



FACT SHEET ON NEXTERA ENERGY SEABROOK

March 14, 2011

NextEra Energy Seabrook is closely monitoring the situation in Japan.

- Since the earthquake and subsequent tsunami, NextEra Energy Nuclear Fleet executives have been coordinating with the Nuclear Energy Institute, the Institute of Nuclear Power Operations and the World Association of Nuclear Operators with regard to the impact of these events on the operation of the Fukushima Daiichi nuclear plant in Japan.
- At this time, all of the facts are not fully known. This is further complicated by the fact that emergency response officials in Japan are dealing with the situation at the Fukushima Daiichi nuclear plant in addition to the overall tsunami recovery efforts.
- It is important to note that because of location, the seismic activity in Japan is of a greater magnitude than what could likely happen in New Hampshire.

As compared to Fukushima Daiichi, Seabrook Station is a newer design and has additional safety systems as a result.

- The World Association of Nuclear Operators reports that the Unit 1 TEPCO Daiichi unit is an older Boiling Water Reactor (Seabrook Station is a Pressurized Water Reactor). Relative to the Japanese plant, NextEra Energy Seabrook has additional safety systems because of our more recent design.
- The issue in Japan deals with the complete loss of power to run decay heat removal pumps (the pumps that circulate water in order to cool the reactor core). Seabrook Station requires only one diesel generator to fully supply the power required to meet core cooling needs. Seabrook Station actually has two fully independent diesel generators installed for redundancy, as well as a separate Supplemental Emergency Power System for added safety.
- In addition, unlike the Japanese plant, Seabrook Station has an additional, separate steam-driven cooling pump system. This steam-driven cooling system can supply water to our steam generators to remove heat from the reactor coolant system without depending on any offsite power or the diesel generators.
- In essence, this means that NextEra Energy Seabrook has multiple redundancies in place that could be used to address potential emergency events.

Seabrook Station is specifically designed for severe events that could impact our state.

- Seabrook Station is located outside of known "high hazard" earthquake zones (as defined by United States Geological Survey and the U.S. Nuclear Regulatory Commission).
- Our plant has been specially designed to withstand a variety of natural events such as earthquakes, storm surges and flooding associated with hurricanes, tornadoes and high winds without losing capability to perform safety functions. Seabrook Station is elevated to deal with the storm surge of a Category 5 hurricane (20+ feet above mean sea level).
- Even though an event like the Japanese earthquake is unlikely, all NextEra Energy Nuclear Fleet plants have additional safety margin added to the "worst case" scenario to ensure the plants can withstand events beyond the requirements in their licensing basis.

Our nuclear plant has extensive emergency plans and rigorous operator training programs.

- All nuclear power plants are designed for and have emergency operating procedures to address worst-case scenarios, including earthquakes, loss of core cooling, and loss of all onsite and offsite power.
- The procedures used in emergencies are part of plant operator training. Plant Operators are required to undergo knowledge and performance testing throughout the year, with one week out of every six weeks totally devoted to training. This training involves the use of real life responses on a plant simulator.
- For conditions warranting public evacuation, dedicated communications systems linking emergency operations centers are in place; public alert systems (sirens) are in place; and, local emergency facilities that are staffed by state and local government emergency response agencies would be fully manned.
- The plant emergency response is tested several times a year via emergency drills involving both onsite and offsite emergency response teams.
- Even though an event of this nature is unlikely in New Hampshire, similar natural emergency conditions are routinely exercised by reactor operators and emergency response agencies in New Hampshire and Massachusetts.

Safety at NextEra Energy Nuclear Fleet Plants

NextEra Energy's nuclear plants are specifically designed to safely shut down and withstand significant natural disasters, including earthquakes, storm surges and flooding, without losing the capability to perform all safety functions.

- » The U.S. Nuclear Regulatory Commission (NRC) requires all nuclear power plants to be able to withstand the most severe natural phenomena historically reported within a 200-mile radius of a plant.
- » All of NextEra Energy's nuclear power plants are outside of known "high hazard" earthquake zones (as defined by the U. S. Geological Survey and the U.S. Nuclear Regulatory Commission).
- » Because our plants are not in high hazard zones, the risk of a tsunami in our operational areas is very remote.
- » Even though an event like the recent Japanese earthquake is unlikely, all NextEra Energy plants have built in safety margins that exceed the "worst-case" design requirements for our units. We plan for the extraordinary.
- » All of NextEra Energy's plants have extremely sensitive seismic monitoring equipment specifically designed to detect even the smallest ground movement, and we are well aware of natural conditions around our plants at all times.

As compared to the Japanese plants, NextEra Energy nuclear plants have additional safety systems, and more extensive backup power capabilities.

- » All U.S. nuclear plants are based on a "defense in depth" design, with multiple physical barriers and backup safety systems to ensure operation in even the most extreme environment.
- » All of NextEra Energy's plants have emergency core cooling systems that are protected from severe weather events, including water incursion and flooding.
- » Plants are also equipped with multiple back-up power supplies, including diesel generators, backup batteries, an independent steam-driven cooling system, and a separate Supplemental Emergency Power System.

