Country Report of Japan

The 18th FNCA Ministerial Level Meeting

October 11, 2017

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Japan's Energy History and Policy

Japan relies on imports for the greater part of its energy resources.

Oil crises in the 1970s drove nuclear energy to Japan's strategic priority.

50+ reactors provided some 30% of the country's electricity.

Following the 2011 Fukushima accident, Japan faces three new energy challenges: 1) Energy self-sufficiency, 2) High electricity cost, 3) CO2 missions

To overcome these challenges, Japan is promoting a balanced energy mix with 2030 as the target year.

Long-term Energy Plan of Japan

Japan needs to attain three objectives in 2030. (METI's Long-term Energy Supply and Demand 2015)

Energy Security

- 20% (2010)
- 6% (2013)
- **Raise to 24% (2030)**

Leverage renewable energy and nuclear energy (generated domestically)

Electricity Fuel Cost

- $45B (2010)
- $84B (2013)
- **Reduce to $48B (2030)**

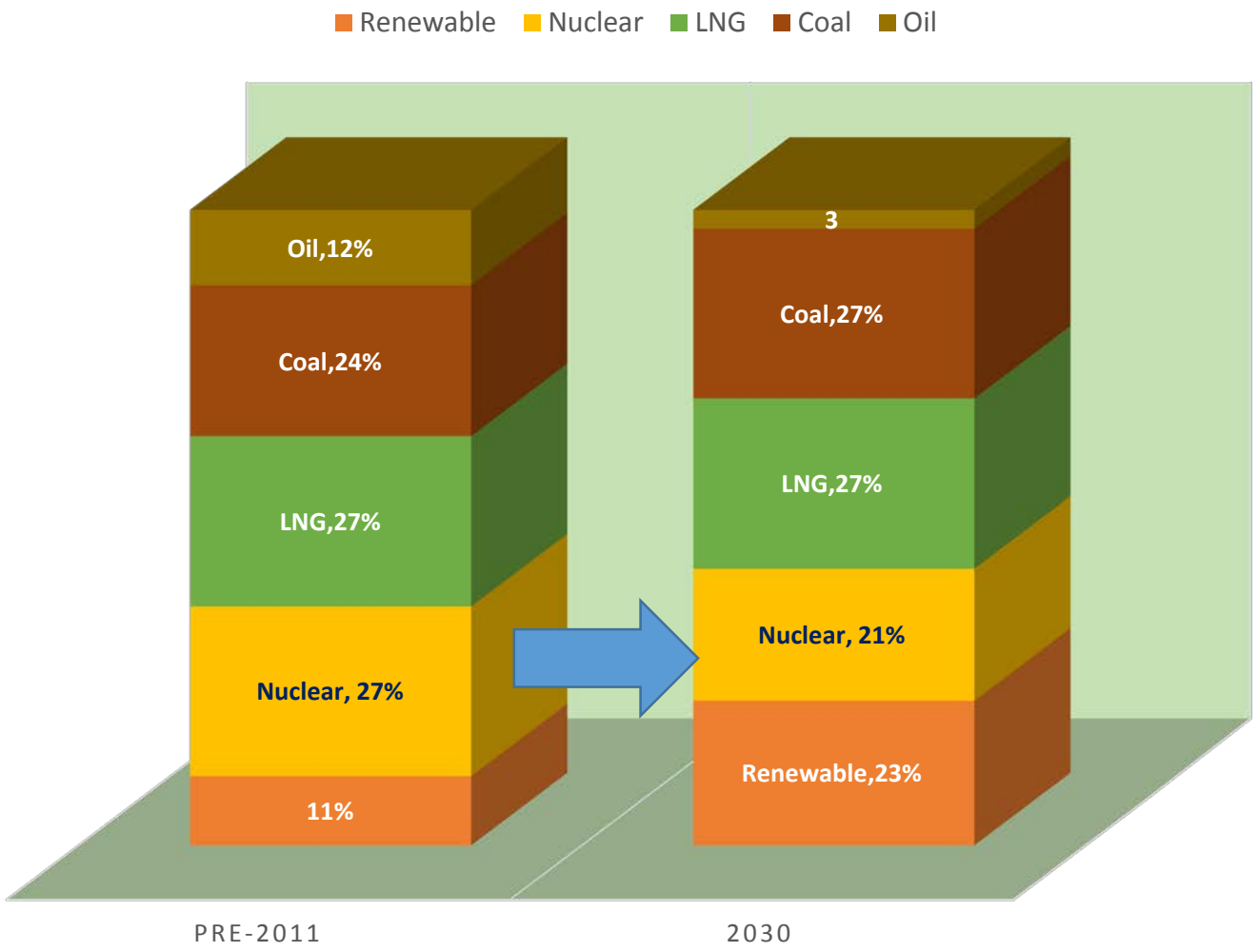
Utilize inexpensive sources:
- Nuclear energy
- coal-fired thermal

