International Atomic Energy Agency

INPRO Dialogue Forum on Nuclear Energy Innovations:
Common User Considerations for Small and Medium-sized Nuclear Power Reactors

PROSPECTUS

Project Number & Title: INT/4/142 “Promoting Technology Development and Application of Future Nuclear Energy Systems in Developing Countries”

Place (City, Country): Vienna, Austria

Dates: 10-14 October 2011

Deadline for Nominations: 5 August 2011

Organizers: The International Atomic Energy Agency (IAEA)

Host Country Organizer: IAEA Workshop Directors:
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Language: English

Purpose: The main objective of the INPRO Dialogue Forum is to bring together nuclear technology users and technology holders from interested IAEA Member States to discuss issues related to sustainable nuclear energy development and deployment. This dialogue facilitates mutual understanding of the needs and potential roles of technology users and the possibilities and limitations of technology holders.

This study provided a comprehensive summary of the opinion of experts from developing countries that are considering the deployment of nuclear power plants in the near term, or are making projections for the deployment of nuclear power plants in the next 40 years (up to 2050).

The CUC scope was initially limited to medium and large nuclear reactors but was then expanded to include small reactors. This study noted potential advantages of SMRs for many developing countries with small electric grids, less-developed infrastructure and limited investment capabilities. Given recent developments in SMR technologies, it is timely to revisit the CUC study but with a focus on SMRs to spell out more particularly issues and considerations that are specific to these technologies and their unique applications. This will provide valuable feedback to developers of SMRs. In addition, it would provide an opportunity for technology users to influence the development of these technologies and to discuss their potential role in SMR development activities.

The purpose of this Dialogue Forum workshop is to discuss user considerations for SMRs in light of the conclusions reached in the CUC study and recent developments in SMR technologies. The focus will be on developing countries’ needs; however, input will also be sought from developed countries that are considering the deployment of SMRs for specialized applications (e.g., deployment in remote areas or process heat applications).

The workshop will be conducted in cooperation between International Project on Innovative Nuclear Reactors and Fuel Cycles (INPRO) and the Nuclear Power Technology Development Section (NPTDS) of the Division of Nuclear Power, IAEA Department of Nuclear Energy.

**Expected Output(s):**

Participating Member States will be provided with an opportunity to present their thoughts and ideas on the prospects of small and medium size nuclear reactors (SMRs) in their future deployment strategies as well as their expectations from these technologies. The information in the form of “SMR user considerations” will be shared with developers of these technologies and will be used to decide if the earlier INPRO common user criteria considerations (CUC) study needs to be updated with a focus on SMRs.

**Scope and Nature:**

The workshop will consist of lectures and presentations by IAEA and workshop participants as follows:

1) Introductory IAEA presentations on SMR technologies
2) Presentations from potential users from developing countries (nominated participants) based on a questionnaire and a template that will be provided before the workshop. The questionnaire will be designed to facilitate input from potential users who are interested in SMRs or may be interested if certain conditions are met.

3) Presentations from users from developed or technology holder countries who understand technical requirements of SMRs for specific applications. These presentations will focus on user criteria related to these specific applications.

4) Presentations from invited SMR developers with a focus on criteria used in their development activities as well as an outline of the development status.

The presentations will be followed by breakout sessions to discuss common user needs from developing countries. The breakout sessions will cover the categories that were identified in the INPRO CUC and other studies:

(a) Economics and financing
(b) Infrastructure
(c) Nuclear safety; environment
(d) Resources
(e) Proliferation resistance
(f) Physical protection
(g) Technical requirements
(i) Assurance of fuel supply
(k) Used fuel and waste management options
(l) Deployment strategy (Options)
(m) Design certification and licensing pathway
(n) Manufacturability and supply chain (Options)

Under item (a) above, the scope will be extended to include socio- and macroeconomic considerations that impact decisions to deploy nuclear energy. In addition, the breakout sessions will address roles that developing countries may wish to have in the development of SMRs.

