## **The Ohma Nuclear Power Station**

#### Introduction

Nuclear power is an important power source that is indispensable from the perspective of maintaining a stable energy supply, and it is also effective in responding to the issue of global warming. J-POWER is therefore proceeding with the construction of a nuclear power station (Advanced Boiling Water Reactor (ABWR); Power Generating Capacity: 1,383 MW) in Ohma-machi, Shimokita-gun, Aomori Prefecture.

At present, we are proceeding with examination of the safety enhancement measures shown at the right, with consideration of the accident at the Fukushima Daiichi Nuclear Power Station.



Diagram of Ohma Nuclear Power Station position (Aomori Prefecture)

#### Measures to Reinforce Safety, etc. for Ohma Nuclear Power Station

We are putting the following measures in place at the Ohma Nuclear Power Station based on the experience of the accident at the Fukushima Daiichi Nuclear Power Station.

#### 1. Safety enhancement measures - Measures against tsunami, ensuring power sources, etc. (May 2011)

#### Measures against tsunami

We are adopting the following measures to mitigate the impact of a tsunami and to prevent flooding of the main buildings and protect the equipment in those buildings from seawater.

- · Installation of seawall around main buildings
- Use of waterproof structures for external doors of main buildings, etc.
- Improvement of waterproofing of rooms in which equipment important to safety is located

#### Ensuring power sources

We are adopting the following measures to prepare for an emergency situation in which power sources external to the nuclear power station are unavailable and emergency diesel generators are inoperative.

- Positioning of emergency generators in elevated areas that will not be affected by a tsunami
- · Preparation of power supply vehicles and other equipment

#### Ensuring ultimate heat removal functions

We are adopting the following measures to ensure functions for the cooling of the reactors and spent fuel storage pools in an emergency.

- Ensuring of ability to supply power from emergency generators or from power supply vehicles, etc.
- Preparation of alternative methods of pumping water (portable power pumps, etc.)
- · Preparation of alternative water sources
- Preparation of spare parts for seawater pump motors, etc.

#### Image of measures to reinforce safety, etc. at Ohma Nuclear Power Station



#### 2. Measures for response to severe accidents (July 2011)

We are adopting the following measures to enable a rapid response in the event of a severe accident.

- Securing of a functional working environment in the central control room
- Securing of means of communication within the power station facility
- Preparation of materials and equipment such as protective clothing for high-radiation environments, establishment of radiation management system
- Installation of hydrogen venting equipment, and hydrogen detectors in buildings
- Preparation of rubble-clearing vehicle

## 3. Additional safety enhancement measures based on proposals by Aomori Prefecture (December 2011)

- Consistent implementation of safety measures (Design changes or additional measures)
  - Raising of height of oil dikes for oil tanks
  - Design responses to enable rapid set-up of alternative seawater pumps
  - Installation of permanent power cables from emergency generators
  - · Construction of seismic isolation emergency response office
  - Reinforcement of water tanks

#### Enhancement of earthquake/tsunami responses

We work constantly to stay abreast of the very latest studies and research trends concerning earthquakes and tsunami, and continuously gather and collate wide-ranging information, striving to implement appropriate responses in ensuring seismic safety and other measures.

#### Working for disaster prevention

In addition to formulating a nuclear utility emergency preparedness plan based on the specific characteristics of the local area, we also collaborate and cooperate in regional disaster prevention initiatives.

#### Development and enhancement of training

To enable us to implement precise responses in an emergency, we work continuously to increase our risk management capacity, for example by conducting training exercises modeling severe weather conditions or responses in the early morning or late at night, and by formulating procedural manuals.

#### Enhancement of inter-company cooperation

Seeking to further increase facility safety and technological capacity and to enhance their ability to respond in a nuclear emergency, five companies that operate nuclear facilities in Aomori Prefecture\* have joined together to create a cooperative system, enabling them to exchange information, conduct relief drills, and provide support via equipment and personnel in an emergency, among other activities.

#### Active efforts to introduce superior safety technologies

We make efforts to collect information on the latest trends, and we actively introduce new safety-related technologies that are both effective and usable.

#### Assessment of safety margins (ultimate limitations of strength): Stress tests

We will conduct assessment of the safety margins of the Ohma Nuclear Power Station prior to commencement of operation of the reactor.

Going forward, we will continue to work to create a safe power station, always appropriately reflecting the necessary measures based on government guidelines and other relevant information.

The latest information concerning these safety enhancement measures and other measures will be published on the nuclear power page of the J-POWER website.

Measures to Reinforce Safety, etc.

http://www.jpower.co.jp/bs/field/gensiryoku/index.html (Japanese only)

\* Tohoku Electric Power Co., Inc., Tokyo Electric Power Co., Inc., Japan Nuclear Fuel Limited, Recyclable-Fuel Storage Company, and J-POWER.



Artist's rendering of completed Ohma Nuclear Power Station



#### Status of construction of Ohma Nuclear Power Station (Spring 2012)



#### Harmony with the Local Community

At the Ohma Nuclear Power Station, we are pursuing a variety of initiatives in order to ensure the understanding and trust of every member of the local community.

We are now in the 22<sup>nd</sup> year of publication of our public relations magazine for local residents, which looks at topics of local interest in addition to providing information on construction plans and the state of progress of construction.

In addition, we work with local schools to support the education of the coming generations, for example by hosting visits by groups of schoolchildren for the study of geological strata and cooperating in comprehensive study programs. We also participate in local festivals and other events on an ongoing basis.

Based on the experience of the Great East Japan Earthquake, our employees are also visiting houses and businesses in Ohmamachi, Kazamaura-mura and Sai-mura in northern Shimokita-gun, explaining the ways in which we are enhancing the safety of the Ohma Nuclear Power Station and other matters, and communicating with local residents regarding their questions and opinions.



Communicating with local people



# Governance

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Sakuma Dam (Shizuoka and Aichi prefectures