

Thursday, July 10, 2008

Japan Times

Power utilities under pressure to clean up their act

By KANAKO TAKAHARA

In March, a report compiled by the Ministry of Economy, Trade and Industry on greenhouse gas emissions of about 9,000 companies rocked the electric power industry.

Of the 20 worst polluters, 11 were electric power companies, with Tokyo Electric Power Co. ranked at the top with 68.88 million tons of carbon dioxide spewed out in fiscal 2006, the report said.

METI's report, which was published for the first time but will from now on be compiled annually, was meant to pressure companies to work harder to slash greenhouse gases.

But despite the growing pressure, electric companies say there are not many steps they can take to cut emissions in the short term.

"We cannot cut down energy supply because we are responsible for supplying the necessary amount of electricity," said an electric company official who asked not to be named. "That is why we are focusing on increasing efficiency."

The nationwide Federation of Electric Power Companies has been trying to reduce the amount of carbon dioxide emissions per kilowatt-hour by increasing energy efficiency and by running power plants that don't burn fossil fuels, including nuclear and hydropower plants.

In fiscal 1990, electric power companies emitted 0.417 kg of carbon

dioxide per kwh.

The industry has set a nonbinding goal to slash that figure by 20 percent to an average of 0.34 kg of carbon dioxide per kwh from fiscal 2008 to 2012.

But so far, the federation estimates that it can only cut the figure to 0.37 kg of emissions per kwh during the period. And with the Kashiwazaki-Kariwa nuclear complex in Niigata Prefecture shut down in the wake of last year's earthquake in the region, the prospect of achieving that goal is even more remote.

Currently, increasing the use of nuclear plants is the most effective way to secure electricity and cut greenhouse gas emissions at the same time, a federation official said.

"But a nuclear power plant cannot be built in a year or two," said the official, who asked not to be named. "It takes a decade or two."

To increase nuclear reactors' operational rate, the government is currently discussing easing nuclear plant inspection rules, under which plants must be checked every 13 months and their operations halted for about three months during the inspections.

The industry is not only working on its nuclear plants, but is also improving energy efficiency at its thermal power plants by introducing newer and more efficient models.

Japan's thermal power plants are considered among the most efficient in the world, with an efficiency rate of about 43 percent, while the figure is 38 percent in the United States and 30 percent in China.

That is because half the thermal power plants in Japan are

combined-cycle power plants, which use liquid natural gas and emit 30 percent less carbon dioxide than oil-fired plants.

A combined-cycle power plant consists of one or more gas turbine generators equipped with heat recovery steam generators to capture heat from the gas turbine exhaust.

Steam produced in the steam generators powers a steam turbine generator to produce additional electricity.

Electric companies are also purchasing the Clean Development Mechanism outlined in the Kyoto Protocol, allowing polluters in rich countries to gain credits for investing in projects that reduce emissions in developing nations.

Electric companies have purchased credits that will allow developing nations to cut 120 million tons worth of greenhouse gas emissions by 2012, the Federation said.

But despite the companies' efforts, emissions continue to mount.

In fiscal 2006, Japan's electric companies sold 889 billion kwh, up from 659 billion kwh in fiscal 1990. Their greenhouse gas emissions increased from 275 million tons to 365 million tons in the same period.

"We can't force people to cut electricity," the federation official said, noting the public needs to be more aware of eco-friendly measures, including saving electricity.