CO2 Emissions

- 1.14B tons (2010)
- 1.24B tons (2013)
- **Reduce to 0.93B tons (2030)**

Utilize inexpensive sources:
- Nuclear energy
- coal-fired thermal

Projected Energy Mix (2030)



Nuclear Power Plant Restart in Japan

Basic Policy for Nuclear Energy(1)

- In July 2017 the Japanese cabinet approved “ Basic Policy for Nuclear Energy ”, which was developed over two years by JAEC, involving public consultation.
- It will provide a reference for future decisions about nuclear energy policy.
- It outlines eight priority activities in attaining the basic targets for using nuclear energy safely while promoting its benefits.

Basic Policy for Nuclear Energy(2)

Eight Important initiatives and directions

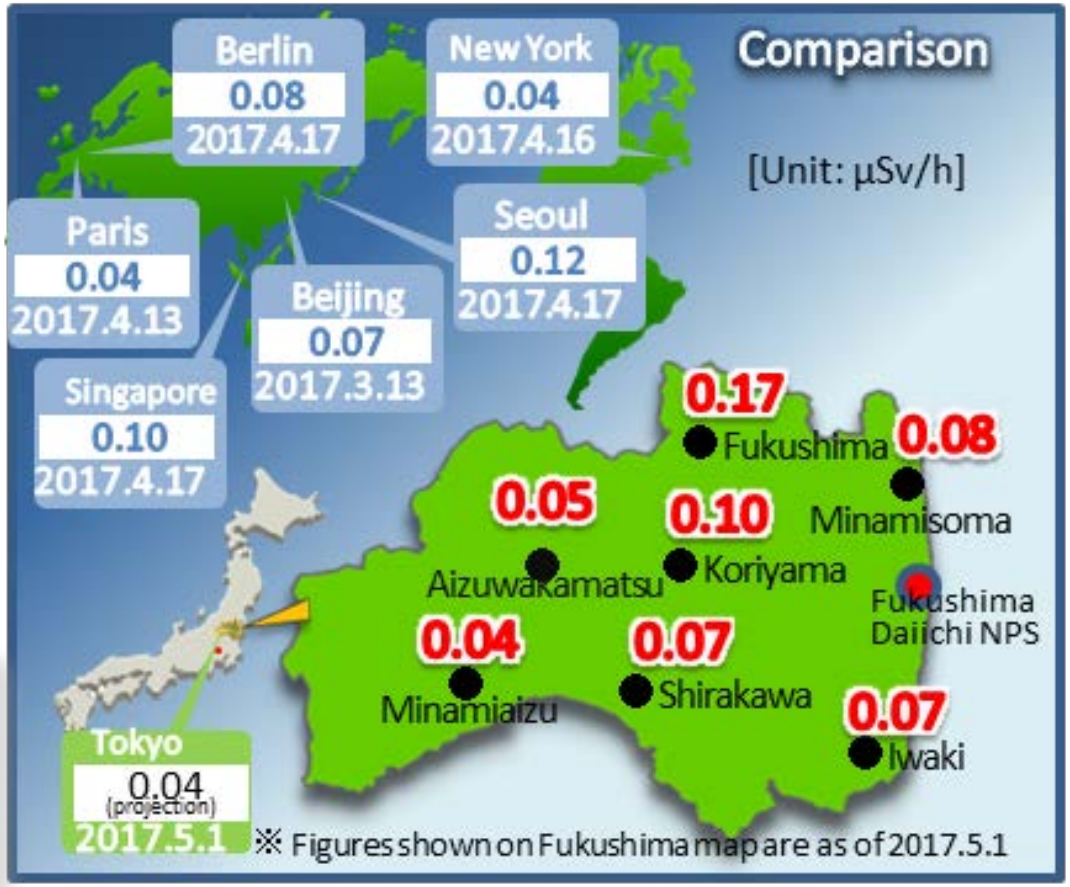
1. Continuous improvement of safety: zero-risk doesn't exist.
2. Nuclear energy use in addressing the global warming, nation's livelihoods and economic issues
3. Nuclear energy in the global context
4. Peaceful use of nuclear energy: enhancing non-proliferation and security regime
5. Rebuilding public trust as a precondition of nuclear energy
6. Coping with Decommissioning and radioactive waste
7. Expanded use of radiation and radioisotopes
8. Solid foundation for nuclear energy use

Fukushima Today
- Safety and Revitalization -

Current state of air dose rates

The air dose rate in Fukushima Prefecture is about the same level as other major cities overseas.

