

GIF 国内ニュースレター #2

1 July 2020



第49回 GIF Policy Group Meeting :

5月27日にZoomを用いて、GIFの政策グループ会合を行いました。

テレ会議として設定したため、議題を、GIFの方向性に関するもの（Policy Director及びVice-chairsのミッションについて）と各国の最新状況に絞り込んだのですが、それでも議論は白熱し、4時間30分と予定の倍近い時間がかかりました。しかしながら、今後の見通しに関する有意義な議論ができていたことから、日本が議長国になって1年半、GIFの今後の方向性が参加各国に浸透してきたのではないかと思います。

なお、GIF関係者とは、主要会議資料を共有しておりますが、近日中にGIFイントラページにも抜粋資料を掲載予定です。本画像はイメージですので、資料詳細を確認したい方は、そちらを参照してください。

49th Virtual Policy Group Meeting – 27 May 2020 Location: Zoom teleconference meeting

Wednesday, 27th May 2020

TIME	SUBJECT	PRESENTER	DOCUMENT
11:00 GMT	Policy Group Meeting Opening		
11:00 GMT	Opening Remarks Why holding a PG virtual meeting?	Mr. Kamide	*
11:05 GMT	Approval of Meeting Objectives and Agenda	Mr. Kawasaki	PG49_Agenda
11:15 GMT	Report from the Policy Director GIF missions (including knowledge management matters) SIAP charter / memberships Status of Turkey Accession Future important meeting schedule	Mr. Kawasaki	PG49_PD_Report
12:00 GMT	Report from the Technical Secretariat GIF memberships Update on Agreements Future important meeting preparation (registration, logistics, etc.) GIF website, GIF Newsletter Approval of 2020 Budget	Ms. Bilbao y Leon	PG49_TS_Report
12:45 GMT	Report of the Technical Director (Report of the EG Meeting: Synthesis & decisions)	Mr. Rodriguez	PG49_TD_Report
13:50 GMT	Report from Vice-Chair on Market Issues	Mr. Pivet	PG49_VC-Market_Report
14:00 GMT	Report from Vice-Chair on R&D Collaborations	Mr. Baek	PG49_VC-RD_Report
14:08 GMT	Report from Vice-Chair on Regulatory Issues	Ms. Caponiti	PG49_VC-Regulatory_Report
14:23 GMT	Report from the IAEA	Mr. Hahn	PG49_IAEA
14:32 GMT	Report from Countries Australia Canada China Euratom France Japan Russia South Africa South Korea Switzerland United Kingdom United States	PG State members	PG49_AU PG49_CA PG49_CN PG49_EU PG49_FR PG49_JP PG49_RU PG49_ZA PG49_KR PG49_CH PG49_GB PG49_US
15:30 GMT	Closing Remarks - Adjoin	Mr. Kamide	

[1] Report from the Policy Director at PG-49

Generation IV major missions (2019-2021)

GIF contributes Sustainable Energy Supply by Gen IV developers' mutual trust and co-operations.

GIF missions:

- Designs and R&Ds of 6 types of Gen IV reactors
- International standardization of Safety design and apply into Regulation
- Increased Flexibility on Nuclear system as Attractiveness in social Market
- Enhancement on R&D collaboration
- Appeal our results to the world



From the interview video to GIF chair (10mins interview)

<https://www.youtube.com/channel/UCUUBIUGLAISeUU5msbHFmxw>

GIFの議長インタビューにも記載の通り、現在GIFのミッションは、

- ① GIF原子力システムの開発推進 (SFR, LFR, GFR, VHTR, SCWR, MSR)
- ② 安全設計の国際標準化と規制への展開
- ③ 社会市場における魅力としての原子炉システムの柔軟性の向上
- ④ R&D協力の一層の促進
- ⑤ GIF成果の世界への発信という5ジャンルのミッションとして再構成しています。

GIFの議長インタビュー：

<https://www.youtube.com/channel/UCUUBIUGLAISeUU5msbHFmxw/>

International standardization of Safety design and apply into Regulation

Regulatory Mission



Alice Caponiti (USA, DOE)

GIF PG Vice-Chair:

Alice Caponiti is the Director of Department of Energy's Office of Nuclear Energy Technologies, which provides strategic direction and execution of nuclear energy programs to improve research infrastructure and industry access to various fields.

