

# Ensuring Safety and Security

We will rigorously implement safety measures for facilities, ensure the safety of workers and conduct business activities with safety and security as the highest priority.

## Major Risk Scenario

Depending on the response to new regulatory standards and the outcome of lawsuits related to nuclear power, and other factors, there could be an impact on our financial performance if the shutdown of nuclear power stations remains for the long term or capital investment increases, among other possibilities.

## Main Initiatives in Fiscal 2017

- Promote thorough safety initiatives
- Ensuring the safety of nuclear power stations
- Handle complex disasters
- Initiatives to ensure the safety of customers
- Initiatives to ensure the security of facilities
- Initiatives for occupational safety and health

## Number of Equipment Accidents that Have a Serious Impact on Society

(Zero accidents in fiscal 2016) **0**

In addition to making sure we have thorough safety measures in place for facilities, and carefully providing explanations to local residents, we ensure a high level of worker occupational safety, and carry out business activities prioritizing safety and security.

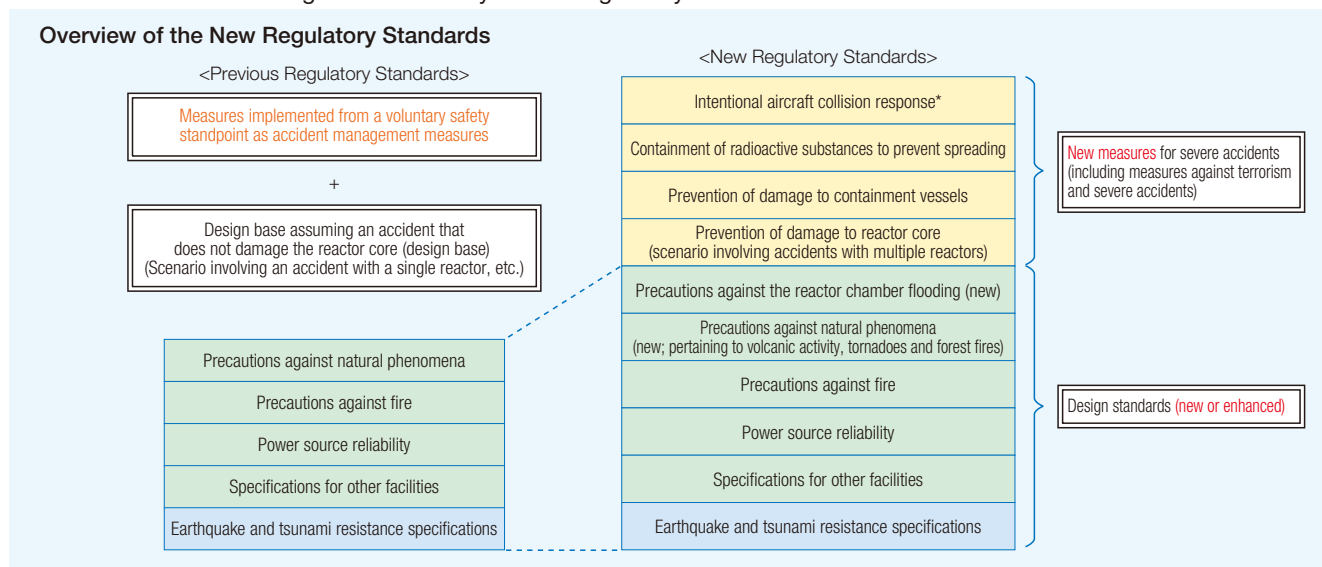
## Examples of Specific Initiatives

### ■ Initiatives to Further Raise the Safety and Reliability of Nuclear Power Stations

Kyushu Electric Power has learned from the accident that occurred at Fukushima Daiichi Nuclear Power Station and based on the national government's new regulatory standards, we are further strengthening measures to prevent major accidents and respond appropriately in the event an accident does occur as we make every effort possible to ensure the safe operation of our nuclear power stations.

Furthermore, we are fully aware that there is no end to initiatives for improving safety and so will willingly and continually work to raise levels of safety and reliability while striving to earn the confidence and trust of local residents.

