(3) Local Environmental Preservation

1. Environmentally-Conscious Facilities Creation

When we create power generation facilities, we conduct appropriate environmental assessments suited to the characteristics of the facilities and local environment as part of our commitment to being environmentally-conscious and integrating our facilities into the surrounding environment.

Performing Environmental Impact Assessments

When we construct power plants and other facilities, we first conduct environmental impact assessments and other surveys of the natural environment (air, water quality, flora and fauna), in line with the Environmental Impact Assessment Act and other relevant legislation, in order to predict what effects the facilities and their operation will have on the surrounding environment, and we then use these results to take appropriate steps to mitigate these effects.

[Environmental Assessment in Otake Power Plant Renewal Planning]

The aging of the Otake Power Plant (Kokonoe Town, Kusu District, Oita Prefecture), Japan's first commercial geothermal power plant, prompted planning to be undertaken to renew and upgrade the facilities (from 12,500 kW to 14,500 kW output). As part of this, environmental impact assessment procedures in line with the Environmental Impact Assessment Act and other relevant legislation were begun in 2013 and were finished up in July 2016. The plant life survey revealed the presence of globe thistle, Aso yarrow and other rare plants within the power plant construction area, and after discussion with an expert, appropriate environmental protection measures will be devised, including relocating the plants prior to the start of construction.

Conceptual drawing

Globe thistle

Aso yarrow

2. Power Plants that Protect the Environment

Preventing Air, Water and Noise Pollution

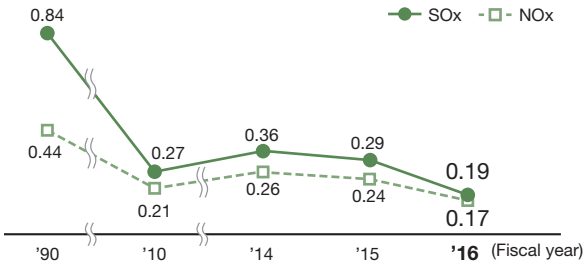
When we operate our power plants and other facilities, we not only ensure that we comply with national laws and regulations but also the environmental protection agreements that we make with local government stakeholders. We perform strict management of exhaust gas, drainage and other emissions that affect the local environment, and this includes reporting our monitoring results to local government stakeholders.

[Tackling Air Pollution]

Electricity generation at thermal power plants entails the emission of sulfur oxide (SOx), nitrogen oxide (NOx) and other gases; however, we utilize flue gas desulfurization systems, flue gas denitrification systems and other systems to remove these harmful gases as completely as possible in order to prevent polluting the air.
In FY2016, our SOx and NOx emissions per quantity of thermal power generated were 0.19 g/kWh and 0.17 g/kWh respectively, and both of these figures represents a reduction from FY2015. These reductions are due to a decrease in the amount of electricity generated via oil-fired power plants, and this was thanks to such factors as the stable, year-round operation (except during schedule maintenance) of Sendai Nuclear Power Plant.

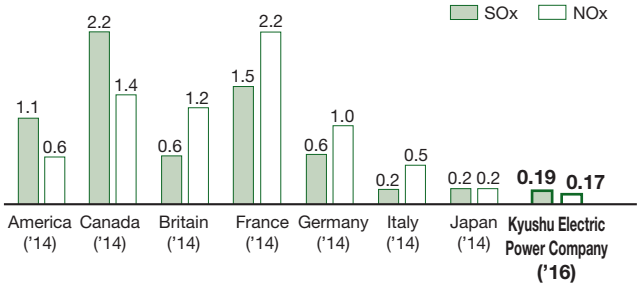
SOx and NOx Emissions per Quantity of Thermal Power Generated

Units: g/kWh



Country-specific SOx and NOx Emissions per Quantity of Thermal Power Generated

Units: g/kWh



Source: [Overseas] (Emissions volumes) OECD, OECD. StatExtracts (Environment, Air and Climate)
(Power generation amounts) IEA, ENERGY BALANCES OF OECD COUNTRIES 2016 EDITION
[Japan] Research conducted by the Federation of Electric Power Companies of Japan
(ten power companies + Electric Power Development Co., Ltd.)