Progresses for Innovative Technology Development by Industry

NEXIP
Nuclear Energy × Innovation Promotion

- **Since April of 2019 (FY2019), the Industry**, to contribute to the innovative technology development **has, joined national R&D programs and has been working for feasibility studies of each innovative reactor.**

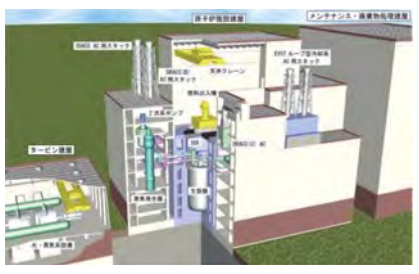
- In March of 2021, the Industry (End of FY2020), JAEA and other related organizations took part in the evaluation meetings and had technology assessment. **From this fiscal year (FY2021), the Industry is working more deeply on prioritizing its support subject to their technical maturity, marketability and so on.**

Small Modular Reactor

- SMR
  (Light Water Reactor Design)
  - ◆NuScale
  - ◆BWRX-300
  - ◆PWR for Multiple purposes
- Micro Reactor

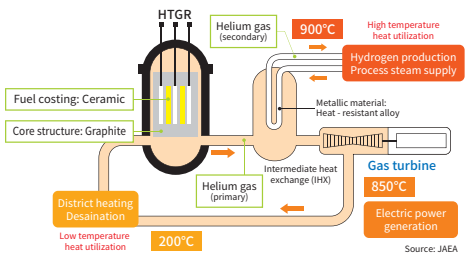
Fast Reactor

- Sodium-Cooled Small Reactor
  (Particle type metal fuel)
- PRISM
- Light Water Cooled Fast Reactor
  (Rectangle Grid Fuel)



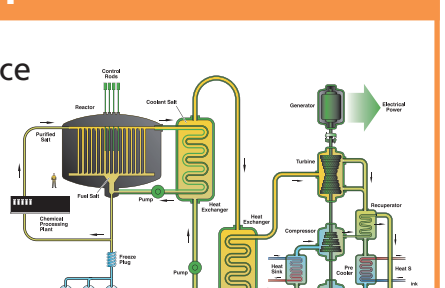
High Temperature Gas-Cooled Reactor

- High Temperature Gas-cooled Reactor and co-generation plant(Hydrogen Production, Electricity Generation)
- High Temperature Gas-cooled Reactor with Heat Storage System



Molten-Salt Reactor

United States, Canada, France and others are developing Molten-Salt Reactor as next generation technology



U.S.DOE : A Technology Roadmap for Generation IV Nuclear Energy Systems

MHI's Efforts on Future Nuclear Technology Initiatives

MITSUBISHI HEAVY INDUSTRIES, LTD.

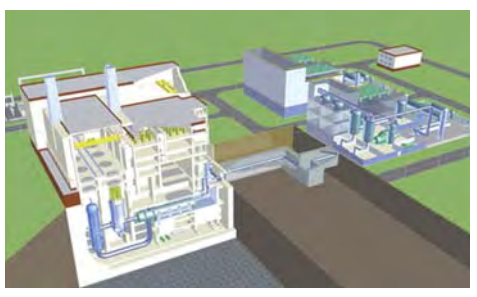
In the NEXIP initiative, MHI is developing 4 new-type reactors.

Small Light Water Reactors

to be used for a power source for small grids and power supply at disaster-stricken /remote areas by ship-mounted reactors

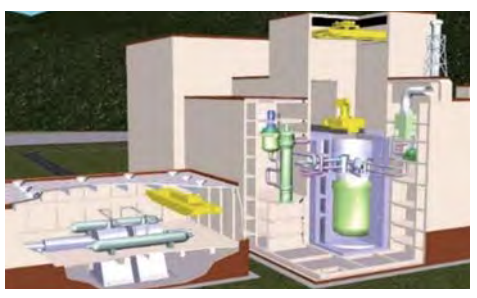
High Temperature Gas-cooled Reactors

to be used for stable and large amount of hydrogen production, and generated hydrogen can be used by steelmaking industries ?which lead to its decarbonization



Sodium cooled Fast Reactors

to be applicable for multipurpose use, based on the technology developed under national project and Japan-France collaboration



Micro Reactors

to be applicable for multi-purpose and portable power source.