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Outlook for Nuclear Power in and outside Japan

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1. Since specialized safety facilities (SSFs) of nuclear power plants take time to construct, a grace period was set in 2015 allowing power plants to operate for five years after obtaining a construction permit for regular facilities even if their SSFs are not yet complete. In 2020, Sendai Units 1 and 2 shut down consecutively after their grace periods expired. Unit 1 went back online on November 19 after its SSFs were completed, and Unit 2 is scheduled to do so in late December.
2. Kansai Electric's Takahama Units 3 and 4 also shut down in 2020 after their grace periods expired. According to Kansai Electric's periodic outage schedule, Unit 3 is due to go back online on December 22 and Unit 4 in February 2021.
3. Meanwhile, in March 2021, the grace period will expire for Shikoku Electric's Ikata Unit 3, whose operation is suspended under an injunction by the Hiroshima High Court issued in January 2020. President Nagai of the company announced on October 29 that the SSFs will be completed around October 2021. Before the facilities are completed, the Hiroshima High Court, which issued the injunction, is scheduled to decide in March 2021 whether to allow the plant to operate in response to an appeal.
4. In 2021, the grace period will also expire for Kansai Electric's Mihama Unit 3 and Takahama Units 1 and 2. If the construction of the SSFs proceeds as scheduled, these plants may also be restarted in FY2021.
5. On November 6, 2020, Tokyo Electric submitted an application for a pre-service inspection of Kashiwazaki-Kariwa Unit 7 to the Nuclear Regulation Authority. According to the application, the inspection is scheduled to be completed around April 2021.
6. Based on the above, operation plans in FY2021 are expected to be as follows: four plants are projected to restart in FY2021, in addition to the nine plants already restarted. However, it is not clear whether the plants will actually restart, due to non-technological factors such as court decisions and approval by municipalities.
7. There were important moves concerning the siting of a high-level waste (HLW)

disposal facility. On November 17, 2020, a literature survey, the first phase for selecting a site, began at Hokkaido's Suttsu Town, which had applied in October at its own initiative, and at Kamoenai Village, also in Hokkaido, which accepted the government's request. In starting the survey, the Nuclear Waste Management Organization of Japan (NUMO), the entity in charge of the geological disposal project, has said they will "start by collecting and organizing necessary literature and data, such as geological maps and academic journals, and explain to the local communities how the literature survey will be conducted." The efforts of NUMO, which considers the literature survey as "a forum for dialog" with local residents and is conducting ongoing information disclosure and dialogs, deserve attention.

8. On November 11, 2020, the Recycle-fuel Storage Center in Mutsu City, Aomori obtained approval from the Nuclear Regulation Authority for changes to its business concerning the safety assessment in accordance with the new regulation standards

Overseas

9. Currently ranked third in the world in installed nuclear capacity, China actively continued to develop nuclear power in 2020. Tianwan Unit 5 went online in August 2020, followed by Fuqing Unit 5 in November. With the start of construction of Taipingling Unit 2 and Zhangzhou Unit 2 in 2020, there are now 14 plants (approx. 1.471 GW) under construction, of which three or four are scheduled to start operation in 2021.
10. In August 2020, Barakah Unit 1 went online in the UAE followed by Ostrovets Unit 1 in Belarus in November, both as the countries' first nuclear power plant. With this, the number of countries using nuclear power increased to 33, up two countries from 2019. Barakah Unit 2 and Ostrovets Unit 2 are expected to start operation in 2021. However, it is not clear whether the plants can continue to operate beyond 2021 since the three Baltic states, including Belarus' neighbor Lithuania, have decided not to buy electricity produced by Ostrovets.
11. NuScale Power Module (NPM), a small modular reactor (SMR) from US NuScale, obtained standard design approval (SDA) from the US Nuclear Regulatory Commission on September 30, 2020. Out of the NPM series, the one with an output of 50 MW was granted SDA; NuScale has not applied for SDA for its 77 MW reactor unveiled in November 2020. In the United States, Utah Associated Municipal Power Systems (UAMPS) already has plans to build an NPM in the DOE's Idaho National Laboratory. However, the start of operation of the first plant, initially scheduled for 2026, has been pushed back to 2030, and the project costs have also ballooned from $4.2 billion to $6.1 billion in the past two years. Due to the delay and the rise in costs,

eight municipalities participating in UAMPS have decided to leave the project. Attention must be paid to any cost increase and delays in the future, as well as changes in the participation of municipalities in UAMPS.

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