**WIN GLOBAL 2008**
**JAPAN report**
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1. Nuclear 2007 highlights:
   - A magnitude 6.8 earthquake occurred in Niigata on July 16 2007. Owing to this earthquake, 3 units operating and 1 unit during start-up were shutdown automatically at TEPCO's Kashiwazaki-Kariwa NPS. Now, all 7 units of the NPS are in an outage for investigation.

     This influenced the capacity factor of Japanese NPPs in FY2007, which stood at just 60.7%.
   - Debate on global warming is more and more active in Japan, as it is the host country of the G8 Hokkaido Toyako Summit in July.

     The Japan Atomic Energy Commission released "White Paper on Nuclear Energy 2007" in March 2008. In the paper, they first expressed the view that the expansion of the peaceful use of nuclear energy is indispensable.

2. Nuclear overview:

a. Energy policy:

Electricity share (percent of nuclear)

25.4% (FY2007, an estimated value)

Future of nuclear power

The energy policy of Japan aims at nuclear power generation being maintained at the current level (30 to 40% of the total electricity generation) or increasing even after 2030, for stable energy supply and as a countermeasure against global warming.

Projects: state of projects, schedule

- Nuclear Fuel Cycle

  Status

  The active tests at the JNFL reprocessing plant in Rokkasho-mura are in the final phase for commercial operation in 2008.

  Schedule

  | | |
  |---|---|
  | By FY2010 | Plutonium utilization in LWRs in 16 to 18 NPP units |
  | Around FY2010 | Installment of new centrifuges at the uranium enrichment plant at Rokkasho-mura |
  | In FY2012 | Start of commercial operation of MOX fuel fabrication plant |

- Fast-breeder reactor cycle

  Status

  Operation of the prototype reactor “MONJU” has been suspended since a secondary sodium leak in 1995.

  JAEA (Japan Atomic Energy Agency) completed full-scale remodeling work and is implementing various tests to confirm the capabilities and soundness of MONJU. They aim to start its operation within FY2008.

  Schedule

  Around 2025 Building a demonstration FBR

  Before 2050 Development of a commercial FBR

b. Nuclear equipment (number and type):

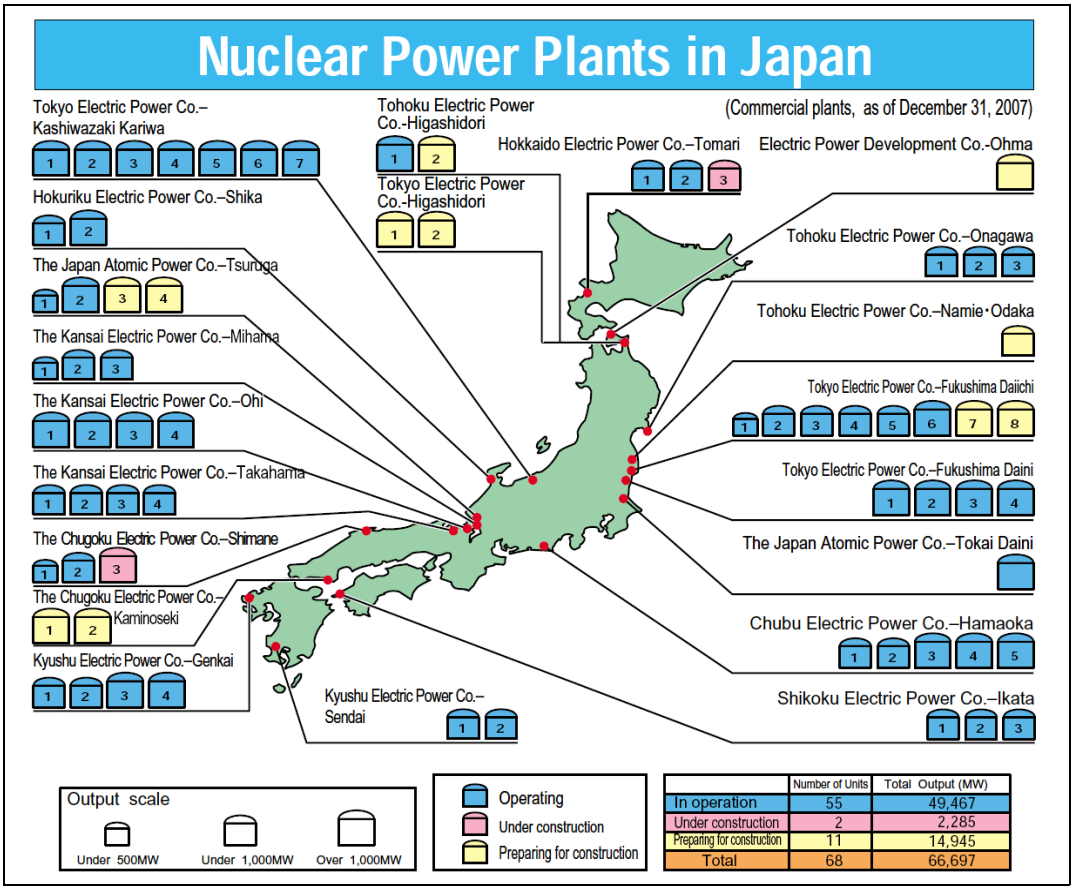
- Electricity production (Operating)

