



Towards a Community approach to nuclear safety



The nuclear package

On 6 November 2002 the European Commission proposed a Community approach to nuclear safety.

Why such an approach?

The Green Paper on security of energy supply adopted by the Commission on 29 November 2000 raised the issue of the position of nuclear energy amongst the other energy sources in the European Union. The policy introduced to reduce emissions of greenhouse gases and their adverse effects on the climate, together with the forthcoming enlargement of the Union which will bring in countries with nuclear power stations, many of them ageing, has brought to light an objective new need for Community action in the nuclear sector, independent of the energy policy choices made by the Member States.

Under the Euratom Treaty, signed in 1957, the Union has adopted extensive legislation on radiation protection. But although the Treaty provided for safeguards relating to the operation of nuclear installations and the use of nuclear materials, it set no standards on **nuclear safety having the force of law**.

Today, however, it is no longer possible to consider nuclear safety from a purely national perspective. Only a common approach can guarantee that high nuclear safety standards will be maintained in an enlarged 25- or even 28-member Union.

In preparation for enlargement, in June 1999 the Cologne European Council asked the Commission to ensure the application of high safety standards in Central and Eastern Europe. The Laeken European Council in December 2001 subsequently requested regular reports on nuclear safety. A new Community reference framework on nuclear safety standards is therefore indispensable. It would be inconceivable for the Union to monitor nuclear safety in just the new Member States but not in the rest of the enlarged Union.

