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Current status of GIF collaborations on sodium-cooled fast reactor system

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The SFR system arrangement Phase II became effective on 16 February 2016 by signatures of CEA, JAEA, KAERI, USDOE, and Rosatom), and was extended for additional 10 years. China signed the SFR SA Phase II on 3th August 2016 and Euratom is expected to sign near future. Collaboration of GIF SFR is growing adding new reactor concepts and related R&Ds.

In 2015, a project arrangement on SFR System Integration and Arrangement (SI&A) has been signed by 7 members : China, EU, France, Japan, Korea, Russia and US. In the SI&A project, R&D needs from the SFR design will be shown to the R&D project, and R&D results from each R&D project will be integrated into the designs. Presently there are four SFR design concepts as shown in ATFR-2015, 1) JAEA Sodium Fast Reactor (JSFR, loop) Design Track, 2) KALIMER-600 (KAERI, pool) Design Track, 3) European Sodium Fast Reactor (ESFR, pool) Design Track, 4) AFR-100 (DOE, modular) Design Track, are proposed from each signatory. China is going to propose CFR-1200, and Russia is going to propose BN-1200 as new design tracks.

After SI&A project started, the GIF-SFR has completed the function of R&Ds and integration of R&D result to the SFR design. These strong collaboration network is expected to provide the promising generation IV SFR concepts. This paper describes SFR design concepts in SFR project and interactions with R&D projects under GIF framework.

Country/Int. Organization

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