



European
Commission

Nuclear Energy - Initiatives at EU level

**EuroSafe Conference
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Gerassimos THOMAS
Deputy Director-General
DG ENER
European Commission



EURATOM TREATY

1957

DFG

2006

Recommendation on financial resources for back-end

Nuclear Safety Dir.

2011

Rad-Waste Directive

Stress tests

Amended Basic Safety Standards

2013

Amended Nuclear Safety Directive

2014

2017

PINC-RW Report-TPR

Communication future of Euratom

2018





**Integrated, Interconnected,
Resilient and Secure**

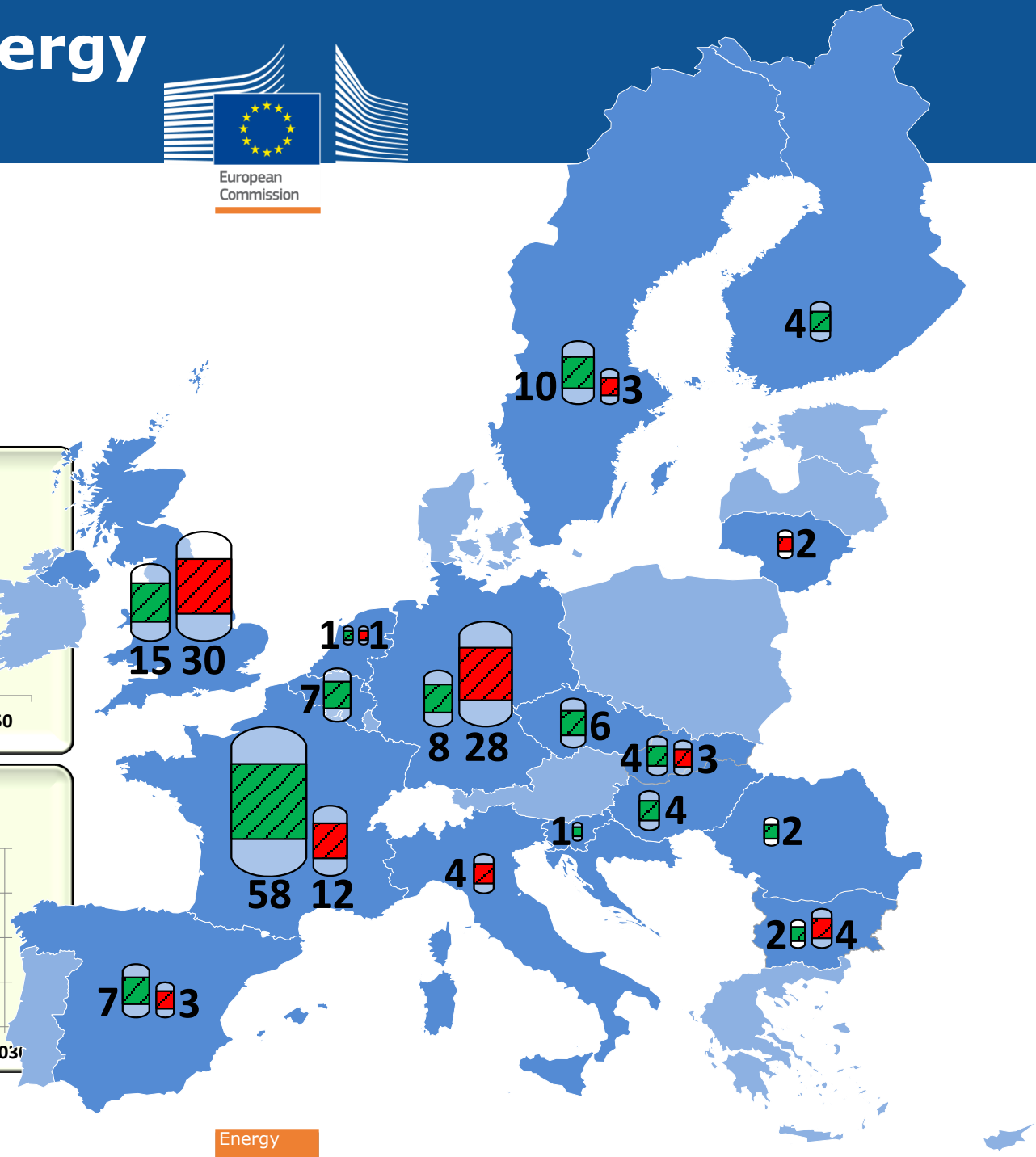
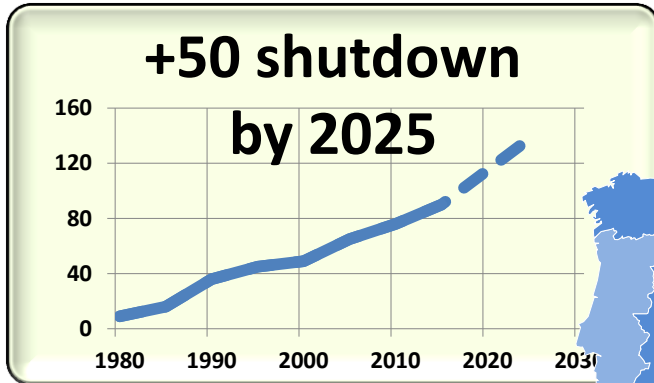
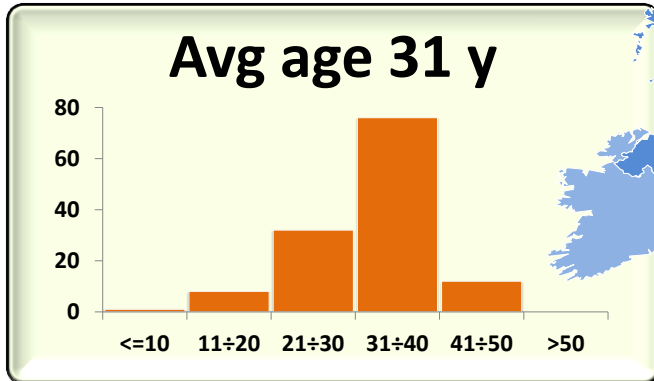
Source: Directorate-General for Energy

