

3. Impacts on peaceful use of nuclear energy

- ⇒ Little impact on peaceful use of nuclear energy
- ⇒ Serious impact to global energy security
- ⇒ Certain movement to actively promote the use of nuclear energy

“Faulting Changes” in the World of Energy

(Materials of GX (Green Transformation) Executive Committee, August 2022, in Japan)

1. Radical Change in Energy Geopolitics

- ❑ Gas disruption risk over Russian invasion of Ukraine
- ❑ Accelerating energy demand by emerging countries

2. Decarbonized Finance and Fossil Fuel Dependence Risk

3. Growth of Renewable Energy toward Carbon Neutrality (CN) in 2050

- ❑ In order to realize CN in 2050, it is necessary to increase renewable energy by about 6 times.
- ❑ China accounts for about 70% of the world's solar panel production, and China accounts for about 50% of the world's share of wind turbine manufacturers.

4. Review of Nuclear Power Generation toward Carbon Neutrality in 2050

- ❑ The IEA analysis expands the importance of nuclear power for the future.
- ❑ In the world nuclear power market (light water reactors), Russia and China account for about 60% of the nuclear reactors under construction or planning.

Review of Nuclear Power Generation toward Carbon Neutrality in 2050 in Japan

[\(Materials of GX \(Green Transformation\) Executive Committee, August 2022, in Japan\)](#)

◆ 2-3year plan

- Secure a total number of 16 (9+7) restarted nuclear power plants

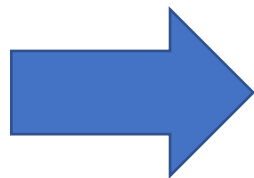
◆ Medium to long term plan

- Promotion restarting up NPP further,
- Extension of the operating period of existing nuclear power plants,
- **Development and construction of next-generation innovative nuclear reactors,**
- Completion of reprocessing facility, Reliable implementation of decommissioning, Strengthening the process of final disposal of HLW

Development and construction of next-generation innovative nuclear reactors,

What should JAEA do for safe and secure future ?

- ◆ High Temperature Gas Cooled Reactor
- ◆ Fast Reactor



Robust 3S design

- Safety
- Safeguards
- Security

What should JAEA do for strengthening nuclear security?

- ◆ Contribution for capacity building support by ISCN/JAEA

Activity Results of 2011- Nov. 2022

Total 5,555 participants in 218 courses
(101 countries, 6 international organizations)

Lectures



Group Exercises



PP Exercise Field



Virtual Reality System



Online Training