The mission of the Vice-Chair on regulatory issues is to coordinate GIF's activities with various regulatory bodies to harmonize regulatory requirements. Dialogue between international R&D communities and regulatory communities can facilitate the development of collaborative approaches that

- identify and resolve key regulatory issues,
- identify and address the need of safety research, and
- further harmonize design, safety, and regulatory requirements.

The tasks of the Vice Chair include promoting Safety Design Criteria (SDC) and Safety Design Guideline (SDG) for GEN IV Systems and working on IAEA Safety Standards.

The Vice Chair also leads GIF's engagement with the OECD/NEA Working Group on the Safety of Advanced Reactors (WGSAR) and with appropriate IAEA departments.

Regulatory Mission:

- Identify need of safety research,
- further harmonizing design, safety, and regulatory requirements.

Risk & Safety Working Group

RSWG developed

➢ Integrated Safety Assessment Methodology (ISAM)

➢ White papers on ISAM implementation & safety systems

See: https://www.gen-4.org/gf/jcms/c_9306/nak-safety

Proliferation Resistance & Physical Protection Working Group

PRPPWG developed

➢ Methodology used to evaluate and facilitate the introduction of PRPP through a case study at the earliest possible stage of design

➢ PRPP white papers on the six GIF systems with SSCs.

See: https://www.gen-4.org/gf/jcms/c_9305/pr-pp

Safety Design Criteria Task Force

SDC TF developed

➢ Safety design criteria and guidelines for SFRs reviewed by IAEA, WGSAR, and international regulators.

See: https://www.gen-4.org/gf/jcms/c_9302/safety-design-criteria

From the attached mission leaflet

① GIF原子力システムの開発推進については、2014年の全6システムの技術ロードマップ策定後、ナトリウム冷却炉に関して、

System Research Plan(r3.2)が策定されたこと(2019年)、VHTRとMSRの分野でもSystem Research Planの改定/策定が進んでいることを紹介し、今後、公開ベースの資料として、技術ロードマップの改定を進めていきたい旨説明し、賛同を得ました。炉型により、設計進捗度合いは異なるため、部分的なロードマップとなる可能性もありますが、可能な範囲で、将来像を具体的に示していきたいと思っています。

Increased Flexibility on Nuclear system as Attractiveness in social Market

Outcomes/direction after GIF Workshop on the Flexibility of Gen IV Systems on 29 May 2019 at Vancouver, Canada:

“POSITION PAPER ON FLEXIBILITY OF GEN IV SYSTEMS” is released on November 2019.

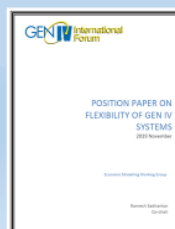
CEM NICE Future new initiative as Flexible Nuclear Campaign started.

(Message about nuclear flexibility with example of GIF reactor systems and other national/organizational examples.)

<http://www.cleanenergyministerial.org/initiative-clean-energy-ministerial/nuclear-innovation-clean-energy-future-nice-future>

Action we need:

- To accelerate flexible campaign with CEM.
- Coordinate EMWG proposed studies with prioritization supported by EG. (See GIF EMWG report/EMWG Status Report and Proposed Studies for Virtual EG/PG meetings)



Webinar-GuideBook

The image shows the cover and several pages of the 'Webinar-GuideBook'. The cover features the GEN IV logo and the title 'Webinar-GuideBook'. The content pages include a 'Webinar list' with topics such as '1. IIR Substitution', '2. Safety & Reliability', and '3. Licensing'. There is also a section titled '1-1. ATOMS FOR PEACE' and a 'Members of GIF Education and Training Task Force' section with a group photo and names.

Japanese Special webinar team is making Webinar Guidebook. 4 pages introduction for each webinar. (Meeting attachment pdf)

Complete until GIF 20th anniversary!

なお、次のマイルストーンとなる主要GIF会合は、7月8日に予定していますGIF-IAEA interface tele meeting となります。

現在、鋭意、アジェンダ設定と参加者調整、方向性・協力内容の協議を進めております。

[https://nucleus.iaea.org/sites/htgr-kb/gif-iaea/SitePages/14th%20GIF-IAEA%20\(2020\).aspx](https://nucleus.iaea.org/sites/htgr-kb/gif-iaea/SitePages/14th%20GIF-IAEA%20(2020).aspx)

GIF leaflets

The image displays several leaflets and a mission statement. The leaflets include 'GIF Position Paper', 'GIF Webinars Leaflet', 'GIF Mission Leaflet', and 'GIF Overall Leaflet'. The mission statement text reads: 'The GIF is developing advanced nuclear reactor concepts under four special missions below: - Regulatory mission, - Market Development, - Enhancement of R&D, and - Education and training'. It also states: 'The GIF was launched in 2000 with the goal of developing advanced nuclear systems with sustainability, economics, safety & resistance to proliferation, and physical protection. Today, more than ever, Generation IV systems are needed, together with other low-carbon technologies, to contribute to a sustainable energy future providing reliable, safe and affordable electricity and heat. Sustainable, safe, clean, reliable, flexible and affordable energy source for the future.'

