GIF International Workshops with Nuclear Industry including SMR vendors and supply chain SMEs:

- Workshop on Advanced Manufacturing
- Workshop on R&D Infrastructures needs and opportunities

18-19-20 February 2020,
OECD/NEA – Boulogne-Billancourt, France

Auditorium

Contact: secretariat@gen-4.org
GIF Workshop on Advanced Manufacturing

Tuesday 18 February 2020

- 9h00 – 9h10 Welcome and opening remarks
  Lyndon Edwards, ANSTO, Australia and Sama Bilbao y Leon, NEA
- 9h10 – 10h00 Session 1 – Overview of workshop
  o Introduction on the opportunities and challenges of advanced manufacturing, overview of GIF AMME Task Force, purpose of workshop: Why we are here! Lyndon Edwards, ANSTO, Australia (20min)
  o The nuclear supply chain; past, present and future. Andrew Storer, NAMRC, UK (20mins+10 min discussion)
- 10h00 – 10h30 Coffee break
- 10h30 – 12h30 Session 2 – Advanced Manufacturing Technologies
  o Additive manufacturing in the nuclear supply chain, Kurt Terrani, ORNL, USA (20mins+10 min discussion)
  o Innovative fabrication in the nuclear supply chain, Dave Gandy, EPRI, USA (20mins+10 min discussion)
  o Advanced surface coatings in the nuclear supply chain, Alfons Weisenburger, KIT, EU (20mins+10 min discussion)
  o Panel Discussion (Presenters) led by Moderator
- 12h30 – 14h00 Lunch (self-paid)
- 14h00 – 15h00 Session 3 – National Advanced Manufacturing Activities
  o Advanced Manufacturing collaboration in the USA, Isabella Van Royen/Mark Messner, DoE (15mins+5 min discussion)
  o Advanced Manufacturing collaboration in the EU, Lorenzo Malerba, CIEMAT, EU (15mins+5 min discussion)
  o Advanced Manufacturing collaboration in France, Eric Abonneau, CEA, France, EU (15mins+5 min discussion)
- 15h00 – 15h30 Coffee break
- 15h30 – 17h00 Session 4 – Group Activity
  o Split into 3 or 4 groups, which undertake following activities led by Moderator / Rapporteur:
    a. identify potential collaborative AMME activities/projects
    b. analyse each identified area of collaboration (SWOT analyses?)
    c. prioritization of identified areas/ideas
    d. agree communication for Rapporteur to give to meeting (can develop presentation overnight)
- 17h00 End of Day 1
Wednesday 19 February 2020

- 09h00 – 10h30 Session 5 – Group Reporting and Meeting Outcomes
  - Communally undertake following activities:
    - Rapporteurs from each group presents group output
    - Overall prioritisation of potential collaborative AMME activities/projects
    - Identification of next steps and way forward
- 10h30 – 10h40 Wrap up
- 10h40 – 11h00 Coffee break

GIF workshop on R&D Infrastructures needs and opportunities

Wednesday 19 February 2020

- 11h00 - 11h15 Welcome
  - Welcome by Roger Garbil, Euratom, DG RTD, Chair of the GIF R&D Task Force and Sama Bilbao y Leon, NEA
- 11h15 – 12h30 Engaging with the private sector – Round Table
  - Moderator: Sama Bilbao y Leon
  - R&D challenges for Gen IV systems, Gilles Rodriguez, CEA and GIF Technical Director
  - GIF R&D infrastructures and large scale experimental programmes, Roger Garbil
  - GIF Advanced Manufacturing initiative, Lyndon Edwards
  - Regulatory challenges to license Gen IV systems, Raj Iyengar, Chief of the Component Integrity Branch, NRC’s Office of Research
- 12h30 - 14h00 Lunch (self-paid)
- 14h00 – 16h00 Identification of collaboration opportunities between private and public sectors for Gen IV systems
  - 14h00 - 14h10 Introduction - Roger Garbil, Euratom, DG RTD, Chair of the GIF R&D Task Force
  - 14h10 – 14h30 Example of a LWR-based Advanced Reactor development programme
  - Moderator: Sang Ji Kim
    - Fredrik Vitabäck, GE-Hitachi, BWRX300
    - Richard Wain, UK SMR, Rolls Royce
    - Jean-Michel Ruggieri, Program Manager, SMRs, CEA, NUWARD Project
    - Sang Ji Kim, SMART Technology Development Division, KAERI, GIF EG member
    - Marketa Krykova, Project Manager, CVR, SSC SCWR co-Chair
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Workshop on Advanced Manufacturing / Workshop on R& D Infrastructures needs and opportunities