EU Nuclear Energy Landscape



Reactors

-  129 operating
-  90 shut-down





PINC: conclusions

- **Nuclear energy expected to remain an important component of the EU's energy mix by 2050**
- **Highest standards of safety, security, waste management to be ensured in line with the EU post-Fukushima legislation**
- **Significant investments needed: new builds, LTOs, radioactive waste management, decommissioning**
- **Importance of EU global technological leadership**
- **Cooperation in the licensing process through ENSREG should be fostered**
- **Efforts to standardise the supply chain**



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Nuclear Safety Objective

Safety assessments

Nuclear safety demonstration

Periodic safety review

Ageing issues, operational experience, international standards

Defense in depth

Impact of hazards

Abnormal failures

Abnormal operations

Accidents basis

Severe conditions

Emergency preparedness and response

Safety culture

Management systems

Operating experience

Reporting safety events

Education and training

- Continuous improvement of nuclear safety

Topical Peer Review

- Topic choice ENSREG/WENRA.
All Member States/ All operating reactors.
- First TPG on ageing: important in the context of the coming Long Term Operations
- Next milestone: Publication of national reports
Dec 2017



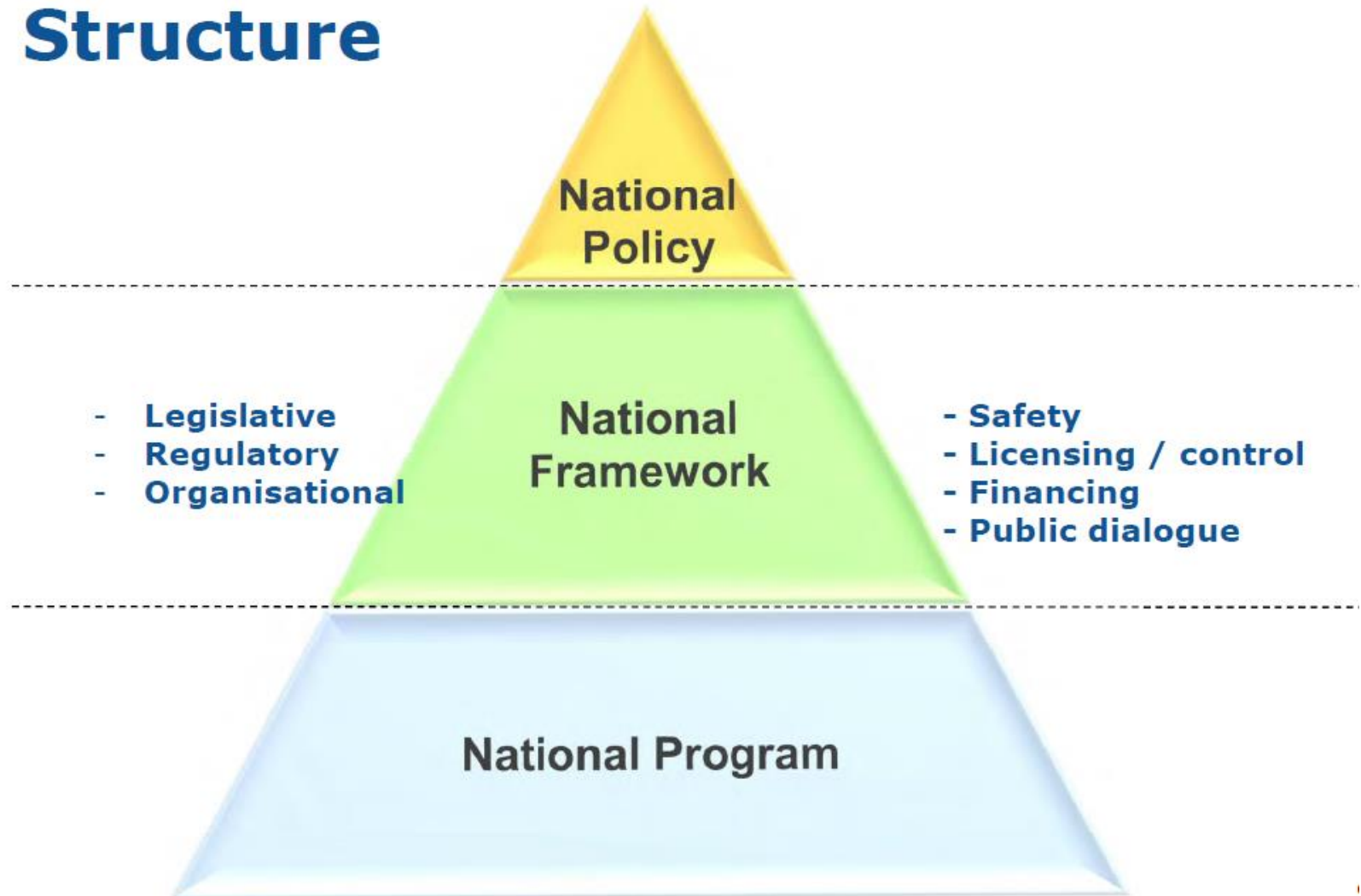
Commission Report on Radioactive Waste

- ✓ Provides an **inventory** of radioactive waste and spent fuel present in the Community's territory, including future prospects
- ✓ Provides a **comprehensive overview** to the Council, European Parliament and EU citizens on implementation of the Directive
 - ✓ **Directive 2011/70/Euratom**



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Structure



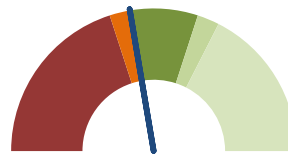
Monitoring

➤ Monitor progress