- Budget for decontamination: approx. US$ 24 billion until FY2016.
- Removed 16,000,000m^3 of contaminated soil and wastes (estimate).
- Total labor: 30,000,000 workers



Sapporo: 0.03
- Tokyo: 0.04
- Fukuoka: 0.06

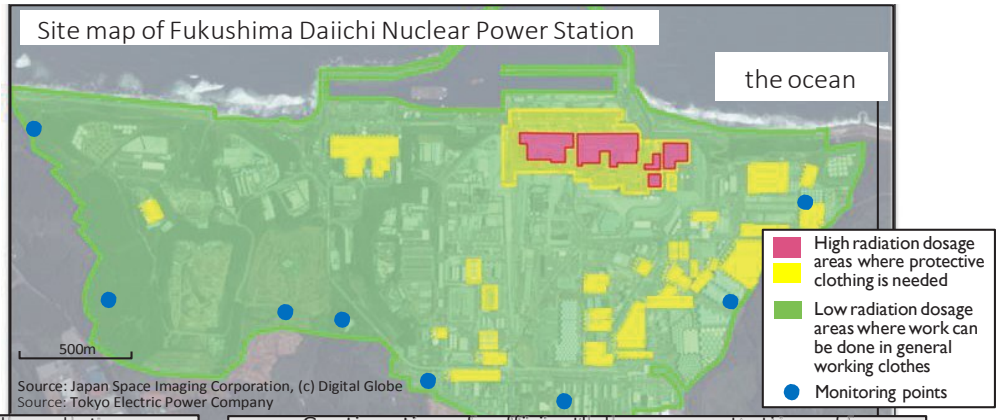
<as of 2017.6.1>

Current status of Fukushima Daiichi

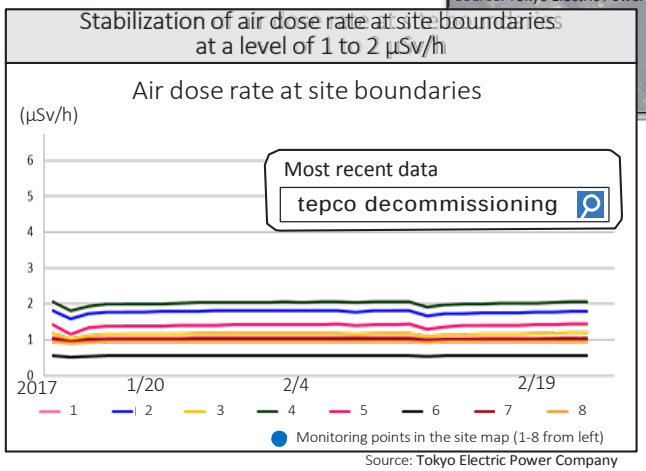
- Monitoring of parameters, such as reactor temperatures, and checking that stable conditions are being maintained.
- The environment has been improved and impacts on the site and surrounding areas have been significantly reduced.

Work in general working clothes is possible in 95% of the area (green area in the right map)

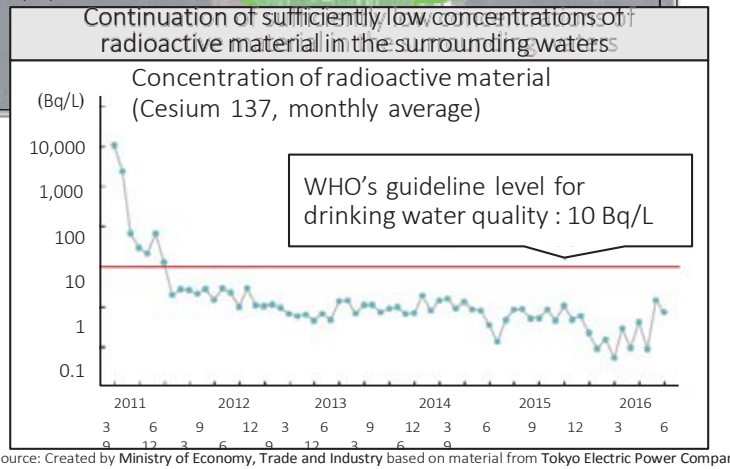
Source: Tokyo Electric Power Company



Source: Japan Space Imaging Corporation, (c) Digital Globe
Source: Tokyo Electric Power Company



Source: Tokyo Electric Power Company



Source: Created by Ministry of Economy, Trade and Industry based on material from Tokyo Electric Power Company

Ensuring Food Safety

Food safety is ensured through a thorough inspection of radioactive substances based on the strictest level of standard limits in the world as set in scientific basis. (Bq/kg)

Japan Standard limits under Food Sanitation Act	EU Council Regulation (Euratom) 2016/52	US CPG Sec.560.750 Radionuclides in Imported Foods-Level of Concern	CODEX CODEX STAN 193-1995
100	1,250	1,200	1,000

Thank you