



ENE Secretariat's Conclusions

The Forum

- Discussed the 2 topics below, and the ENE Secretariat has found the following points to best summarize the points of view expressed during the panel debates:

1. Maintaining a critical level of nuclear safety expertise in Europe

The Forum:

- Highlights that while the share of nuclear electricity in the EU is expected to fall from its current level of 27%, nuclear power is expected to remain in the market;
- Underlines that nuclear safety expertise is relevant beyond the power generation sector and its legacy and covers also medical, industrial, agricultural, space and research applications;
- Highlights that Member States which are currently using nuclear power or phasing out nuclear power generation will still need sufficient numbers of qualified professionals for an indefinite period of several generations or even longer in order to handle the safe decommissioning and safe management of spent fuel and radioactive waste;
- Highlights that given current plans for long term operation of the existing nuclear fleet and new build projects, expertise may be needed in the area of continuing operations, but certainly for decommissioning of nuclear power plants and management of radioactive waste and spent fuel;
- Underlines that nuclear safety must be ensured throughout the entire life cycle of nuclear installations. The nuclear safety directive highlights the importance of qualified and skilled human resources in this regard and the key role for the Member States to ensure arrangements for the education and training of their staff;
- Acknowledges the European Commission Joint Research Center's projects aimed at the preservation of knowledge and European expertise in the field of nuclear safety. The Euratom programme supports a variety of consortia in their education and training activities such as ANNETTE and ENEN+. Moreover, the European Clearinghouse on Operating Experience for Nuclear Power plants is an important tool for exchange and

preservation of international operational experience essential for ensuring continuous safety improvements;

- Appreciates the actions undertaken by certain Member States in partnership with nuclear industrial organisations in an effort to coordinate action and identify industrial needs in matters of education and training;
- Supports the work of ETSON (a European network of technical support organizations), and the European Nuclear Society, and in particular its Young Generation Network, which gives insight into nuclear energy as a career option and what is possible in the sectors, as well as actions directly supported by the European Commission, such as facilitating the common training actions of nuclear safety regulatory and TSO staff;
- Mentions the good example of a training initiative launched by JRC and 14 MS partners and IAEA on nuclear decommissioning and environmental remediation (ELINDER); as well the organization of summer schools in decommissioning;
- Stresses the importance of the European Observatory on Human Resources in the Nuclear field (EHRO-N), which monitors the needs and supply of nuclear experts;
- Stresses the challenge of the European nuclear sector in recruiting and retaining qualified professional staff to ensure the safety of the existing nuclear fleet and its legacy;
- Highlights that several reports made by EHRON indicate a deteriorating situation, mainly due to growing retirements and lack of attractiveness of the sector, may lead to a potential shortage in the future if no action is taken;
- Recognises that efforts need to be stepped up to enhance transparency on nuclear safety matters with the active involvement of civil society and stakeholders;
- Looks forward to the future efforts to be taken in this area and asks the Commission to monitor the progress achieved.

2. Small modular reactors – EU and worldwide perspectives

The Forum:

- Highlights that larger scale introduction of small modular reactors introduces new questions, including the increased risks for malevolent attack when reactors are more widely geographically spread, and increased risks for nuclear proliferation.
- Acknowledges that the choice of whether or not to use SMRs remains with the Member States, their citizens and the relevant operators;
- Reminds that Europe has traditionally been in the forefront of nuclear research, and there exists an ambition among some in Europe to maintain technological leadership, in particular in nuclear technologies like SMRs;
- Highlights that Member States and regulators should be open to new technologies – and approach their licensing without compromising the high level of nuclear safety standards in the EU;
- Points out that the early involvement of regulators in the design review is identified as a good practice. The so-called first of a kind (FOAK) aspects should be dealt with to demonstrate in time by appropriate physical testing and calculation methods the effectiveness of the main features, in particular passive safety systems;
- Notes the potential non-power uses of SMRs, which some would like to see further explored;
- Considers that SMRs that are to operate in liberalised markets in the EU should not be offered financial support by the state and/or the EU or Euratom;

- Highlights that the first analyses performed by regulators show that when the high nuclear safety standards of nuclear power plants have to apply to SMRs, these will necessitate only limited interpretation or modifications. Simplification claims of vendors should be carefully considered before being accepted. Safety and security specificities related to several units operated simultaneously in the same plant should be carefully analysed;
- Highlights that the recent Commission initiative to explore the opportunities for increased cooperation in the area of licensing, as well as modernisation and security of the nuclear supply chain also applies to SMRs;
- Considers that the European Nuclear Safety Regulators' Group (ENSREG) is the appropriate high-level working group to address those issues at regulatory level. Notes that it has included several of those topics in its working programme;
- Considers that it is essential to ensure strong cooperation and dialogue between Industry, Utilities, Member States, civil society and the EC to ensure justified, safe and transparent deployment of SMR, when they indeed would reach the market.