The NextEra Energy Nuclear Fleet consists of eight units at five locations:

- » Duane Arnold Energy Center in Palo, Iowa (1 unit)
- » Point Beach Nuclear Power Plant in Two Creeks, Wisconsin (2 units)
- » St. Lucie Nuclear Power Plant in Jensen Beach, Florida (2 units)
- » Seabrook Station Nuclear Power Plant in Seabrook, New Hampshire (1 unit)
- » *Turkey Point Nuclear Power Plant in Florida City, Florida (2 units)*

Along with redundant systems, processes and procedures, our plants plan and practice for extraordinary events that go beyond likely "worst-case" scenarios.

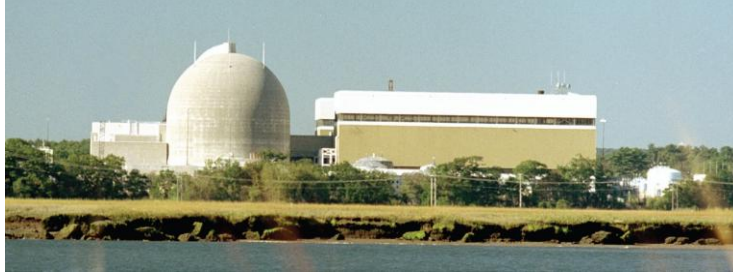
- » All nuclear power plants are designed for and have emergency operating procedures to address worst-case scenarios, including earthquakes and loss of all onsite and offsite power.
- » The procedures used in emergencies are part of plant operator training. Plant operators are required to undergo knowledge and performance testing one week out of every six weeks, all year long. That training involves the use of real-life testing on a plant simulator.
- » For conditions warranting public evacuation, dedicated communications systems linking emergency operations centers are in place; public alert systems (sirens) are in place; and, local emergency facilities that are staffed by state and local government emergency response agencies would be fully manned.
- » The plant emergency response is tested several times a year via emergency drills involving both onsite and offsite emergency response teams.
- » Similar natural emergency conditions are routinely exercised by reactor operators and emergency response agencies.

NextEra Energy Nuclear Fleet units have demonstrated the effectiveness of plant design, equipment, systems and training during several weather events.

- » Turkey Point withstood the direct hit of Category 5 Hurricane Andrew in 1992.
- » St. Lucie withstood two hurricanes in rapid succession in 2004.
- » Duane Arnold withstood record flooding in 2008.

As a result of the emergency situation in Japan, NextEra Energy nuclear sites, along with the entire U.S. nuclear industry, have already committed to the following actions:

- » Re-assessing the severe accident mitigation plans and commitments already in place to validate each unit's ability to respond to possible accident events resulting from extreme external events.
- » Reviewing station response capabilities to validate the effectiveness of procedures, equipment and capabilities in the case of total power loss.
- » Evaluating flooding readiness, including both internal and external flooding sources.
- » Conducting detailed assessments to verify equipment readiness for any possible seismic events.



Site Vice President
Paul Freeman
Site Communications Manager
Sarah Gebo
P.O. Box 300, Lafayette Road
Seabrook, NH 03874
Corporate Media Line
(305) 552-3888

Safety Information

Built in a low-risk seismic zone: Seabrook is located in one of the lowest hazard zones for earthquakes according to the U.S. Geological Survey (USGS).

Constructed to withstand earthquakes: The plant is designed to withstand the force of the earthquake that hit the Japanese plants, which is significantly higher than any recorded earthquake in New England history.

Protected from flooding: The plant is located two miles inland and elevated 20 feet above sea level to protect against flooding and extreme storm surges.

Designed with multiple safety systems: Redundant safety systems include:

- » Two diesel generators protected by a concrete and steel-reinforced building, and a separate Supplemental Emergency Power System with two diesel engines
- » Additional reactor cooling system powered by steam generated by the plant itself
- » Back-up batteries for critical safety systems are stored on-site
- » External cooling options (i.e. injection and fire pumps) are pre-staged onsite; can use ocean water for cooling

Seven-day power supply: Safety and cooling systems can be powered for seven days without requiring any offsite power or additional fuel.

Highly trained plant operators: For one full week out of every six weeks, plant operators must prove their ability to safely operate the plant in a variety of worst-case scenarios that include earthquakes, severe storms, flooding, loss-of-power, and loss of reactor core cooling.

System Information

Primary System

Reactor Type	Westinghouse Pressurized Water Reactor
Reactor Core	193 fuel assemblies
Reactor Vessel	44' high; 15' wide
Reactor Containment Building	Double-dome concrete and steel construction. Outer dome 15" thick; inner dome 4.5' thick; outside height 180'; inside diameter 140'

Secondary System

Turbine/Generator	General Electric
Cooling Tunnels	Two 3-mile-long tunnels carry water to and from the Atlantic Ocean

General Information

Seabrook Station is located on 900 acres on the seacoast of southern New Hampshire. The plant is operated in a highly-responsible manner and is dedicated to protecting the environment while meeting the energy needs of New England. Seabrook Station is one of only a few nuclear power plants in this country that is ISO 14001 certified, recognizing the plant's leadership and excellence in environmental stewardship.

» **Workforce**

1,100 during normal operations; 2,100 on-site during scheduled refueling outages.

» **Salaries**

Approximately \$100 million annually.

» **Economic impact**

\$10 million annually.

» **Property taxes paid**

Approximately \$20 million annually.

» **Construction Permit granted**

June 1976

» **Commercial operation began**

August 1990

For More Information:

www.nei.org

www.nrc.gov

www.radiationanswers.org

www.epa.gov

www.NextEraEnergyResources.com

www.seabrookstation.com