

## Verifying Earthquake Resistance at the Onagawa-2 NPS

On November 29, the Nuclear and Industrial Safety Subcommittee's working committee on earthquakes and structure design (the subcommittee falling under the jurisdiction of the Advisory Committee for Natural Resources and Energy) held its first meeting. At the meeting, the members commenced their verification of a report entitled, "Analyses and Evaluation of Data Gathered at the Onagawa NPS on the Miyagi Earthquake, and Evaluation of Seismic Safety," which the Tohoku Electric Power Co. submitted to the Nuclear and Industrial Safety Agency (NISA) on November 25. NISA, via the working committee, will thoroughly consider the report, and has also asked the Japan Nuclear Energy Safety Organization (JNES) to do a cross-check. NISA will then consolidate a national evaluation.

All three units at the Onagawa NPS shut down automatically when the Miyagi Earthquake, with a magnitude of 7.2 on the Richter scale, struck on August 16. Although no damage was found in any major facility, several short-period (seismic) tremors exceeded the standard tremor values established when the plant was designed. NISA asked Tohoku Electric Power for a detailed evaluation of seismic safety, and to analyze why the standard values were exceeded.

The report submitted on the November 25 dealt with Onagawa-2 only. As for the detailed evaluation, seismic safety was ensured based on response analyses of the buildings and equipment important to safety. According to the cause-analysis, it is clear that short-period (seismic) tremors, in particular, tend to be large because of the regional characteristics of the sea floor beneath the coastal waters off Miyagi Prefecture. That knowledge, however, was not available when the standard tremor values were established. Now the company has issued a peak ground acceleration figure for a hypothetical "Miyagi earthquake" (equivalent to magnitude 7.6) issued by the Headquarters for Earthquake Research Promotion, and has confirmed seismic safety under those conditions. It has also determined a peak ground acceleration of 580gal (equivalent to magnitude 8.2) for which safety would be ensured, and implemented confirmation of that. To sum up, its seismic safety is fully ensured. The reports on Units 1 and 3 will be issued as soon as their evaluations are completed.

At the meeting, the company explained the above analyses and evaluation results. The committee will begin verify safety evaluations of the buildings, equipment and the ground at the next meeting. Two working groups were established – to evaluate earthquake resistance and building structure – to provide subjects for committee discussion.

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