



Generation IV International Forum: Progress Report for NERAC

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GIF Vision & Charter

- ***GIF established Jan 2000, Charter signed July 2001***
- ***International R&D collaboration to develop “Gen. IV” nuclear energy systems, deployable 2030 or earlier***
- ***To show significant advances in:***
 - ***Economics***
 - ***Sustainability***
 - ***Safety & Reliability***
 - ***Proliferation Resistance & Physical Protection***
- ***Current GIF Membership:***



U.S.A.



United Kingdom



Switzerland



South Korea



South Africa



Japan



France



Canada



Brazil



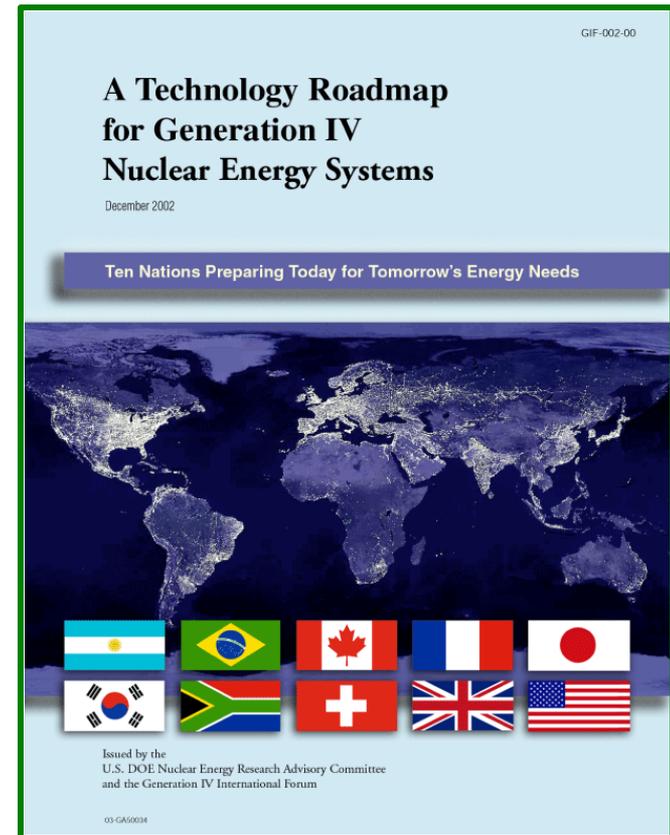
Argentina



European Union

GIF Technology Roadmap

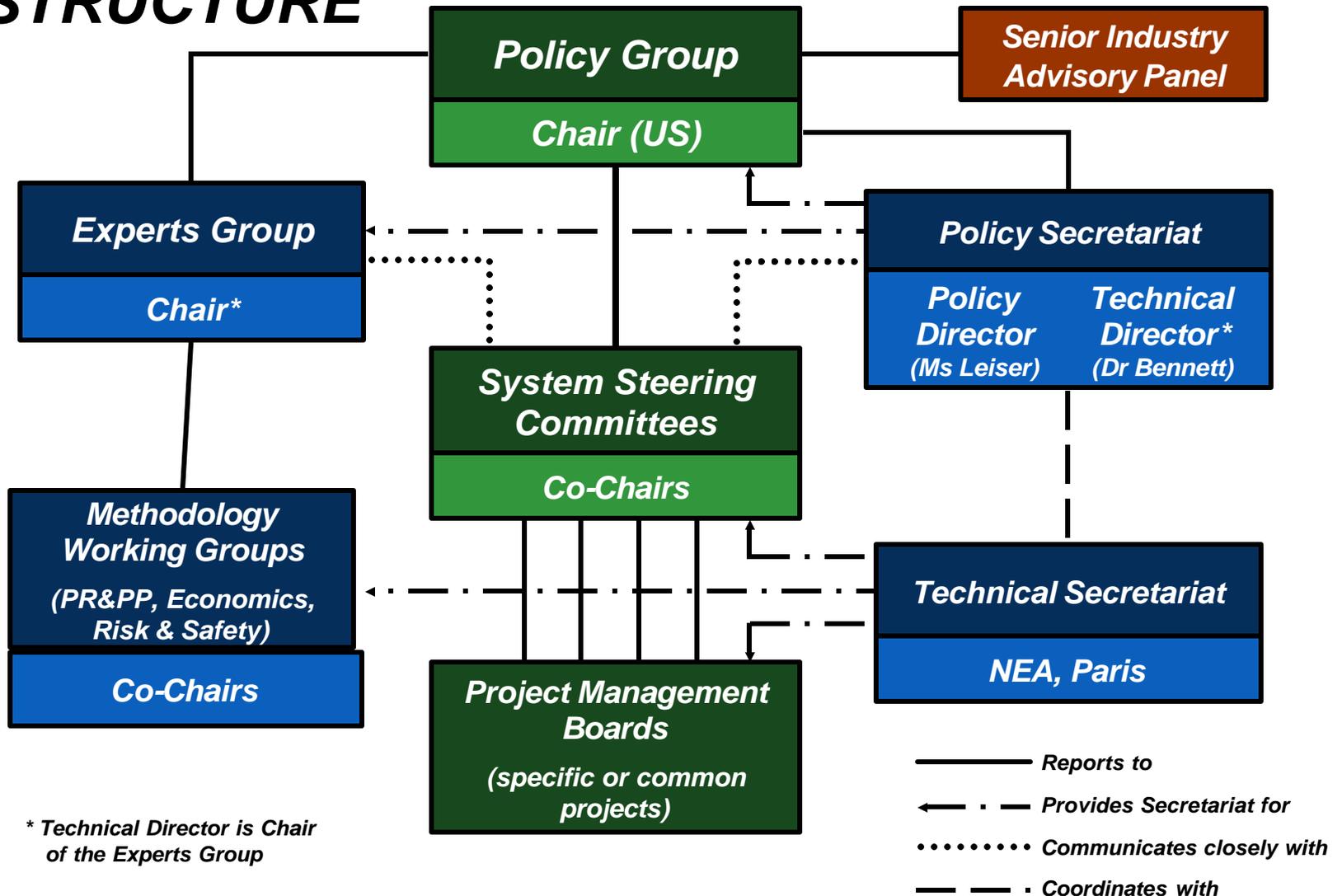
- **Issued Dec 02 by NERAC & GIF**
- **6 Gen IV Systems selected:**
 - **Gas-Cooled Fast RS (GFR)**
 - **Lead-Cooled Fast RS (LFR)**
 - **Molten Salt RS (MSR)**
 - **Sodium-Cooled Fast RS (SFR)**
 - **Supercritical-Water-Cooled RS (SCWR)**
 - **Very-High-Temperature RS (VHTR)**
- **Outlined R&D priorities**
- **Also identified 16 Near-Term Designs: potential R&D synergies**



