OECD/NEA countries adopt a statement
about qualified human resources in the nuclear field

Representatives from OECD/NEA member countries have unanimously adopted a statement on the need for qualified human resources in the nuclear field. The adoption of this statement reflects their concerns about the difficulties nuclear institutions in many OECD/NEA member countries are experiencing in recruiting qualified specialists. Recent studies have also shown that nuclear education and training have been suffering declines of various degrees. If no action is taken on this issue, the nuclear sector risks facing a shortage of qualified manpower to ensure the appropriate regulation and operation of existing nuclear facilities as well as the construction of new ones in those countries wishing to do so.

The statement, as adopted by the Steering Committee for Nuclear Energy, has just been sent to Ministers in all member countries and has been reproduced below.

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NEA membership consists of 28 OECD member countries. The mission of the NEA is to assist its member countries in maintaining and further developing, through international co-operation, the scientific, technological and legal bases required for a safe, environmentally friendly and economical use of nuclear energy for peaceful purposes. The NEA also provides authoritative assessments and forges common understandings on key issues, as input to government decisions on nuclear energy policy and to broader OECD policy analyses in areas such as energy and sustainable development.

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Statement by the NEA Steering Committee for Nuclear Energy regarding a government role in ensuring qualified human resources in the nuclear field

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1. The life cycle of the nuclear industry is no different than that of any other industry, as well as to most forms of human activity from beginning to end. However, each industry has its own distinguishing features that set it apart from others. The nuclear energy sector is characterised by long time horizons, technical complexities and need for excellence. While the early nuclear power plants were designed to operate for 30-40 years, today the expected lifetime is 50-60 years. Moreover, nuclear activities from cradle to grave may be in excess of 100 years when one adds the monitoring of long-lived radioactive waste.

2. The rapid technical evolution of industry would not have been possible without the many high-quality research and development programmes helping to create knowledgeable and technically competent staff necessary for safe operations. Due to the long timescales and requisite specialised competence, the nuclear sector now faces three problems:

- How to retain existing skills and competences for the long period during which a plant is operating, especially when facilities in that country may be at the end of the life cycle and no additional facilities are foreseen in the near future.

- How to develop and retain new skills and competences in areas such as decommissioning and radioactive waste management, which may be viewed as “sunset” activities and therefore unattractive to young people.

- How to support a revival of nuclear power in countries wishing to do so, with an ageing workforce and declining programmes.

3. These problems are affected by the increasing liberalisation of electricity markets, resulting in pressure to reduce costs as well as a decrease in government funding for nuclear research. The sector is witnessing a loss of expertise following downsizing to reduce salary costs, a loss of research facilities to reduce operating costs, and a decline in support to universities to reduce overheads. Additional factors include the high volatility of fossil fuel prices and concerns regarding the security of energy supply and greenhouse gas emissions. A greater use of nuclear energy by those countries wishing to do so could make a contribution to a diversified energy mix as well as being a way of reducing CO₂ emissions.

4. In recent years, a number of studies have been undertaken to examine the concern that nuclear education and training are in decline. In July 2000, the OECD/NEA published a report entitled Nuclear Education and Training: Cause for Concern? with recommendations. The actions taken by governments have varied, with improvements in some areas and little change in others. In some countries, specific plans to support universities have been successful in reversing the declining trends of the number of graduates in nuclear engineering and related disciplines.

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5. Most countries have recognised the need to secure qualified human resources in the nuclear energy field, *inter alia*, due to the long lead time in existing programmes and consideration of new energy production options. Although some progress has been achieved, more needs to be done. Given that availability of qualified human resources is a prerequisite, *inter alia*, to the safe operation of existing nuclear power plants as well as to recourse to nuclear energy in general, the OECD Steering Committee for Nuclear Energy has agreed to convey to its members governments the following statements:

- Governments should regularly carry out assessments of both requirements for, and availability of, qualified human resources to match identified needs.

- Governments, academia, industry and research organisations should collaborate both nationally and internationally to enhance nuclear education and availability of nuclear expertise, including financial support to universities and scholarships to students.

- Governments, whether or not they choose to utilise nuclear power, should also encourage large, high-profile, international R&D programmes which attract students and young professionals to become the nuclear experts required for the future.