

The ISaR Institute for Safety and Reliability

The ISaR Institute is a scientific organization offering expertise and methods for assessing and optimizing the safety and the reliability of nuclear power plants and other complex systems. Main fields of activity are consulting on nuclear and interdisciplinary safety issues, analytical research related to simulation and probabilistic safety assessment, and training of graduates for nuclear careers. ISaR is located at the campus of the TU München in Garching near Munich.

www.isar.tum.de

The Chair of Nuclear Engineering of TUM

The NTech Chair of the Technische Universität München belongs to the Faculty of Mechanical Engineering located at the Garching Campus. The chair is offering both a Bachelor and a Master program in nuclear engineering. Activities focus on applications of nuclear technology and safety analysis of nuclear systems. Current research points relate to best estimate safety analysis of NPPs and to neutronic and thermal-hydraulic methodologies.

www.ntech.mw.tum.de

The ENEN Association

The European Nuclear Education Network is a non-profit international organisation whose mission is to preserve and further develop higher nuclear education and expertise. Members are universities and organisations involved in the application of nuclear science and ionising radiation with established relations to universities. At present ENEN has 46 members in 18 countries. Most members are European universities providing high level scientific education in nuclear disciplines.

www.enen-assoc.org

Training Course on

The Role of Nuclear Power for Energy **Supply and Economics**

Date

Place Munich, Germany

February 23rd - 24th, 2009

Who should attend?

The course module is tailored to university graduates in engineering and science preparing for careers at nuclear utilities, vendors, suppliers, regulators, international organisations, expert organisations and consultants. The module is also well suited for young academic professionals in nuclear organisations and for nuclear re-education of engineers and scientists working in other fields.

Lecturers

The lectures are given by internationally renowned experts and executives from industry, research institutes and universities.

Registration deadlines

Early registration: February 2nd, 2009 Late registration: February 19th, 2009

Registration fees*

Early registration: 1.000 € Late registration: 1.200 €

* Fees include VAT, cover lectures and course material

Public bodies and ENEN members receive a 20% reduction Grants are available for a limited number of students.

Information / registration

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Further details and registration at www.isar.tum.de/courses

Venue and Accomodation

The lectures will be given on the premises of the Technical University of Munich.



Training Courses

1SaR



The Role of Nuclear **Power for Energy Supply** and Economics Munich | February 23rd - 24th, 2009





Summary

This course module deals with whole spectrum of energy supply and economics and the role of nuclear energy within this context. It covers energy demand and resources, the concept of sustainability, the role and functionality of energy and electricity markets as well as the macroeconomic aspects of electricity and nuclear power production.



Objectives

Participants are expected to achieve a good understanding of

- the different sectors of energy consumption and energy supply
- the impact of population growth
- bases and limits of forecasts
- common definitions such as load sectors, elasticity, resources and sustainability
- cost structures of relevant electricity generation options
- the role of relevant international institutions
- functioning of electricity markets
- how transmission and distribution is regulated
- role and structure of relevant taxes, subsidies and certificates
- interactions between economic growth and energy prices
- main factors relevant for security of supply
- principles and concepts of risk analyses.

Syllabus

- Energy demand / consumption and supply / resources
 - dependence on population and economic growth
 - elasticity, forecasts
 - role of energy for life and civilisation
 - resources
 - different sectors of energy consumption (electricity, heat, traffic, natural gas, ect.) and different technologies (incl. R&D) + transmission and distribution
 - different load sectors with respect to electricity generation
- Sustainability in energy policy / economics
 - overview of relevant national and international institutions
 - triangle of goals in sustainability
 - role of energy mix
 - generic evaluation of different energy sources and technologies with respect to sustainability
- Energy markets and electricity markets
 - value creation chain
 - market mechanism
 - costs and cost structure of electricity generation options
 - regulation of transmission and distribution
 - regime of emissions trading
 - energy taxis
- Macroeconomic and environmental aspects of energy / electricity, especially of nuclear energy
 - economic growth and role of energy prices
 - security of supply and risks analyses