### Overview of the Nuclear Regulation Authority's New Regulatory Standards



[Prepared from materials announced on July 3, 2013 by the Nuclear Regulation Authority]

\* A five-year period, calculated from the approval date for projects related to conformance with the new standards, has been set as an interim measure for facilities to address specific large-scale disasters (measures for restricting abnormal emissions of radioactive materials caused by a large aircraft collision or other act of terrorism).

## ■ Initiatives Aimed at Further Increasing the Safety and Reliability of the Genkai Nuclear Power Station Units 3 and 4 (Serious Accident Countermeasures)

	Main content of new regulatory standards	Main content of application for permission for reactor installation changes
(1) Measures to prevent reactor core damage	<ul style="list-style-type: none"> <li>Establish measures to ensure there is no damage to the reactor core even if all safety functions are lost at once</li> </ul>	<ul style="list-style-type: none"> <li>Diversification of electric power supply means               <ul style="list-style-type: none"> <li>Install large-capacity air-cooled generators in preparation for the event of a loss of external power supply and permanent emergency power supply</li> </ul> </li> <li>Diversification of means to cool nuclear reactors               <ul style="list-style-type: none"> <li>In addition to permanent pump, additional deployment of portable pumps, etc.                   <ol style="list-style-type: none"> <li>Inject water into nuclear reactor and steam generator using portable diesel injection pump (new)</li> <li>Inject water into nuclear reactor using permanent electric injection pump (new)</li> <li>Inject water into nuclear reactor using containment vessel spray pump (additional function)</li> <li>Supply seawater to nuclear reactor auxiliary cooling equipment using mobile, large-capacity pump truck (new)</li> </ol> </li> </ul> </li> </ul>
(2) Prevention of damage to containment vessels	<ul style="list-style-type: none"> <li>Establishment of measures to ensure there is no damage to containment vessels even if the reactor core is damaged</li> </ul>	<ul style="list-style-type: none"> <li>Diversification of means to cool containment vessels               <ol style="list-style-type: none"> <li>Containment vessel spray using permanent electric injection pump (new)</li> <li>Containment vessel spray using portable diesel injection pump (new)</li> <li>Supply seawater to containment vessel recirculation unit*1 using mobile, large-capacity pump truck</li> </ol> </li> <li>Measures to reduce hydrogen concentration               <ul style="list-style-type: none"> <li>To prevent a hydrogen explosion, be able to reduce the hydrogen concentration even if hydrogen materializes inside the containment vessel</li> </ul> </li> <li>Passive autocatalytic recombiner (PAR)*2</li> <li>Install electrical hydrogen igniter*3</li> </ul>
(3) Containment of radioactive substances to prevent spreading	<ul style="list-style-type: none"> <li>Establishment of measures to suppress radioactive substances on site, even if the containment vessel is damaged</li> </ul>	<ul style="list-style-type: none"> <li>Deployment of water cannons that spray water on damaged parts of containment vessel, etc., and installation of a silt fence (in-sea curtain) that prevents radioactive substances from spreading into the ocean</li> </ul>
(4) Command center to handle serious accidents	<ul style="list-style-type: none"> <li>Establishment of an emergency response office as a base facility from which to take command during a serious accident</li> </ul>	<ul style="list-style-type: none"> <li>Establishment of an emergency response office               <ul style="list-style-type: none"> <li>Establish an alternative emergency response office that satisfies the demands of the new regulatory standards, including earthquake resistance, communications equipment, etc.</li> <li>In the future, establish an emergency response office within an earthquake-resistant emergency response building that has a higher level of functionality</li> </ul> </li> </ul>

\*1 A device that cools air inside a containment vessel with heat exchange using cooling water

\*2 A device that uses a catalyst to cause hydrogen and oxygen to react and form water

\*3 A device that uses an electric heater to force hydrogen to combust and form water

## ■ Promoting Thorough Safety Initiatives

Understanding that the pursuit of safety has no endpoint, in April 2017, we established the Companywide Safety Promotion Committee chaired by the President to promote initiatives based on strong leadership from top management.

The committee promotes safety initiatives aimed at ensuring safety and reliability for people in local communities, and fosters an organizational culture in which employees place the highest priority on safety.

### Group Safety Promotion Framework