18-19-20 February 2020, OECD/NEA – Boulogne-Billancourt, France

- 14h30 – 15h00 Molten Salt Reactors (MSR)
  
  **Moderator: Stéphane Bourg**
  
  - David Leblanc, President and CTO, Terrestrial Energy
  - Stéphane Bourg, CEA, GIF SSC Chair
  - Lou Martinez Sancho, CIO Kairos Power FHR (KP-FHR)
  - Victor Ignatiev, IPPE, MOSART project and related infrastructures
  - Jan Uhlir Update on Pu/Pr cooperation in CZ

- 15h00 – 15h15 Coffee break

- 15h15 – 15h45 Liquid Metal Reactors (SFR and LFR)
  
  **Moderator: Alessandro Alemberti**
  
  - Fausto Franceschini, Westinghouse LFR,
  - Alessandro Alemberti, ANSALDO Nucleare, LFR SSC Chair,
  - Jean-Marie Hamy, Framatome, SFR
  - Ilya Pakhomov, Head of Laboratory, Russian Federation, Institute for Physics and Power Engineering (IPPE)

- 15h45 – 16h15 Gas-cooled High Temperature Reactors (HTR)
  
  **Moderator: Lyndon Edwards**
  
  - Jean-Marie Hamy, Framatome, US SC-HTGR program
  - Dominique Hittner, USNC
  - Karl-Fredrik Nilsson, EU/Euratom JRC, Chair HTR SSC

- 16h15 – 16h45 Cross-cutting topics, non-electric applications
  
  **Moderator: Taiju SHIBATA**
  
  - John Jackson, INL, National Reactor Innovation Center,
  - François LE Naour, CEA
  - Taiju Shibata, JAEA
  - Abderrahim Al Mazouzi, EDF

- 16h45 – 17h30 Wrap-up and lessons learnt (Tech Director + Moderators)
  
  - All the moderators – Need to 2 bullet points + ½ page reporting

- 17h30 Networking Cocktail – GIF and Industry
  
  - Making connections and fostering exchanges among GEN-IV systems and cross-cutting topics between: Public / Private sectors, R&D Organisms / Industry, R&D platforms.
Thursday 20 February:

- **9h00 – 11h00** Examples of collaboration between Governmental organisations and industry
  - Welcome by GIF Vice Chair on R&D Collaboration, *Jong-Hyuk Baek*, KAERI
  - Panel discussion - **Moderator: Gilles Rodriguez**
    Will involve representative of governmental research labs reporting on collaboration with the private sector, as well as international organisations.
    - Gilles Rodriguez, (on behalf of the CEA’s Sodium School Director)
    - John H. Jackson, Acting Director, Gateway for Accelerated Innovation in Nuclear (GAIN)
    - Tatiana Ivanova, FIDES projects to address post-Halden situation / OECD
    - Stefano Monti, IAEA
    - Raj Iyengar, Chief of the Component Integrity Branch, NRC’s Office of Research
    - Stephen Bushby, Atomic Energy of Canada Limited
    - Iuliia Kusina, Director, Institute for Physics and Power Engineering (IPPE)

- **11h00 – 11h30** Coffee break

- **11h30 – 12h30** Views from the Private Sector, an Outlook for SMRs
  **Moderator: Stefano Monti**
  - Fausto Franceschini, Westinghouse LFR,
  - Lou Martinez Sancho, CIO Kairos Power FHR (KP-FHR),
  - David Leblanc, President and CTO, Terrestrial Energy,
  - Robin Manley, VP SMR Technology, Ontario Power Generation,
  - Raj Iyengar, Chief Component Integrity Branch, NRC’s Office of Research,
  - Dominique Hittner, USNC,
  - Richard Wain, UK SMR, Rolls Royce
  - Fredrik Vitabäck, GE-Hitachi, BWRX300,
  - Arkady Karneev, Rosatom Western Europe

- **12h30 – 13h00** Workshop conclusions
  GIF Policy Group Chair *Hideki Kamide*, representative of industry, representative of regulator, representative of OECD/NEA

- **13h00** Closing of the Workshop