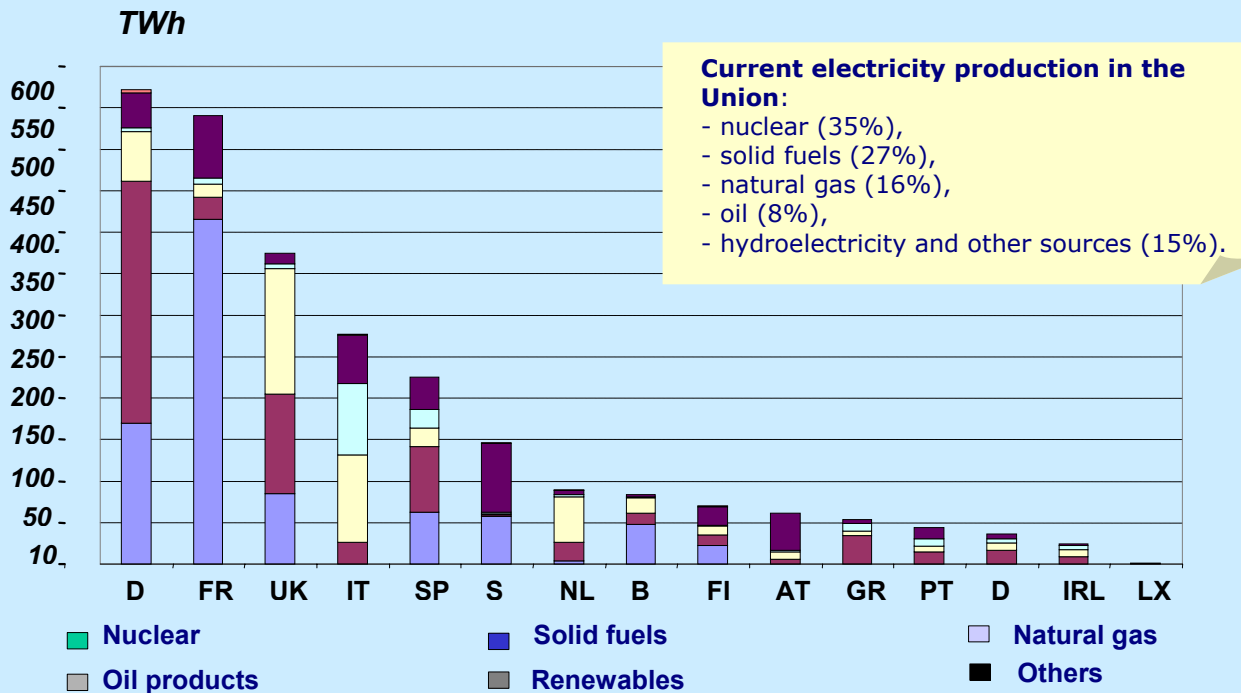
The legal basis

Action by the Community in this field must be built on a solid legal basis in the founding treaties. Since this area concerns the use of nuclear energy, the legal basis is clearly to be found in the Euratom Treaty. The provisions in the Treaty concerning health protection provide a general framework containing the legal basis for the Community's responsibilities for nuclear safety.

Beyond the purely legal aspects, this responsibility is, moreover, recognised by the Council.



Electricity production by source and Member State in 2000



As part of this new approach, the Commission has proposed a package of measures to improve nuclear safety.

To produce a truly Community approach to nuclear safety, even before enlargement, the Commission has proposed a package of three measures covering nuclear safety and the decommissioning of obsolete installations, the management of radioactive waste and trade in nuclear materials with Russia.

1 A directive on the safety of nuclear installations during operation and decommissioning

This directive will introduce **common safety standards** and monitoring mechanisms which will guarantee that common legally enforceable methods and criteria will be applied throughout the enlarged Union. Each Member State will be required to have an independent **safety authority**. A common frame of reference for these safety standards has been built up by the existing standards, those developed by the International Atomic Energy Agency (IAEA), and those developed over 25 years by national safety authorities in working groups organised by the Commission and by the Western European Nuclear Regulators' Association (WENRA).

Nuclear energy in the Member States today

Five out of the eight Member States with nuclear installations have now introduced or announced a moratorium.

France, the United Kingdom and Finland have not taken any decision on whether to stop using nuclear energy, but no new reactors are likely to be built in the next few years, except, possibly, in Finland.

Italy renounced nuclear energy following a referendum in 1987.

Germany has announced its decision to shut down its last reactors in 2021 and in Belgium agreement has been reached to do the same in 2025.



Like the existing national systems, a Community approach to the safety of nuclear installations during operation and decommissioning must consist of two components. First, a set of standards and, second, mechanisms for monitoring compliance with them and imposing penalties for any failure to do so. Community control will consist of verifying the methods whereby the safety authorities conduct their mission, it will not aim to verify in situ the safety conditions of nuclear installations. Co-ordination of the national systems within a Community framework is a gage to maintain a high level of safety of nuclear installations.

A report every two years. Every two years the Commission will publish a report on the nuclear safety situation in the European Union.

Nuclear energy in the candidate countries today

The candidate countries, some of which have given the European Union undertakings to shut down their nuclear reactors which are not particularly safe, take a mixed view of the alternatives to nuclear energy because of the impact on their economies.

While Turkey has put off building a nuclear power station indefinitely, Poland would like to keep its options open. It is also possible that other candidate countries might toy with the possibility of new power stations.

Consequently, the problem of the safety of nuclear installations in the candidate countries and of decommissioning facilities which cannot be upgraded at reasonable cost is a priority and will be closely monitored before their accession to the European Union.

At the same time the directive will **guarantee adequate financial resources for the decommissioning funds** required. Many nuclear installations in the Union are coming to the end of their service life, while in the candidate countries eight reactors will have to be shut down by 2009. Sufficient financial resources must be set aside to ensure safe decommissioning. To this end, the proposal for a directive defines the **Community rules for the constitution, management and use of the decommissioning funds** required with its own legal personality, distinct from that of the nuclear operator, to guarantee available and adequate resources to enable decommissioning operations to take place in a way that protects the population and the environment from ionising radiation. It provides that decommissioning funds set up by operators must be managed separately from their other financial resources. In particular, it must be possible to mobilise these decommissioning funds when the time comes.

