



INPRO
International Project on
Innovative Nuclear Reactors
and Fuel Cycles

Second Joint GIF-IAEA/INPRO Consultancy Meeting on Safety Aspects of Sodium-Cooled Fast Reactors

30 November -1 December 2011

IAEA Headquarters, Vienna, Austria

Background

Sodium-cooled fast reactor (SFR) development is the focus of considerable effort within both the GIF and IAEA (INPRO and TWGFR) international collaborative research and development programs. GIF and IAEA have jointly committed to collaboration between the programs and to share information in selected areas of mutual interest. Purposeful efforts to share relevant technical information between the two programs are intended to expedite research and development activities and to enhance the value of that R&D. One of the key areas of emphasis in both the GIF and IAEA/INPRO programs is the safety of SFR technology. The first GIF – IAEA/INPRO joint SFR workshop, titled “Operational and Safety Aspects of Sodium-Cooled Fast Reactors” was held 23-25 June 2010 at IAEA Headquarters in Vienna Austria. Major topics discussed at that joint workshop included SFR operating experience, safety fundamentals of SFR designs, and safety characteristics and goals for future SFR systems. One of the significant recommendations that came out of the first workshop was to hold a second future workshop that would be sharply focused on technical issues associated specifically with SFR safety, and on recent developments related to SFR safety.

Objectives of the Meeting

The overall objective of this workshop is to share information amongst GIF and IAEA (INPRO and TWGFR) research and development leaders concerning technical issues that are uniquely or particularly relevant to the safety of SFRs. It is also expected to achieve progress in the harmonization of the safety approaches and goals for next generation’s sodium cooled fast reactors, thus contributing towards the harmonization of the safety criteria for GEN IV sodium cooled fast reactors. Topics include basic safety characteristics of fast spectrum reactors, issues associated with the use of sodium as a fast reactor coolant, historical experience with sodium fast reactor safety issues, proposed approaches to achieving SFR safety, and innovative design concepts. Specific objectives include:

- Identify important unresolved technical issues that are vital to the safety of SFR systems, and summarize recent, current and planned R&D activities intended to help resolve those issues;
- Discuss potential implications of Fukushima experience as they relate specifically to SFR safety issues and phenomena;
- Discuss design approaches for safety issues on SFRs.

Programmatic Context

The meeting is being held under Project 1.1.4.001 (Coordination and Implementation of the INPRO Activities), 1000017: Sub Task 04.01 (Sub Policy Coordination including GIF) of the IAEA’s Programme & Budget 2010–2011.

Location

The meeting will be held at the IAEA HQ, Room: F0822, Vienna, Austria

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