GIF Policy Group Meeting, 11-12 May, Sun Valley: main outcomes

- ***Approved Policy Statement on GIF Governance, supplementing Charter***
- ***Agreed arrangements for OECD's Nuclear Energy Agency to provide a Technical Secretariat for the GIF***
- ***Discussed the proposed legal framework for R&D collaborations, & appointed two Task Forces***
- ***Updated on preparation and review of R&D plans***
- ***Approved ToR for a Risk & Safety Working Group***
- ***Reviewed areas for cooperation with IAEA/INPRO***
- ***Interacted with Idaho High School students***

GIF STRUCTURE



GIF Secretariat

- ***Policy Secretariat: supports Chair of PG***
 - ***Policy Director (Washington) – Ms Helen Leiser***
 - ***Technical Director (Idaho) – Dr Ralph Bennett, also Chairs Experts Group***

- ***Technical Secretariat: supports collaborative R&D***
 - ***OECD's NEA (Paris) will support work of Systems Committees, Project Boards and other Groups***
 - ***Gives benefit of NEA expertise, data banks etc***
 - ***Assures continuity***
 - ***GIF members to contribute funds + cost-free experts***

Legal Agreements

- ***Needed for R&D costing \$600m-\$1,000m per system***
- ***USDOE leading the drafting of Agreements***
- ***For signature by participants in:***
 - ***System Steering Committees (Governments or their agencies)***
 - ***Project Management Boards contributing to a System (wider range of participants)***
- ***At Sun Valley, PG set up two Task Forces, to:***
 - ***Help resolve remaining issues on the Agreements***
 - ***Develop guidance on valuation of contributions***

Review of R&D Plans

- ***Provisional System Steering Committees (SSCs) in place for GFR, LFR, SCWR, SFR, VHTR***
- ***PG agreed at SV to establish an MSR SSC***
- ***Quality and consistency of System Research Plans (SRPs) being reviewed by EG – most reviews will be complete by July 04***
- ***Good progress in defining Projects for each System***
- ***Much R&D already under way, under bilateral agreements***

GIF Risk & Safety Working Group

- ***Members: PG nominees and co-optees with relevant expertise***
- ***Purposes:***
 - ***Define safety and QA goals, and evaluation methods***
 - ***Advise EG and PG on interactions with nuclear safety regulatory authorities***
 - ***Facilitate integrated consideration of safety, proliferation resistance and physical protection goals***
- ***RSWG proposal follows PG discussion with senior regulators in Sept 03***

Interactions with IAEA & INPRO

- ***IAEA have permanent observer status in GIF***
- ***Most GIF Members (not Japan, UK or US) also in IAEA's Innovative Reactors Project (INPRO)***
- ***Review at SV noted much useful practical cooperation e.g.:***
 - ***GIF experts assisted with peer review of INPRO methodology framework (January 04)***
 - ***IAEA experts participate in GIF PR&PP Working Group***
 - ***IAEA Code of Accounts used by Economic Modeling Group***
 - ***GIF potential interest in IAEA project on Safety of Innovative Reactors; and development of Sustainability Indicators***
- ***GIF/INPRO liaison meeting proposed Sept 04***

KEY GOALS – NEXT SIX MONTHS

- ***GIF Technical Secretariat up and running***
- ***Agreements in place for Systems & key Projects***
- ***Quality Research Plans in place***
- ***Methodology work on schedule & being integrated***
- ***Dialogue in train with industry and regulators***
- ***GIF public Website available***