

## Japan

**Tomofumi Yamamoto**, of the AESJ International Activities Committee and the ANS Japan Local Section, sent this report:

### Japan Report for ANS Globe, October 2019

ANS and Atomic Energy Society of Japan (AESJ) have established a bilateral agreement in 1999 to provide a mutual cooperation and since then AESJ is one of the so-called “sister-societies” of ANS.

#### 1. Energy Policy and Activities of the Government

The Government of Japan formulates the Strategic Energy Plan in order to show to the public the basic direction of Japan's energy policy under the Basic Act on Energy Policy. On July 3, 2018, the Cabinet approved the new Strategic Energy Plan as the basis for the orientation of Japan's new energy policy towards 2030 and further towards 2050, considering the changes in energy environments inside and outside Japan.

This Strategic Energy Plan shows a similar direction to the previous one and emphasizes the following:

- Renewable energy is to be the major electric power source for decarbonization
- The share of nuclear energy remains at 20-22% of total electricity in 2030
- The pursuit of reactors with superior safety, economics and mobility, and the development of technology aimed at the resolution of backend problems.

According to the Strategic Energy Plan, the Ministry of Economy, Trade and Industry (METI) launched a new project for nuclear innovation in April 2019. The budget of 2019 fiscal year is 650 million yen (Approx. \$6 million) for feasibility study.

#### 2. Status of Nuclear Power Plants

As of September 30, 2019, only 9 PWRs are back on line and 6 plants have passed the safety review of Nuclear Regulation Authority. Utilities have decided to close 24 NPPs.

Applicant	NPP	Type	Commercial Operation	Status (NRA Review)
Hokkaido	Tomari 1	PWR	1989	Application, Jul. 2013
	Tomari 2	PWR	1991	Application, Jul. 2013
	Tomari 3	PWR	2009	Application, Jul. 2013
Kansai	Ohi 3	PWR	1991	Restart, Mar. 2018
	Ohi 4	PWR	1993	Restart, Apr. 2018)

	Mihama 3	PWR	1976	Approved. Nov. 2016 Life Extension Approved, Nov. 2016
	Takahama1	PWR	1974	Approved. Jun. 2016
	Takahama2	PWR	1975	Life Extension Approved, Jun. 2016
	Takahama 3	PWR	1985	Restart, Jul. 2017
	Takahama 4	PWR	1985	Restart, Jun. 2017
Shikoku	Ikata 3	PWR	1994	Restart. Sep. 2016
Kyushu	Sendai 1	PWR	1984	Restart. Sep. 2015
	Sendai 2	PWR	1985	Restart. Nov. 2015
	Genkai 3	PWR	1994	Restart. Mar. 2018
	Genkai 4	PWR	1997	Restart. Aug. 2018
Tokyo	Kashiwazaki-Kariwa 6	ABWR	1996	Approved. Dec. 2017
	Kashiwazaki-Kariwa 7	ABWR	1997	Approved. Dec. 2017
Chugoku	Shimane 2	BWR	1989	Application. Dec. 2013
Tohoku	Onagawa 2	BWR	1995	Application. Dec. 2013
	Higashidori 1	BWR	2005	Application, Jun. 2014
Chubu	Hamaoka 3	BWR	1987	Application. Jun. 2015
	Hamaoka 4	BWR	1993	Application. Feb. 2014
Hokuriku	Shika 2	ABWR	2006	Application. Aug. 2014
JAPC	Tokai 2	BWR	1978	Approved. Sep. 2018 Life Extension Approved, Nov. 2018
	Tsuruga 2	PWR	1987	Application. Nov. 2015
EPDC	Ohma (Full Mox)	ABWR	Not yet	Application, Dec. 2014

### 3. Activities of Atomic Energy Society of Japan (AESJ) (<http://www.aesj.or.jp/en/>)

#### (1) Message from Dr. Shigeaki Okajima, new President of AESJ

Dr. Shigeaki Okajima, Japan Atomic Energy Agency, took office as President of AESJ in July 2019. His message shows the following.

#### Message of AESJ President

The purpose of AESJ's activities, giving the top priority to public safety, is to provide environmental conservation and social development by advancing science and technology on the peaceful uses of nuclear energy and radiation.

AESJ marked its 60th anniversary on February 14th, 2019. The year 2019 is also a notable year when a new era has been reached from Heisei to Reiwa. It is an honor for me to serve AESJ as the President at such a historical milestone.

