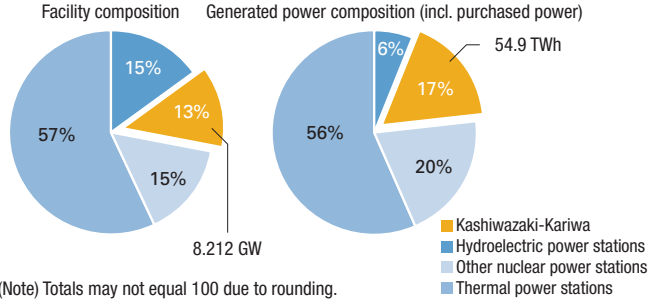
Initiatives Derived from the Niigata-Chuetsu-Oki Earthquake

In July 2007, TEPCO's Kashiwazaki-Kariwa Nuclear Power Station suffered damage in the Niigata-Chuetsu-Oki Earthquake, and all its units were shut down. This suspension of operations had serious ramifications on TEPCO's supply of electricity, as well as on the financial balance and environmental performance of its business.

The Kashiwazaki-Kariwa Nuclear Power Station's standing within TEPCO

The Kashiwazaki-Kariwa Nuclear Power Station accounts for roughly 10% of TEPCO's total output and close to 20% of total generated power, and serves an extremely important and indispensable role in providing a stable supply of electricity.

Status of the Kashiwazaki-Kariwa Nuclear Power Station (FY2006)



(Note) Totals may not equal 100 due to rounding.

Impact on financial balance

The shutdown of the Kashiwazaki-Kariwa Nuclear Power Station has had a large impact on TEPCO's financial balance. In addition to restoration costs, TEPCO has experienced a large increase in fuel expenses, due to the need to expand thermal power generation to compensate for the decrease in nuclear power.

Impacts of the shutdown of the Kashiwazaki-Kariwa Nuclear Power Station

Year ended March 2009 (billions of yen)

Total impact	**649**
Fuel expenses, etc.	585
Increase in fuel expenses, power purchasing costs, etc.	635
Decrease in nuclear fuel expenses, nuclear back end costs	–50
Restoration costs, etc.	64
Extraordinary loss (disaster-related extraordinary loss, etc.)	56.5
Other expenses (for recommencement of inactive thermal power plants, etc.)	7.5

Environmental impact

Due to the increase in thermal power generation, including the recommencement of operations at long-suspended thermal power plants, CO_2 emission has increased approximately 24% and CO_2 emission intensity approximately 23%, compared to FY2006 levels, before the earthquake.

Comparison of FY2006 and FY2008 CO_2 emission and CO_2 emission intensity levels

	CO_2 emission (million t-CO_2)	CO_2 emission intensity (kg-CO_2/kWh)
FY2006	97.6	0.339
FY2008	120.7	0.418 (0.332, reflecting carbon credits)

Status on the recovery of the Kashiwazaki-Kariwa Nuclear Power Station (as of May 31, 2009)

On May 8, 2009, TEPCO received the approval of the local government to restart Unit 7. We would like to extend our deepest appreciation to the local residents and all parties concerned for their warm support and encouragement following the Niigata-Chuetsu-Oki Earthquake.

Given this approval, we will perform a final confirmation of the soundness of Unit 7 and thereafter restart its operations, based on a steady commitment to ensure greater information disclosure and give top priority to safety.

In regard to Units 1 to 6, we will proceed step by step to confirm the soundness of the facilities restore damaged areas and implement earthquake resistant technology, also giving foremost priority to safety.

Systematic confirmation of facility soundness

We are performing inspections according to an inspection and evaluation plan. After confirming the soundness of all equipment, we will evaluate combinations of related equipment as a system, and finally start up the actual nuclear reactor for a test run of the entire plant.


Pump inspection


System function test

Earthquake safty

To improve the seismic safety of the facilities, we are implementing earthquake resistant technology based on an evaluation of design-basis seismic motion. Other facilities of high safety significance will also be examined to ensure they are safe against earthquakes.

Fire-extinguishing facilities and framework

We have initiated various measures to improve our initial fire-extinguishing system. For example, we have installed chemical fire trucks and pump trucks with water tanks in our power stations, and have added more personnel to our firefighting units.

Construction of earthquake-proof buildings

We are constructing earthquake-proof buildings as part of our effort to strengthen our response to disasters.

See pp. 70 - 71 for more information on TEPCO's initiatives for improving seismic safety at its nuclear power stations.

Updates on the status of the Kashiwazaki-Kariwa Nuclear Power Station are available on the TEPCO website. (Japanese only)