

# **SFR Safety Design Criteria**

**Yutaka Sagayama**  
**GIF Policy Group Chair**

**June 13, 2012**

**International Workshop on Prevention and Mitigation of Severe Accidents  
in Sodium-cooled Fast Reactors**

# SFR Safety Design Criteria

- Necessity of SFR safety design criteria
  - As Gen-IV SFR is progressing to the conceptual design stage, Licensing procedure is expected in the near future.
  - Enhanced safety approach aiming at “Elimination of the need for offsite emergency response” should be shared internationally.
  - Safety design criteria is needed for improving safety designs common to the Gen-IV SFR systems.

# GIF activities related to the SDC

- Status:
  - Development proposed in Oct. 2010
  - SDC Task Force [TF] established in May 2011
  - Meetings for preparing/updating the SDC held since July 2011
  - SDC finalization by the end of 2012
- Scheme for Updates of the SDC:
  - Feedbacks from GIF communities related to:
    - High-level policy, Safety goal & Safety approach (Policy Group, Expert Group, RSWG)
    - R&D on SFR Technology (SFR SSC & PMB)
    - Industries (Senior Industry Advisory Panel)
  - Interactions with the IAEA
    - via GIF-IAEA/INPRO Joint Workshop on SFR Safety (Dec. 2011, Feb. 2013)
- Next step would be 'Shared with regulatory bodies'

# Implementation of SFR SDC

- Generation-IV SFR system
  - To be commercialized around 2030-2040 shall comply with SDC to achieve Gen-IV safety goals
    - With built-in design
    - Applying harmonized safety approaches of SDC
- Present SFRs (including SFRs being constructed or designed)
  - To be evaluated with SDC for ensuring enhanced safety
    - Design margin
    - Add-on accident managements measures (like for MONJU)