The final session will consist of presentations summarizing the conclusions from the breakout sessions. These conclusions will be used to decide if sufficient information is available from the workshop to determine common user considerations for SMRs for developing countries, or if a follow-up CUC activity specific to SMRs is needed.

**Background Information:** Through the Technical Cooperation (TC) Programme, the Agency seeks to bring together technology holders and technology users to discuss and share
information on desirable innovations, both technical and institutional, to ensure that nuclear energy is available to meet long-term global energy needs in a sustainable manner. The INPRO Dialogue Forum is one mechanism for technology holders and users to discuss such innovations.

**Participation:**

The meeting is open to 50 participants from Albania, Algeria, Angola, Argentina, Armenia, Australia, Azerbaijan, Bangladesh, Belarus, Belgium, Bolivia, Brazil, Bulgaria, Burkina Faso, Canada, Cameroon, Chile, China, Croatia, Czech Republic, Dominican Republic, Ecuador, Egypt, El Salvador, Estonia, Finland, France, Georgia, Germany, Ghana, Greece, Hungary, India, Indonesia, Israel, Italy, Japan, Jordan, Kazakhstan, Kenya, the Republic of Korea, Kuwait, Latvia, Libyan Arab Jamahiriya, Lithuania, Malaysia, Mexico, Mongolia, Morocco, Netherlands, Nigeria, Norway, Pakistan, Peru, Philippines, Poland, Qatar, Romania, Russian Federation, Saudi Arabia, Senegal, Singapore, Slovakia, Slovenia, South Africa, Spain, Sudan, Sweden, Switzerland, Syrian Arab Republic, Thailand, Tunisia, Turkey, Uganda, Ukraine, United Arab Emirates, United Kingdom, United Republic of Tanzania, United States of America, Uruguay, Venezuela, Vietnam, Yemen, and the European Commission.

The participants from developed countries and from the countries which are not recipients of the IAEA Technical Cooperation (TC) assistance are kindly requested to attend the workshop on cost-free basis to the IAEA.

**Participants’ Qualifications:**

The workshop is targeted to senior officials engaged or interested in establishing and conducting a dialogue between nuclear technology holders and users as part of the international discussion on nuclear issues, including planning for future nuclear energy systems. The participants will be asked to give brief presentations (see item 2 under Scope and Nature) based on a questionnaire and a template that will be provided before the workshop.

The “Description of work” part of the nomination form should contain the justification of the role of the nominated participant in the country’s envisaged engagement in the Dialogue Forum as part of the national strategy for nuclear energy.

**Nomination Procedure:**

Nominations should be submitted on the standard IAEA Nomination Form for Meeting/Workshop and National Consultant (available on the IAEA website: http://www.iaea.org/). Completed forms should be endorsed by relevant national authorities and returned to the Agency through the official channels, i.e. the designated National Liaison Office for IAEA Matters.

The completed nomination forms should be sent to the Programme Management Officer for this project, Mr. Ivan Videnovic, through IAEA Official Fax (+43-1-26007) or E-Mail (Official.Mail@iaea.org), not later than **05 August 2011**. Nominations received after this date or which have not been routed through the established official channels cannot be considered.
Administrative and Financial Arrangements:

Nominating Governments will be informed in due course of the names of the candidates who have been selected and will, at that time, be given full details of the procedures to be followed with regard to administrative and financial matters.

Selected participants from countries eligible to receive technical assistance will be provided with a round trip economy class air ticket from their home countries to Vienna, Austria, and a Daily Subsistence Allowance (DSA) at the prevailing UN Rate. Shipment of accumulated meeting materials to the participants' home countries is not the responsibility of the IAEA.

The organizers of the meeting do not accept liability for the payment of any cost or compensation that may arise from damage to or loss of personal property, or from illness, injury, disability or death of a participant while he/she is travelling to and from or attending the meeting, and it is clearly understood that each Government, in nominating participants, undertakes responsibility for such coverage. Governments would be well advised to take out insurance against these risks.