  BWR: 32 units (including 4 units of APWR), PWR: 23 units
- Electricity production (Under construction)

  BWR: 1 unit, PWR: 1 unit
- Electricity production (Preparing for construction)

  BWR: 9 units, PWR: 2 units
- Research

  FBR: 1 unit



c. Nuclear waste management

NUMO (Nuclear Waste Management Organization of Japan) was established as the implementing organization for a high-level waste disposal project in October 2000. Operations are slated to start in the 2030s.

NUMO will select the site through the following three-step process.

1st. Selection of preliminary investigation areas by documentary studies
2nd. Selection of areas for detailed investigation by borehole programs, etc.
3rd. Selection of the site for repository construction by test programs in underground exploration facilities

NUMO is recruiting voluntary candidates for documentary studies. Some municipalities have interested in the project, however, they have not let NUMO to do documentary studies.

The mayor of the town of Toyo in Kochi prefecture applied for a documentary study in January 2007. It was the first application in Japan, and NUMO was authorized to implement a documentary study there by the national government in March 2007.

But NUMO withdrew its application in April 2007 because of opposition from prefectural governors, stakeholders and general public in the town.

To improve this situation, the government strengthened its efforts to start documentary studies. For example, they changed the rule so that the government could propose some suitable towns as candidates for documentary studies, in addition to accepting voluntary applications.

d. Other nuclear activities

Implementation of a new inspection system (after FY2008)

- Instead of the current uniform inspection, change to a plant-by-plant approach
- Inspection also during operation
- Analyzing the root causes of abnormal occurrences and accidents

>>>This new system improves not only measures against aging facilities but also the reliability of inspection activities by individual plants and the quality of work by equalizing the volume of work.

3. Nuclear competencies (Needs, education and training):

It's serious subject how the Japanese nuclear industries maintain sufficient robustness in the fields of technology, safety, and personnel in twenty-five years or more before new wave of replacement begins.~~Regarding medium- and long-term challenges for human resource development in the nuclear field, the Council on Nuclear Human Resource Development was established so that participants from industry, government and universities could have continuous discussion, share information, cooperate on activities and provide advice to relevant institutions.~~

~~The following subjects are under discussion:~~

1. ~~Making medium- and long-term roadmaps for human resource development (For example, change of required human resources from construction to maintenance)~~

2. ~~Quantitative analysis of supply and demand of human resources and job vacancies in the nuclear field~~
3. ~~Release of lists of nuclear specialists and organizations where nuclear specialists are needed~~
4. ~~To interest students in the nuclear field from primary to high school~~

~~and so on.~~

Countermeasures in "Japan's Nuclear Energy National Plan (2006)" are as follows:

- Development of a Japanese next-generation LWRs
  - Next-generation LWRs that can compete in world markets
  - The first united private/public sector national project in 20 years
- Assist on-site engineer training and skills transfer
  - Local initiatives regarding personnel development and passing down of skills beyond the boundaries of individual business enterprises
  - For more than 20,000 people (in Aomori, Fukui, Niigata/Fukushima)
- Creating nuclear energy training program for universities, etc.
  - Develop course materials, invite instructors from industry
  - Support basic technology fields underlying nuclear energy
  - Provide students with opportunities to experience a reality and appeal of the nuclear industry and research laboratories

4. WIN-Japan 2007 Main Achievements
   - Town hall meeting for women

     WIN-Japan organizes town hall meetings for women a few times a year. We had one in Omaezaki City (near Hamaoka NPS) and Aomori city (nuclear fuel cycle facilities in the prefecture) in 2007. We discussed anxiety about the influence of earthquakes on NPS, the situation of energy supply in the future and energy saving measures.

     Refer to WINFO Issue 14, http://www.win-global.org/winfo/2007/Issue_14.pdf and Issue 15, http://www.win-global.org/winfo/2007/Issue_15.pdf)

- Technical Tour of Kashiwazaki-Kariwa NPS

  On 18 January 2008, 32 members of WIN-Japan visited Kashiwazaki-Kariwa Nuclear Power Station, which was damaged by a magnitude 6.8 earthquake last July. The purpose of this tour was to understand the scale of the damage to the NPS and the efforts of TEPCO for the resumption of operations.

  Refer to WINFO Issue 16, http://www.win-global.org/winfo/2008/Issue_16.pdf)


- Support for female university students to select their course

  In addition to women and young students, we have expanded our target to female university students since 2007. This is because we hope they will consider the nuclear industry as a potential field of employment. We expect many women to get jobs and work actively in the frontline of the nuclear industry.