Presently transforming to fit web style.

Complete until GIF 20th anniversary!

Presently expanding them to fit 5 important field.

Future important meeting schedule

GIF-IAEA interface tele meeting in 8 July

=one 3 hour virtual meeting to discuss key points, starting 11:00GMT or later.

=Collaborations for Reactors, Safety, Market, R&D collab., PRPP, ET(KM/KT) between GIF and IAEA

Main participants:

IAEA, PG chair, VCs, TD, TS, PD, SSC/WG/TF chairs

https://www.gen-4.org/gif/jcms/c_9493/external-collaborators

Find and strengthen collaboration with IAEA by direct presentations from each SSC/WG/TF level. (Because maximum 3hrs)

[2] Reports from the Vice chairs at PG-49

Collaboration with IAEA (1/2)

Participation in safety document development for SMRs

- IAEA is developing safety standards for SMRs. Most SMR technologies overlap with GIF reactor technologies.
 - Division of Nuclear Installation Safety in IAEA is interested in the collaboration with GIF in the field of SMR safety such as Development of TECDOC on
 - Approach and Methodology for the Development of Regulatory Safety Requirements for the Design of SMRs
 - Applicability of Design Safety Requirements for SMR Technologies
 - Current Experiences and Considerations for Innovative SMRs
- ① 米GIF副議長がIAEAと協力していく方針を表明
- Some of IAEA activities will be discussed in coming meeting in June, and GIF-IAEA interface meeting in July.

①米のMs. Caponiti副議長からは、GIF RSWGの最新活動状況が報告されるとともに、今後の安全分野におけるIAEAとの協力の方向性について、その考え方が示されました。現在IAEAが進めているSMRの安全規制活動に関するTECDOCの策定作業とGIFが目指している第4世代炉に関する安全基準の策定作業は、共通する項目も多いため、今後、GIF-IAEAの共同活動を実施していくことになりました。なお、本会合には、IAEAのMr. Hahn (Nuclear Power division director) も参加しており、IAEA側からもこの活動に関する賛同の意思が表明されております。

Strategic orientation

- **GIF market-issues related activities emphasize increased flexibility of nuclear systems as a key attractiveness element**
 - “Flexibility will be the cornerstone of tomorrow’s energy systems”
See Chair greeting and PD e-mail 08/01/2020.
 - In this area, two documents were issued by EMWG since last PG-48
 - “Position paper on flexibility of GEN IV systems”: the main objective of the position paper is the completion of the main EMWG work plan.
Ramesh Sadhankar, Nov. 2019
PD e-mail 08/01/2020.
 - “NICE Flexibility” document summarizes the thoughts shared within the GIF.
April 2020
- ② 仏GIF副議長が社会市場分野の活動方向性を示す
- ... perspectives on the flexibility of Gen-IV systems
... technical flexibility capabilities of Gen-IV systems

②また、仏のMr. Pivot副議長からは、社会市場分野の活動の方向性が示されるとともに、
③韓のMr. Baek副議長からは、R&D協力に関するWhite Paperの検討/発行スケジュール案と目次・構成案が示されました。

Attachment ENHANCEMENT OF R&D COLLABORATION WITHIN GIF (draft-3)