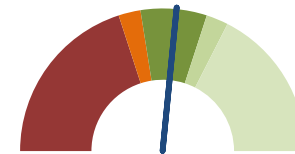
Only one third of Member States have defined clear and detailed milestones and time frames

➤ Key performance indicators

Most Member States have not clearly defined key performance indicators



SPI



CPI



PINC follow-up initiatives building on existing initiatives

NEA, MDEP, CEN, ENSREG, WENRA projects

- **Improving nuclear safety**
- **Exchanging best practice**
- **Benchmarking nuclear safety practises**
- **Expanding Harmonising codes**

PINC follow-up(1)

DG ENER study (August 2017)

- **Benchmarking of European Utility Requirements against the highest nuclear safety standards**

The study is technology independent

PINC follow-up (2)

- **Top – down**
 - **DG ENER to promote a standardisation action through CEN to extent the use of non nuclear standard in particular for bulk equipment (SSC3)**
- **Bottom – up**
 - **DG ENER and DG JRC are supporting a project of a sub group of WS 64 on “Modernisation & Optimisation of European Nuclear Supply Chain”**

PINC follow-up (3)

- **DG ENER study on the market for decommissioning nuclear facilities in the European Union**
- **DG ENER study on the risk profile of the funds allocated to finance the back-end activities of the nuclear fuel cycle in the EU**

Euratom Research

- **Euratom last call on fission research:**
 - **Safety improvements**
 - **Material integrity**
 - **Inspection technologies**
 - **SMRs**
- **Euratom calls on fusion research and ITER support**

Cooperation with ETSON

- **Identifying improvements in the licensing process**
- **Technical support for NSD implementation**
- **Standardisation / optimisation in the nuclear supply chain**
- **More?**



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Thank you!

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ec.europa.eu/priorities/energy-union

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