The PHARE programme

Through the PHARE Programme, the Community has for a number of years been funding projects in the nuclear sector in the candidate countries, several of which concern activities relating to final closure, including waste treatment, fuel storage and the planning of activities.

Decommissioning costs in the candidate countries

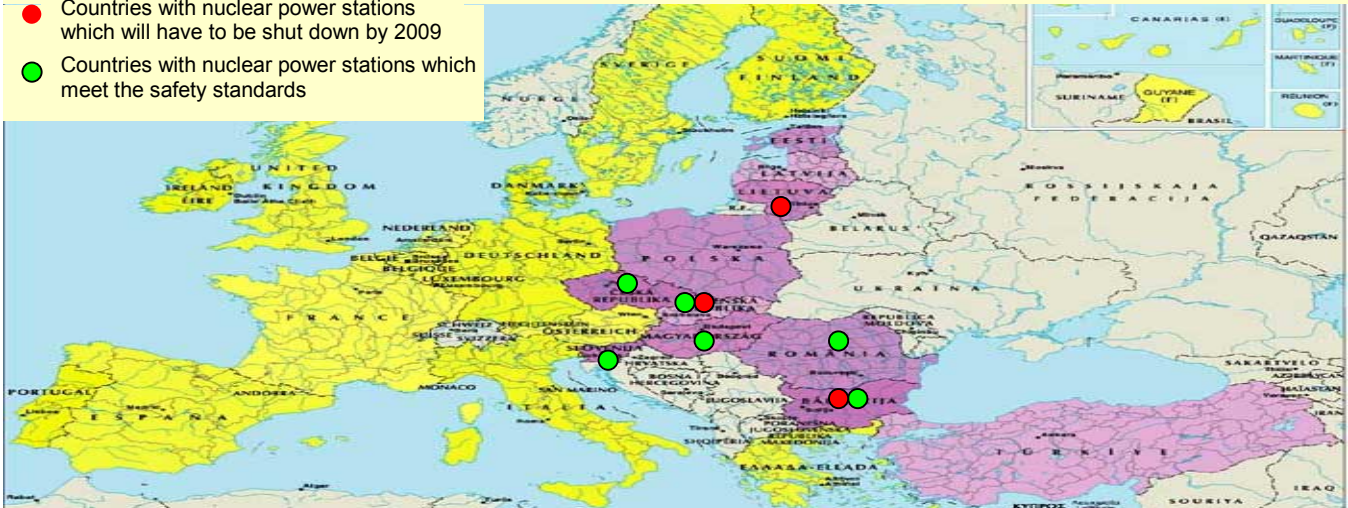
Clearly the national decommissioning funds in the three countries concerned by the early closure of nuclear reactors (Lithuania, Bulgaria and Slovakia) will not have sufficient resources to pay for all the work needed until decommissioning is completed. However, the situation differs from country to country. The Commission is unable to enter into any commitments beyond 2006, although the need for funding will be greatest in the years after that, considering the decommissioning timetables proposed.



Between them seven of the twelve candidate countries have a total of 22 nuclear power plants. Enlargement has brought to light an objective new need for Community action in the nuclear sector, independent of the energy policy choices made by the newcomers to the EU or by the existing Member States.

Nuclear power stations in the candidate countries

- Countries with nuclear power stations which will have to be shut down by 2009
- Countries with nuclear power stations which meet the safety standards



2 A Directive on radioactive waste

This directive will help to produce a clear, transparent response in reasonable time to the issue of how to deal with radioactive waste. This proposal gives priority to **geological burial** of waste as the safest method of disposal given the present state of knowledge. It provides that Member States should adopt, according to a pre-set timetable, **national programmes for the storage of radioactive wastes** in general and deep burial of highly radioactive wastes in particular. They are required to decide on (national or regional) burial sites for highly radioactive wastes at the latest by 2008 and to have the sites operational at the latest by 2018. For low-activity, short-life waste, storage arrangements must be ready at the latest by 2013. To increase coordination and financial support for research, the Commission intends in due course to propose the creation of a Joint Undertaking to manage and steer funding for research programmes on radioactive waste management from the Joint Research Centre, the Member States and industry.