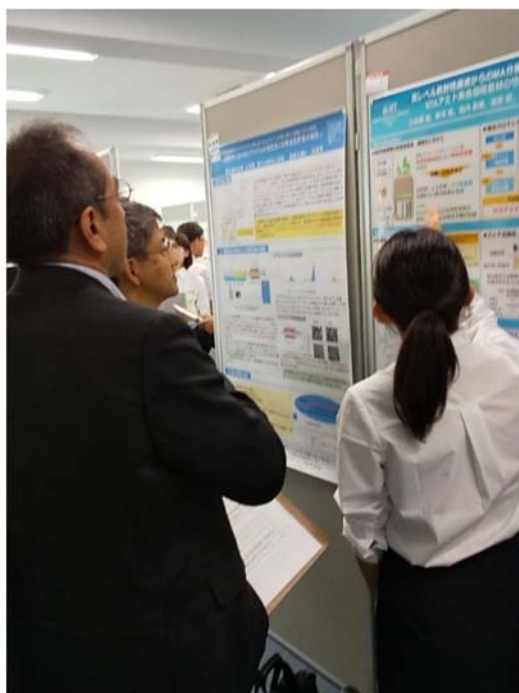
As shown below, I am working with members of AESJ on the five challenges facing "Toward the Reconstruction Period for Nuclear Energy", in addition to pursuing nuclear and radiation science and technology for a sustainable society.

1. Promoting activities for suggesting the necessity of nuclear energy and better understanding of nuclear energy
2. Promoting the decommissioning of the TEPCO Fukushima Daiichi Nuclear Power Plants (1F), and supporting Fukushima reconstruction
3. Promoting research on peaceful use of radiation and research on radiation protection
4. Continuation of education and human resource development, and technology inheritance
5. Activities to maintain the number of members

## **(2) Annual Conference**

The 2019 Fall Annual Meeting was held at the University of Toyama September 11-13. Many special plenaries and sessions, such as decommissioning, SMRs, reactor physics, and so on were organized and implemented successfully. More than 1,500 people attended, including students.

The photographs below show the poster session and one scene of the reception party.



Poster Session



Entertainment at Reception Party  
(Traditional dance in Toyama Prefecture:  
ETCHU OWARA KAZE-NO-BON

Ref. <https://foreign.info-toyama.com/en/event/>)

### **(3) Fukushima-Daiichi- Accident-Related Activity**

The Review Committee on Decommissioning of the Fukushima Daiichi Nuclear Power Station of AESJ provides scientific advices and has follow-up activities for the AESJ Fukushima Daiichi Nuclear Accident Report. The committee held a symposium on Fukushima Daiichi Decommissioning on March 9, 2019 in Tokyo. What the current subjects or problems to face with and what or how AESJ could cope with are discussed. The following topics were presented.

- Whole process of decommissioning and its hold point
- Management goal and security of damaged reactors
- Waste management for decommissioning and restoration of sites
- Safety evaluation for damaged reactors against natural hazard
- Challenge for new technologies
- Proposal for international cooperation

The committee also co-hosted the “International Topical Workshop on Fukushima Decommissioning Research” with JSME at Fukushima on May 24-26, 2019. The workshop had five technical tracks: Fukushima accident analysis, Debris removal strategy, Robot technology, Radiation measurement and Waste management.

### **4. Activities of ANS Japan Section FY2019 (April - September 2019)**

The ANS Japan Section is managed by the International Nuclear Information Network (ININ) of AESJ. The ININ has approximately 180 members including eleven officers.

Major activities in the first half of FY2019 are as follows;

- Semi-annual Members’ General Meetings are held twice a year, in autumn and spring. The autumn meeting was held in September 2019 in Toyama, the spring meeting will be held in March 2020 in Fukushima.
- Executive Committee Meetings are held about five times a year. Three meetings were held in April, June and August.
- Workshops are held four times a year with invited lecturers. Two workshops were successfully held in this fiscal year as follows:
  - ✓ “Key to Successful Spent Fuel and Radioactive Waste Management” presented by Dr. Christophe XERRI, Director, Division of Nuclear Fuel Cycle, Waste Technology, Research Reactor, IAEA, on July 18, 2019

✓ “The French Nuclear Sector: Trends and latest Developments“ and  
“The Jules Horowitz Research Reactor Construction, Reactor  
capabilities, Irradiation Facilities”, presented by Dr. Christian  
GONNIER, representative of Jules Horowitz Research Reactor,  
Cadarache Center, CEA, on September 12 , 2019

Planning of the remaining two workshops is ongoing. Also, the ANS Japan Section has  
other communication opportunities to the section members through e-mail, Web and annual  
Newsletter.