

Highlights from the year

The *GIF 2020 Annual Report* is divided along the lines of two main periods:

- First semester: when objectives were completely reshuffled so that the GIF organization could adapt to the global COVID-19 crisis and the consequences on working methods;
- Second semester: when the working process was stabilized, and a great deal of the GIF Board's time was spent on reassessing in depth some of the GIF foundations: our communications approach and 2021 perspectives.

In 2019, the governance of the Generation IV International Forum was completely renewed. In 2020, this new governance entered into force. The vice-chairs began to fulfil their respective missions on regulatory issues (Alice Caponiti, United States), market opportunities and challenges (Sylvestre Pivet, France), and enhancement of R&D collaboration (Jong Hyuk Baek, Korea). They are now strongly connected with the corresponding GIF task forces or working groups, and can follow or influence their actions.

On regulatory issues, the mission of the Vice-Chair is to co-ordinate GIF efforts with various regulatory bodies so as to achieve harmonized regulatory requirements. GIF engagement was confirmed through the Reactor Safety Working Group (RSWG), improving interfaces towards the Nuclear Energy Agency (NEA) Working Group on the Safety of Advanced Reactors (WGSAR) and the International Atomic Energy Agency (IAEA) Safety Sections (see the corresponding chapter for the RSWG).

On market opportunities and challenges, the Vice-Chair overseeing the Economic Modelling

Working Group (EMWG) chose two priorities at the 42nd meeting, with new actions planned in this regard: advanced nuclear technology cost reduction and advanced nuclear technology private financing. Cross-cutting activities are also planned, in particular on the design-to-cost process, with a presentation of case studies, such as the French ASTRID project (see the corresponding chapter for the EMWG).

The mission focus of the Vice-Chair for the enhancement of R&D collaboration is to strengthen such collaboration within GIF, sharing innovative technology ideas and advancements among GIF members, and promoting collaboration with outside organizations. The Vice-Chair proposed the drafting of a white paper that would outline the activities of R&D collaboration in GIF and action items to enhance this collaboration. The objectives of this white paper would be to: 1) better understand R&D collaboration activities among GIF members; 2) find practical ways of co-operating within GIF members and other organizations; and 3) conduct action items that can promote R&D collaboration in GIF. This white paper initiative was launched in the summer of 2020 through a collective drafting effort. The final draft of the white paper will be produced in 2021.

On 18-20 February 2020, GIF organized a three-day workshop at the NEA entitled "GIF International Workshop with Nuclear Industry, including SMR vendors and supply chain SMEs". The first half of the workshop was dedicated to advanced manufacturing, and was organized by the Advanced Manufacturing and Materials Engineering (AMME) Task Force leader, Lyndon

Figure 2-1: Co-working sessions on advanced manufacturing





Figure 2-2: Panel discussion on R&D infrastructure needs with the private sector



Figure 2-3: First page of the Newsletter No. 6

Edwards. The second half was dedicated to R&D infrastructure needs and opportunities, and was organized by the R&D Infrastructure Task Force (RDTF) leader, Roger Garbil. This successful event gathered over 120 specialists from around the world, who exchanged on recent progress, potential solutions and practical ways of increasing interactions, particularly with the private sector (i.e. SMR vendors).

The conclusions of this workshop are presented in the corresponding AMME TF and RDTF chapters. It should be underlined that the workshop was video recorded and seen by our Chinese colleagues via streaming. This initiative allows the seminar to be seen by a larger audience, even after the event has already taken place.

Highlights from the Experts Group and the cross-cutting working groups and task forces

The Experts Group advises the Policy Group on priorities and methodology thanks to the work being carried out by specific task forces and working groups. Some of the achievements of 2020 include:

- The GIF 2018 Symposium Proceedings were published on the GIF website.
- A chapter on GIF flexibility was produced for the Nuclear Innovation: Clean Energy Future (NICE Future) initiative. This chapter provides the GIF position on flexibility, for which interest is steadily increasing.
- The RDTF final report was produced internally. An open version of this report will be delivered in early 2021.
- The process of writing a white paper on proliferation resistance and physical protection (PRPP) for all of the six systems.
- The Education and Training Working Group (ETWG) webinar series was regularly scheduled and produced on a monthly basis. Topics for these webinars are fully booked until April 2021. All are now available on the YouTube platform.

The second part of the year 2020 was dedicated to enhancing GIF communications with a new logo that expresses GIF values - expertise, collaboration

and excellence - new, visual branding and a completely refreshed GIF website. The regular production of the GIF Newsletter appears to be an efficient tool for maintaining a connection between GIF members and other international organizations (i.e. the NEA, IAEA).

During the year 2021, and in accordance with the Programme Plan proposed by the Technical Director and discussed in the Experts Group and Policy Group, GIF will pursue its efforts in the following areas:

- The GIF initiative towards the private sector will go beyond the February 2020 workshop, with a dedicated, international workshop under preparation for 2022, again partnering with the private sector.
- The non-electrical application of nuclear heat (NEANH) will become an important cross-cutting subject that will be further investigated in 2021.
- The promotion of education and training towards the younger generation of scientists will continue with a "Pitch Your Generation IV Research Competition" being prepared for February 2021.

Finally, in 2020 GIF had been preparing for a significant event to celebrate its 20th anniversary. The event was to take place at a highly symbolic place, the Clos Lucé Castle, or the home of Leonardo Da Vinci in Amboise, France. Unfortunately, the COVID-19 crisis postponed these initiatives until better times.



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