

INSC Country Report

Country: Japan

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1. Political situation in nuclear in your country

1. Energy Policy and Activities of Ministry of Economy, Trade and Industry (METI)

(1) The revised “Energy Basic Plan”, approved by the Cabinet on April 11, 2014, emphasized that restoration and reconstruction of Fukushima would be the starting point of nuclear energy, and that nuclear energy would be one of the important base load power contributing to ensure the stability of the energy supply and demand structure, and that dependency on nuclear power generation would be reduced as much as reasonably possible.

“Energy demand/supply prospectus Subcommittee”, formulated by METI, decided “Long Term Energy Demand/Supply Prospectus” on July 2015, consistent to the above energy basic plan and the desirable “power best mix” in 2,030, as electric power base, features 20-22 % of nuclear, down from about 30 % before “the Great earthquake disaster” of 2011, and 22-24% of renewable energy in order to contribute to CO2 reduction of 26% from 2013.

(2) “Safety enhancement / technology/ human resources Working Group”, formulated by METI, proposed safety enhancement means on May 27, 2015 and published safety technology and human resources roadmap on June 16, 2015. This WG was restarted on June 17, 2016 and the rolling activity is continuing.

(3) “Radioactive Waste Working Group”, formulated by METI, proposed the revised basic policy of the final disposal of HLRW and TRU and the Ministerial Meeting approved this on December 18, 2015. This WG is still underway discussing how to proceed the dialogue at the scientifically promising site.

2. Nuclear Regulation Authority

(1) Commissioner

Current five Commissioners and their term of office are as follows.

- Shunichi Tanaka, Chairman (Special Adviser of Japan Atomic Energy Agency, the former

2. News on nuclear facilities (NPP's, WSF's etc.) in your country (power upgrades, lifetime extensions, new build etc.)

1. Status of LWRs Restart

The new safety regulation for commercial LWRs was enforced in July 2013, and applications for NRA review on conformity with new safety standard for restart were started. Applications as of September 2016 are 16 sites 26 reactors (16 PWR, 4ABWR, 6 BWR).

In September 2015, Sendai unit 1 started commercial operation. This is the first unit to be restarted after the "Great Earthquake" in 2011. Sendai unit 2 started commercial operation in November 2015. Takahama unit 3 started commercial operation in January 2016. Ikata unit 3 started commercial operation in September, 2016. Takahama NPP Unit 1&2 obtained approval in April, 2016. Takahama Unit 1&2 granted approval in June 2016 and Mihama Unit 3 is expected to grant approval by November 2016.

Further, Kansai Electric Power Company (KEPCO) applied long term operation beyond 40 years for Takahama Unit 1 & 2 in April 2015 and for Mihama unit 3 in November 2015. (See Attachment)

2. Fracture Zone Issue

"A Knowledgeable Specialist Sub-Committee" formed by the NRA, concluded in March 2015 that fracture zones at Tsuruga-site and Higashidori-site should be treated as active faults since the Subcommittee could not deny that these would not be active from geological view point. Final decision will be made in the plant re-start application review. Concerning Shika, they also reported to NRA the same recommendation on April 2016 and final decision will also be made in the plant re-start application review.

Concerning Mihama-site, Sub-Committee reported to NRA on September 2015 that the possibility of activity after Late Pleistocene would not be recognized.

Concerning Monju-site, Sub-Committee also concluded on August 25, 2016 that the possibility of activity after Late Pleistocene would not be recognized.

3. Monju (prototype FBR) Issue

NRA issued a recommendation about Monju (Prototype FBR) on Nov. 13, 2015. NRA recommended that an

3. News on companies (projects, financial results, production etc)

1. Hitachi, Toshiba and Mitsubishi are still working with TEPCO to restore Fukushima Daiichi NPS.
2. Hitachi, Toshiba and Mitsubishi are also working with Electric Power Companies to restart the operating plants, currently under shutdown following jjeach periodic inspection after East Japan Great Earthquake.
3. Hitachi, Toshiba and Mitsubishi are working for nuclear plant export in the area of Asia, Middle East, Europe, the US and so forth.

4. Public opinion towards nuclear (results latest PO polls)

1. PO polls for re-start by media in 2016 showed “negative” 30-60%, “positive” around 30%, “don’t know” 10-20%.
2. PO polls for re-start by research center in 2016 showed “positive” around 60% (dependent on NRA, site local government adjacent local government approval) “unconditionally negative” 25% and “don’t know” 15%.

