3 Local Environment Preservation

To conserve the local environment, we conduct proper environmental assessments when building electric power facilities; we control air pollutants such as SO_x and NO_x emitted from thermal power stations; and manage radiation levels at nuclear power stations.

Environmental Conservation Measures at Power Stations

When we operate our power stations and other facilities, we comply not only with national laws and regulations but also with the environmental protection agreements that we make with related 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 authorities.

Tackling Air Pollution

We do our best to remove sulfur oxide (SO_x)*1 and nitrogen oxide (NO_x)*2 emissions that inevitably arise with the generation of electricity as much as possible.

In FY2017, our SO_x and NO_x emissions per quantity of thermal power generated were 0.19g and 0.18g per kWh respectively, and both of these figures represent a reduction from FY2016.

■ SO_x and NO_x Emissions by Thermal Power Station* (FY2017 figures)

Unit: t
t = metric ton (tonne)

Thermal power station (Fuel)	SO_x	NO_x
Shin-Kokura (LNG)	0	249
Karita (Coal/heavy oil/crude oil)	79	426
Buzen (Heavy oil/crude oil)	1,713	945
Matsuura (Coal)	1,397	887
Ainoura (Heavy oil/crude oil)	118	66
Shin-Oita (LNG)	0	2,001
Reihoku (Coal)	3,427	2,900
Sendai (Heavy oil/crude oil)	1,789	503
Total	8,522	7,976

*Excludes internal combustion power stations

*1 SO_x: Generic term for sulfur oxides, including SO_2 (sulfur dioxide) and SO_3 (sulfuric trioxide). Generated when fossil fuels such as coal and petroleum are burned and the sulfur content in the fuel oxidizes, they cause air pollution and acid rain.

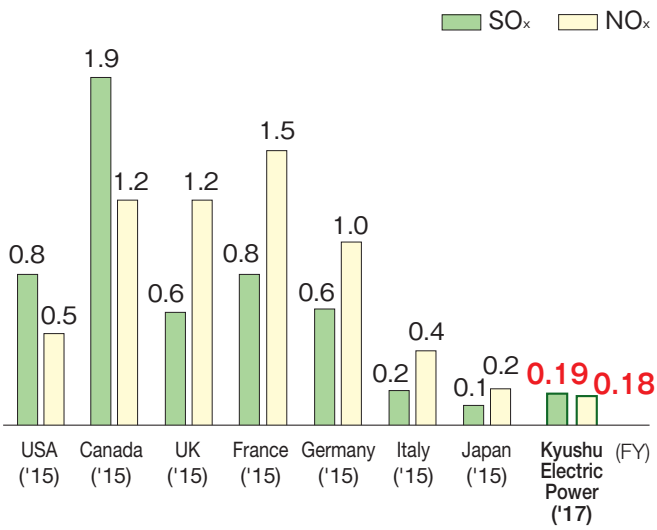
*2 NO_x: Generic name for nitrogen oxides, including NO (nitric oxide) and NO_2 (nitrogen dioxide). Generated from the combustion of nitrogen-containing fuel, and also from the oxidation of nitrogen in the air during combustion, they cause air pollution and acid rain.

■ SO_x and NO_x Emissions per Quantity of Thermal Power Generated

Unit: g/kWh

■ SO_x and NO_x Emissions per Quantity of Thermal Power Generated, by Country

Unit: g/kWh



Source (Overseas/Japan): Federation of Electric Power Companies' pamphlet "Energy and Environment 2017"

Tackling Water Pollution

We properly treat wastewater generated at thermal or nuclear power stations using wastewater treatment equipment. In addition, our water intake and discharge method for seawater used for cooling water condensers, adapts the discharge according to the characteristics of the surrounding sea area to reduce impact on the sea.

Wastewater is properly treated with wastewater treatment equipment, and the oil content and hydrogen ion concentration (pH) are confirmed to be within standard tolerances.

At the dam reservoir of the hydroelectric power station we regularly conduct water quality surveys, carry out eutrophication countermeasures and red tide treatment, and try to mitigate turbid water early through selective intake. We also strive to preserve water quality by cooperating with maintenance projects for degraded forests in the surrounding area.

Preventing Noise and Vibration

We utilize low noise/low vibration equipment, install mufflers and soundproof walls, and install equipment indoors as part of our countermeasures. In construction work, we also select low-noise, low-vibration construction machinery.

Preventing Soil Contamination

We try to ensure no releases or leakages of hazardous substances into the soil. In addition, we voluntarily carry out soil contamination surveys when selling company-owned land and when buying land.

■ Environmental Conservation Measures Taken at Thermal Power Stations