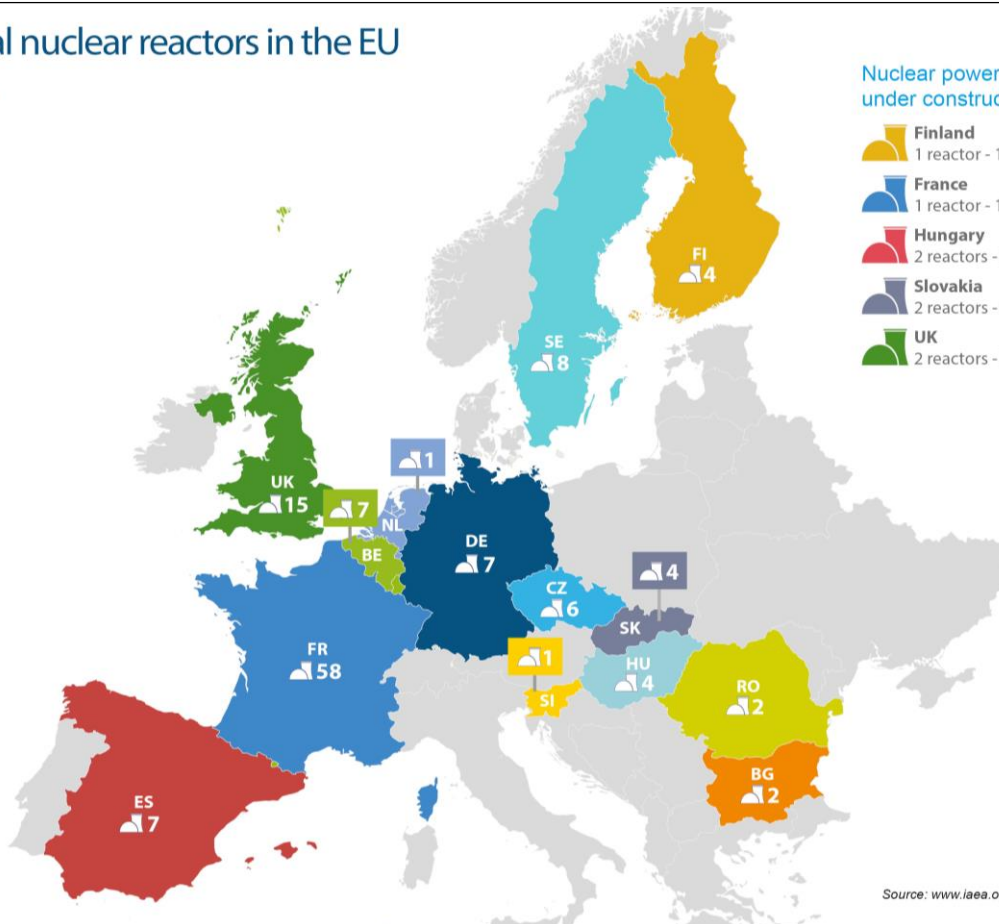
Nuclear energy in the EU

127 Operational nuclear reactors in the EU

Nuclear share of electricity



Nuclear power plants under construction



Examples of cooperation between the industry and universities



UNIVERSIDAD
COMPLUTENSE
MADRID

Spain

- Launching a number of Post-Graduate and Master's degrees by the best Spanish universities together with the industry & R&D institutes
- Exemplary courses:
 - *European Master of Science in Nuclear Fusion and Engineering Physics (Universidad Complutense de Madrid)*
 - *Master Course in Nuclear Engineering and Applications (Universidad Autónoma de Madrid)*
 - *Master's Degree in Nuclear Technology and Instrumentation (Universidad de Huelva)*
 - *Master's Degree in Sustainable Energy Engineering (Universidad Politécnica del País Vasco)*
 - *Master's Degree in Nuclear Engineering (Universidad Politécnica de Cataluña)*



France

- 2-year Master's degree programme created by Paris Sud University, Paris-tech, Centrale-Supelec & National Institute for Nuclear Science and Technology and supported by the industry (e.g. EDF, Orano) & CEA
- Covered topics:
 - *Nuclear Reactors Physics & Engineering*
 - *Nuclear plant design*
 - *Operations*
 - *Fuel cycle*
 - *Decommissioning & Waste Management*



Education, Training & Knowledge Management Working Group



Tasks:

- ✓ Strengthening the link between the industry, research institutes and education and training stakeholders
- ✓ Providing a platform for the exchange of information on the current and future needs and the best examples of collaboration between the industry, universities and research institutes
- ✓ A gateway for representatives from both industry and research organisations to provide input to various EU institutions



External partners:

- ✓ IAEA Nuclear Knowledge Management division
- ✓ JRC
- ✓ ENEN
- ✓ SNETP



FORATOM involvement in selected European initiatives



EHRO-N

European Human Resource Observatory in Nuclear

Goal: to analyse and provide information on HR demand and supply in the nuclear sector



ANNETTE

Advanced Networking for Nuclear Education, Training and Transfer of Expertise

Goal: to promote a better coordination of academic learning initiatives in nuclear



ELINDER

European Learning Initiatives for Nuclear Decommissioning and Environment Remediation

Goal: to create a commonly qualified training programme in nuclear decommissioning



ENEN+

European Nuclear Education Network Plus

Goal: to attract develop and retain new talents in the nuclear professions



Key challenges facing the nuclear industry (education & training)



1

Maintaining knowledge

- Promote best practices
- Facilitate the transfer of knowledge and expertise

2

Meeting changing expectations of the young generation

- Set out a long-term vision
- Make nuclear more attractive
- Show the role nuclear energy can play in the EU energy transition

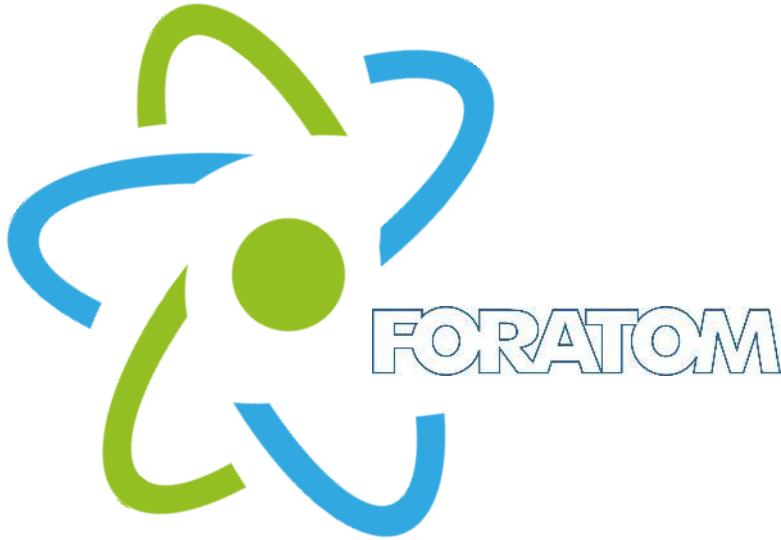
3

Putting forward good arguments

- Emphasise career opportunities, mobility, innovative projects and a decent salary



Thank you



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