EUROPEAN COMMISSION

MEMO

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New Nuclear Safety Directive

What is new in the directive?

The proposal substantially strengthens the provisions of the existing directive. It:

- introduces EU-wide **safety objectives**;
- sets up a **European system of peer reviews** of nuclear installations;
- increases **transparency** on nuclear safety matters;
- strengthens **the role** and **independence of national regulatory authorities**;
- introduces a requirement of **specific safety reviews for older nuclear power plants** for which a lifetime extension is considered;
- enhances **on-site emergency preparedness and response, for example** by implementing strict accident management guidelines and by putting in place emergency response centres which must be protected against radioactivity and earthquakes or flooding.

Why safety objectives rather than specific technical requirements?

Any fixed technical requirements can become quickly obsolete given the continuous improvements expected in safety over time and they could become a disincentive for further development of a sound nuclear safety culture in Europe. Instead, the directive sets up a flexible and dynamic process. To support the safety objectives, more detailed requirements explaining how they are to be achieved in practice relating to the life (licensing, design, operation, decommissioning) of nuclear installations are laid down in the directive.

What are topical peer reviews?

The topical peer review system allows for a verification mechanism to ensure that common safety objectives are achieved at EU level. The introduction of topical peer reviews was largely inspired by the peer review process used during the nuclear stress tests undertaken after the Fukushima accident, whilst here the assessments will each time focus on different safety aspects.

How do they work?

A peer review of one or more nuclear safety topics will be organised at least **every six years.** First, national assessments will be prepared, and these will be submitted for a peer review. The results of the peer review will then be translated into concrete technical recommendations.

Who will pick the topics? Based on what?

Based on their importance and relevance, the topics will be chosen by Member States with the support of regulators and in close coordination with the Commission. An example of a topic could be systems to allow safe depressurising of a reactor containment in case of an accident (e.g. by means of containment filtered venting).

In addition, in case of an accident and major safety problems, the Member State has to organise a peer review of the installation within six months.

What will be the Commission's role in these peer reviews?

If Member States fail to select at least one topic for a peer review, the Commission will decide on the topics. If the Commission identifies deviations or delays in the implementation of peer review recommendations, it can launch a verification mission to be carried out by other Member States.

Will the results of the peer reviews be public?

Yes, national regulatory authorities will have to publish the results of the peer reviews.

When will the new standards be implemented?

The directive could be adopted by the Council in the course of 2014, following the (non-binding) opinion of the European Parliament. Member States will then have 18 months to transpose it into national legislation.

What else is the Commission doing to ensure nuclear safety in Europe and beyond?

The Commission is following up with the European Nuclear Safety Regulators' Group the implementation of the technical improvements required by the stress tests report. It continues to monitor the implementation of other relevant legislation, for example in the areas of radiation protection or radioactive waste management. It also promotes research activities aiming at improving the safety of nuclear installations.

Outside the EU, the Commission continues to engage, in particular with EU neighbouring countries, and provides assistance to ensure that countries planning to start using nuclear energy will meet internationally recognized nuclear safety standards. In this context, the Commission cooperates closely with the International Atomic Energy Agency.

How many nuclear power plants (NPPs) are there in the EU and where are they located?

There are **132 operating reactors in 14 EU Member States**:

- Belgium: 7 reactors (2 NPPs)
- Bulgaria: 2 reactors (1 NPP)
- Czech Republic: 6 reactors (2 NPPs)
- Finland: 4 reactors (2 NPPs)
- France: 58 reactors (19 NPPs)
- Germany: 9 reactors (12 NPPs, 17 reactors, 8 were shut down after Fukushima)
- Hungary: 4 reactors (1 NPP)
- The Netherlands: 1 reactor (1 NPP)
- Romania: 2 reactors (1 NPP)
- Slovakia: 4 reactors (2 NPPs)
- Slovenia: 1 reactor (1 NPP)
- Spain: 8 reactors (6 NPPs)
- Sweden: 10 reactors (3 NPPs)
- United Kingdom: 16 reactors (10 NPPs)

Lithuania: 2 reactors under decommissioning (1 NPP)

Four reactors are **under construction**:

- Finland: 1
- France: 1
- Slovakia: 2

Planned reactors:

- Bulgaria: 1
- Czech Republic: 2
- Finland: 2
- France: 1
- Lithuania: 1
- The Netherlands: 1
- Poland: 2-3
- Romania: 2
- United Kingdom: 4