

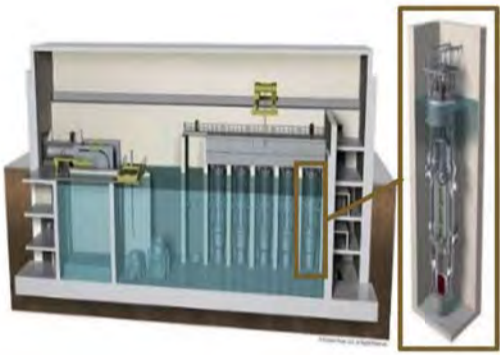
# NEXIP : Nuclear Energy x Innovation Promotion



## METI supports various types of nuclear reactor technologies

### Small Modular LWR

- NEXIP supports initiatives in collaboration with overseas projects aiming to start operation by the end of the 2020s at the earliest including NuScale (JGC & IHI) and BWRX-300 (Hitachi GE).



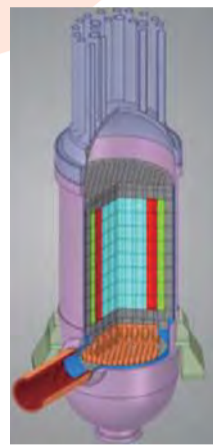
### Fast Reactor

- Based on the "Strategic Roadmap", METI is promoting diverse technological competition.
- Fast reactors enhance the effectiveness of nuclear fuel cycle with fast neutrons such as through reducing the volume and toxicity of radioactive waste as well as effective utilization of resources.



### High Temperature Gas-cooled Reactor

- NEXIP supports a hydrogen production concept (MHI) and an electric power generation concept with options of heat storage and hydrogen production (Toshiba ESS & Fuji Electric).
- METI will establish technologies for producing large-scale carbon-free hydrogen in a stable manner using HTGR's high temperature.



## The Japan Atomic Energy Agency (JAEA) possesses important test facilities



### Jojo: Experimental Fast Reactor

- Irradiation tests with fast neutrons under controlled temperature and finely tuned, high energy neutron spectrums.



### AtheNa: Large-scale sodium experimental facilities

- The world's leading facility that can test the actual scale sodium equipment.



### HTTR: Experimental HTGR

- Restarted in July 2021.
- Reactor outlet coolant temperature 950°C (First in the world).



## Innovative Nuclear Research and Development Program

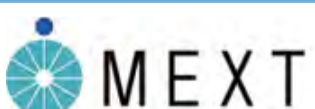
- MEXT supports basic research mainly in the simulation fields to realize nuclear innovation.
- To promote collaboration with other fields, MEXT introduces experts from other fields as Program Advisers.
- Young researchers are expected to advance their careers through this project.

### Categories for research proposals

Collaboration and Innovation

Bottleneck Technologies

New and Innovative Ideas



## Global Nuclear-HRD Initiative

MEXT supports human resources development by making a consortium for Japanese nuclear education and training.

### Examples

- Online education program
- Credit transfer system
- Nuclear reactor education course
- International workshop



University A



Company D

1. Constructing comprehensive educational programs and sharing lectures utilizing information technology
2. Providing opportunities for practical training utilizing research reactors or other nuclear research facilities
3. Providing opportunities for international study through systematic collaboration with international organizations and overseas universities
4. Promotion of collaboration with industry and other fields



University B



Research institution C

National Institute of Technology