3 A draft decision authorising the Commission to negotiate an Agreement between Euratom and the Russian Federation on trade in nuclear materials

Since 1992 the Euratom Supply Agency has been pursuing a policy of diversification of sources of supply in order to avoid over-dependence on the Russian Federation. This Agreement will have to protect the interests of European consumers and maintain the viability of the European industries, in particular the enrichment industry.

The characteristics of the nuclear reactors in the majority of candidate countries and the commercial supply relations with the Russian Federation has placed in a new light the ongoing difficulties regarding trade in nuclear materials between the Union and the Russian Federation, which is an important supplier of nuclear materials (natural uranium and enrichment services).

The nuclear disarmament agreements, and above all the prospect that enlargement will bring in countries which have Soviet-type nuclear power stations for which Russia is practically the only fuel supplier, requires consideration of a new long-term framework for current supply policy.

For the European Union, it is also an opportune moment to bring home to the Russian authorities that the opening of negotiations on trade in nuclear materials should result in the opening of parallel detailed talks on the safety of first-generation power stations still operating in Russia.



The new Agreement will have to take account of the new conditions on the market in the enlarged Union. For the European Union it is also the opportune moment to make known to the Russian authorities that the opening of negotiations on the trade in nuclear materials should open parallel detailed negotiations on the safety of first-generation power stations still operating in Russia.

The Community's responsibility for supplies and Euratom safeguards

The Euratom Treaty sets out the framework for comprehensive Union responsibility for the whole fuel cycle, from nuclear materials to waste.

Civil nuclear activities are regulated in the European Union by the Euratom Treaty signed in 1957. This set up a Supply Agency to ensure a regular, equitable supply of nuclear materials to European users and a European Safeguards Office to make sure that nuclear materials were not diverted from their intended use. Some 215 inspectors are currently working on this task. The arrangements put in place by the Treaty and by the Community legislation ensure the most effective control in the world over nuclear materials.

A substantial set of specific measures has been developed in the field of radiation protection. Paradoxically, however, nothing similar has been developed on the safety of nuclear installations. With this in view, the Commission has proposed adding common safety standards to the corpus of legislation dealing with radiation protection, as requested by the European Council, particularly at its meeting in Laeken, and by the European Parliament in the Rübzig report, adopted on 8 July 2002, on the report from the Commission on the activities of the Euratom Safeguards Office in 1999 – 2000.

Conclusions

Since the Chernobyl accident in April 1986 public opinion is very sensitive to matters concerning nuclear safety. Relations between Austria and the Czech Republic, resulting in the conclusion of a protocol under the auspices of the Commission, are a perfect illustration of this.

The work carried out by the Commission and the Council has made it possible to evaluate the safety of the nuclear power stations in the candidate countries and issue recommendations so that those installations can achieve a high level of nuclear safety. However, no comparable evaluation has been carried out with regard to the safety of the nuclear installations in the current Member States. This situation is not only unfair but also politically delicate, since it is the Member States' safety authorities who have declared that safety standards are high at the installations under their responsibility. Such a finding by an independent supervisory authority would have greater weight.

On the eve of an unprecedented enlargement, at a time when there are vital nuclear safety issues at stake, it is time for the Community clearly to shoulder its responsibilities with regard to the safety of nuclear installations and adopt legally binding rules.

Enshrining the existing rules and principles in Community legislation will make it possible to reconcile efficiency and speed of implementation. Having recourse, to some extent, to experts from the national safety authorities to carry out the tasks connected with the verifications will make it possible to provide undisputed technical expertise. Interlinking the national systems and the Community system will guarantee that a high level of safety is maintained at nuclear installations in the enlarged European Union.