

Electric Power Utilities' Efforts on Environmental Issues

On September 16, the Federation of Electric Power Companies (FEPC) announced the results of its follow-up on the environmental action plan developed for the electric power industry in 1997.

The plan was originally issued to consolidate policies and activity plans within the industry on environmental matters, including measures to combat global warming and to develop a recycling-oriented society. Incorporating a portion of Nippon Keidanren's "Environmental Voluntary Action Plan" (June 1997), it was also recognized by the government's recent "Program to Achieve the Targets under the Kyoto Protocol" (Cabinet Decision in April 2005) as an effort of the power-generation sector, which is a major producer of CO₂ emissions by energy source. The plan is revised annually, reflecting actual results for the year and taking domestic and overseas developments into consideration. This was the eighth such revision.

The user target of per-unit emissions in FY2004 (i.e., the amount of CO₂ emissions per 1kWh of electricity used) was 0.421kg-CO₂/kWh, down 3.4% from the previous year. Nuclear power generation's share of total generated electricity increased to 29.1%, up 3.4 points, thanks to the resumed operation of several nuclear power plants (NPPs) after long suspensions, despite other factors working in the opposite direction, including increased electricity demand and additional suspensions of other NPPs due to problems.

The overall capacity factor for Japan's NPPs in FY2004 was 68.9%. If those plants had operated at a capacity factor of 84.1% as intended, nuclear-generated electricity would have increased by about 5.7TWh, reducing CO₂ emissions to about 329 million tons-CO₂, a decrease of about 35 million tons-CO₂ from the year before, and users' per-unit emissions would have been 0.38kg-CO₂/kWh.

However, in comparison with the level of FY1990 (reference year for the Kyoto Protocol), the amount of electricity used increased by 31%, resulting in an increase of 31% in CO₂ emissions. As a result, users' per-unit CO₂ emissions were unchanged.

FEPC aims to reduce user per-unit CO₂ emissions in FY2010 by some 20% from the FY1990 level (reduced to the level of 0.34kg-CO₂/kWh or so). To meet that target, FEPC will work on the following items: (1) the promotion of nuclear generation, (2) improvements in thermal-power generation, (3) greater use of natural energies and energy-conservation equipment, and (4) use of Kyoto mechanisms. All will be pursued under the condition of ensuring safety and recovering confidence.

Editor: Noriyuki Ishii, JAIF