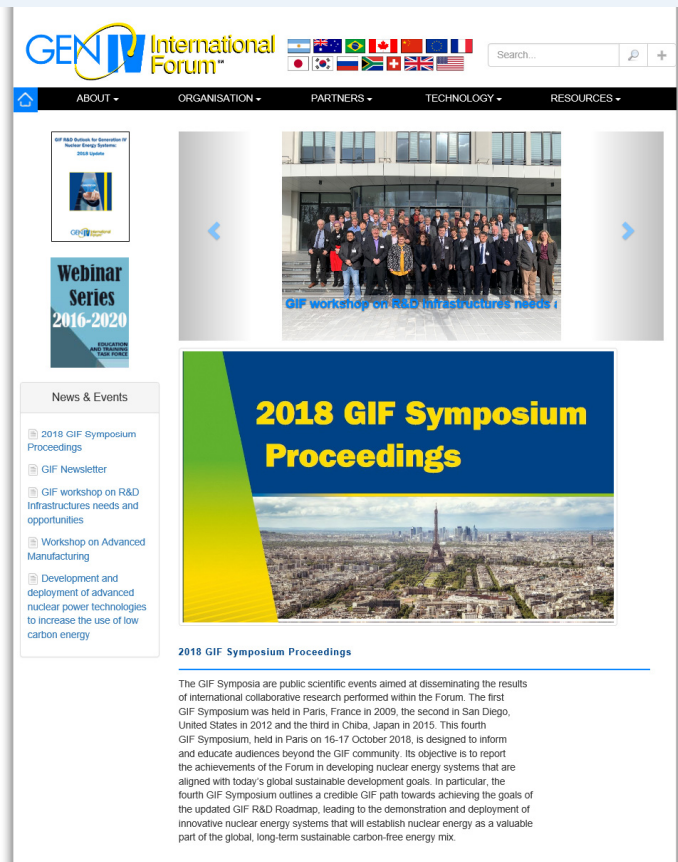
EXECUTIVE SUMMARY

1. INTRODUCTION
 - 1.1. Background
 - 1.2. Objectives
 - 1.3. Scope
 - 1.4. Structure
2. REVIEW OF GIF DOCUMENTS RELATED TO R&D COLLABORATION
 - 2.1. Charter of the GIF
 - 2.2. Governance of the GIF
 - 2.3. Agreement for R&D Collaboration
3. REVIEW OF R&D COLLABORATION ACTIVITIES
 - 3.1. Review of Vice Chair Reports
 - 3.2. Summary of RDTF Works
 - 3.2.1. Scope of Mission
 - 3.2.2. Approaches
 - 3.2.3. Key Recommendations
 - 3.3. Summary of AMME TF Works
 - 3.3.1. Scope of Mission
 - 3.3.2. Approaches
 - 3.3.3. Key Recommendations
 - 3.4. Activities of GIF
 - 3.4.1. GIF-R&D C...
 - 3.4.2. ...
4. PROPOSAL FOR R&D COLLABORATION
 - 4.1. ...
 - 4.2. ...
 - 4.3. Soft Collaborations
 - 4.4. Human Collaborations
 - 4.5. Action Items
5. CONCLUSIONS

REFERENCES

③ 韓GIF副議長がR&D協力に関するWhite Paperの目次原案を示す

[3] GIF Public Website / GIF Newsletter



The screenshot shows the GENIV International Forum website. At the top, there is a navigation bar with links for ABOUT, ORGANISATION, PARTNERS, TECHNOLOGY, and RESOURCES. Below this, there is a search bar and a row of flags representing member countries. The main content area features a large image of a group of people at a workshop, with the caption "GIF workshop on R&D infrastructure needs and opportunities". To the left, there is a sidebar with a "Webinar Series 2016-2020" section and a "News & Events" section listing various events. The central focus is the "2018 GIF Symposium Proceedings" section, which includes a large image of a cityscape and a detailed text block about the symposium.

GIFの公開Website (<https://www.geniv4.org/>) は、現在、GIFの最新状況をお伝えすべく、OECD/NEAが鋭意改良中です。2018年に開催されたGIF Symposiumに関するProceedingsがWebsiteで公開されるとともに、最新の状況は、今年度4月より英語版GIFニュースレターとして毎月紹介されております。

GIF関係者には、メーリングリストにて、内容のご紹介をしておりますが、本サイトからも閲覧することが可能です。



The screenshot shows the GENIV International Forum newsletter, titled "The GIF Newsletter" (GIFNews n°1 - April 2020). The main article is an editorial by Gilles RODRIGUEZ (GIF Technical Director), titled "Editorial - A GIF Newsletter ! Why ? When ? For who ?". The editorial discusses the purpose and importance of the newsletter, particularly in the context of the COVID-19 crisis. Below the editorial, there is a section titled "Towards HTTR restart" by Taiju SHIBATA, EG member of JAEA. This section reports on the progress of the HTTR (High-Temperature Engineering Test Reactor) project, including the basic agreement from the Japanese Nuclear Regulation Authority (NRA) for the restart of the reactor. The newsletter also features a small image of a reactor and a diagram of the HTTR system.