Japan’s Nuclear Energy Policy and Nuclear Innovation

Ministry of Economy, Trade and Industry
February 2019
Position of Nuclear in Japan’s Strategic Energy Plan

**Towards 2030: Achievement of Optimal Energy-Mix Target**

**Nuclear is Important Baseload Power Source**

- Safety is First Priority. Only when approved by NRA’s strict review, NPPs restart.
- With principle of minimizing nuclear dependence, achieving 20-22% nuclear by 2030.

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<thead>
<tr>
<th></th>
<th>2010</th>
<th>2013</th>
<th>2017</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuclear</td>
<td>25%</td>
<td>1%</td>
<td>3%</td>
<td>22-20%</td>
</tr>
<tr>
<td>Renewable</td>
<td>9%</td>
<td>11%</td>
<td>16%</td>
<td>22-24%</td>
</tr>
<tr>
<td>Thermal</td>
<td>65%</td>
<td>88%</td>
<td>81%</td>
<td>56%</td>
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**Towards 2050: Challenge for Energy Transition**

**Nuclear is One Option for Energy De-carbonization**

- Safety is First Priority. Minimizing dependence on nuclear while trying to expand Renewable.
- Great progress in human resources, technology and infrastructure
- Pursuit of safe, economically efficient and mobile reactors, Development of Back End tech

Pursue every possible energy source
Various Examples of Nuclear Innovation in the World

Accident Tolerant Fuel

Predictive monitoring (Crosscutting development)

MOX fuel SFR

LW SMR with Economic Efficiency + Safety

Small- HTGR

Safety

Radioactive Waste Management

SFR (using Metal Fuel)

Levitation Type PWR

Nuclear Non-Proliferation

Multi-Purpose

Economic Efficiency

Mobility

Off Grid Micro Reactor

Small HTGR

Levitation Type PWR

Accident Tolerant Fuel

Predictive monitoring (Crosscutting development)
3 Key Factors for Future Nuclear Innovation

Financial support

Private-sector-led nuclear innovation

R&D infrastructure

Communication with regulatory authority