5. Stakeholder dialogue (Attitudes of NGOs, media, local communities towards nuclear)

1. Juridical Issue (Related to the plants already restarted)

(1) Takahama Unit 3&4

Fukui District Court issued provisional disposition to prevent the restart of Takahama Unit 3&4 on April 14, 2015, stating that the current NRA requirement was not enough and the safety of Takahama Unit 3&4 would not be fully assured. KEPCO raised objection and Fukui District Court in the objection trial cancelled the above disposition on December 24, 2015 and Takahama unit 3 was restarted on January 29, 2016. However, on March 9, 2016 Otsu District Court, which area is adjacent to Fukui prefecture, issued provisional disposition to prevent the restart and Takahama unit 3 turned to shutdown on March 10, 2016. KEPCO raised objection, but Otsu District Court rejected this objection in July 2016. KEPCO raised appeal pertaining to temporary restraining order to Osaka High Court in July 2016.

(2) Sendai Unit 1&2

On April 22, 2015, Kagoshima District Court rejected a request by a group of local anti-nuclear residents for a temporary injunction to prohibit the restart of the Sendai 1&2 of Kyushu Electric Power Company, due to "no irrationalities in the NRA new regulatory standards", in the context of the latest scientific findings. Although anti-nuclear residents raised immediate appeal against this decision, Fukuoka High Court rejected this request in the Immediate Appeal Court on April 6, 2016. Anti-nuclear group requested to Fukuoka District Court to cancel the approval of reactor permit on June 10, 2016.

(3) Ikata Unit 3

Temporary injunction to prohibit the restart of the Ikata Unit 3 by anti-nuclear group was raised to Hiroshima District Court on March 11, 2016, to Matsuyama District Court on May 13, 2016 and to Oita District Court on June 24, 2016.

2. Activities of the Nuclear Risk Research Center (NRRC)

(1) NRRC was formed in the Central Research Institute of Electric Power Industry on October 1, 2014 for research and development of the comprehensive risk assessment utilizing PRA based on the lessons learned from Fukushima Daiichi Nuclear Power Station Accident. Dr. George Apostolakis, the former NRC Commissioner is the Head and Dr. Richard A. Meserve, the former NRC Chairman is the Executive Advisor. Technical Advisory Committee has been held every three months.

| Applicant | NPP | Type | Commercial Operation start | Application |
|-----------|------------------------|------------|----------------------------|--|
| Hokkaido | Tomari 1 | PWR | 1989 | July, 2013 |
| | Tomari 2 | PWR | 1991 | |
| | Tomari 3 | PWR | 2009 | |
| Kansai | Ohi 3 | PWR | 1991 | July, 2013 |
| | Ohi 4 | PWR | 1993 | |
| | Mihama 3 | PWR | 1976 | March, 2015 |
| | Takahama1 Takahama2 | PWR PWR | 1974 1975 | Approval Obtained (June ,2016 |
| | Takahama 3 | PWR | 1985 | Restarted(January2016) but shut down(March2016) * |
| | Takahama 4 | PWR | 1985 | Approval obtained (February 2015) |
| Shikoku | Ikata 3 | PWR | 1994 | Restarted (September, 2016) |
| Kyushu | Sendai 1 | PWR | 1984 | Restarted (September,2015) |
| | Sendai 2 | PWR | 1985 | Restarted (November, 2015) |
| | Genkai 3 Genkai 4 | PWR PWR | 1994 1997 | July, 2013 |
| Tokyo | Kashiwazaki-Kariwa 6 | ABWR | 1996 | Sept. 2013 |

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|----------|----------------------|------|---------|-----------|
| | Kashiwazaki-Kariwa 7 | ABWR | 1997 | |
| Chugoku | Shimane 2 | BWR | 1989 | Dec. 2013 |
| Tohoku | Onagawa 2 | BWR | 1995 | Dec. 2013 |
| | Higashidori 1 | BWR | 2005 | June 2014 |
| Chubu | Hamaoka 3 | BWR | 1987 | June 2015 |
| | Hamaoka 4 | BWR | 1993 | Feb. 2014 |
| Hokuriku | Shika 2 | ABWR | 2006 | Aug. 2014 |
| JAPC | Tokai 2 | BWR | 1978 | May 2014 |
| | Tsuruga 2 | PWR | 1987 | Nov 2015 |
| EPDC | Ohma (Full Mox) | ABWR | Not yet | Dec.2014 |

* : Takahama unit 3 was shut down due to Ohtsu District Court Judgement on March 10, 2016.