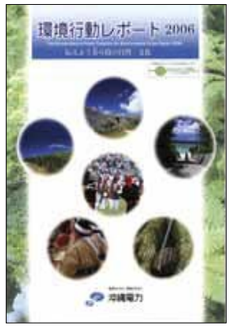
Environmental measures

To leave the heritage of a beautiful, unspoiled natural environment to future generations, it is our duty to utilize our technological expertise and all other forms of know-how, from every possible angle, to ensure that all our staff address their efforts to resolving the issue of harmonizing our business operations with the need to reduce their burden on the environment.



OEPC has been publishing a report on its environmental activities annually since 1996

Improving our environmental management

The Company has established the OEPC Environmental Policy under our Global Environment Action Committee, and is engaged in environmental activities covering all Company businesses.

In March 2005, the Power Generation Dept. of OEPC's Electric Power Engineering Division obtained the 1996 version of the ISO 14001 certification of conformity with international standards for environmental management systems. This certification includes a blanket certification for three thermal power plants, Ishikawa, Gushikawa and Makiminato, which have hitherto obtained such certification separately, as well as Kin, and the Power Generation section at our head office, so that all power generation operations are now covered. Thus, all sections of the Company directly engaged in power generation have now been certified as in conformity with the ISO 140001 standards for environmental management systems. Building on this success, we will ensure that our environmental management systems under the blanket certification work more effectively, and will endeavor to reduce the environmental burden of our operations still further in the future.

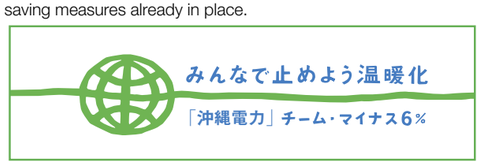
An ISO 14001 certificate

Combating global warming

The carbon dioxide released into the atmosphere by the burning of fossil fuels is said to be the principal cause of global warming, and this is a major issue which the electric power utilities have to address. Up to now, countermeasures have included measures to improve the efficiency of heat utilization at power stations, the introduction of new energy sources such as wind power and solar power, and a variety of energy conservation initiatives. By these means, the utilities have attempted to reduce their volume of combustion of fossil fuels and thus their emissions of carbon dioxide.

At OEPC, we have decided on the construction of a new power station at Yoshinoura, which will burn LNG instead of coal or oil, as this fuel generates much lower carbon dioxide emission levels. As supplemental measures, we are also taking advantage of the mechanisms provided under the Kyoto Protocol to assist in the reduction of greenhouse gas emissions on a global scale, through contributions to the World Bank's Community Development Carbon Fund, among other such projects.

The Company is raising the awareness of global warming issues through participation in the Team Minus 6% national campaign for prevention of global warming (for achievement of a 6% reduction in emissions of greenhouse gases in Japan, in line with the Kyoto Protocol). We are also aggressively promoting energy-saving measures already in place.



Local environmental improvement initiatives

To ensure that the islands of Okinawa retain their beautiful natural environment for the enjoyment of generations yet unborn, we make a special effort to protect the countryside and seaside in the vicinity of our power plants.

At existing power plants, we are undertaking a range of environment protection measures, targeting atmospheric pollution, water pollution, warm wastewater pollution, and noise and vibration issues, to ensure that our activities do not impact the surrounding environment. We also make reports to relevant local authorities based on environment protection agreements, after carrying out environmental monitoring studies into air and water quality and noise and vibration issues around our power plants.

In preparation for the start of operations at our planned Yoshinoura Thermal Power Station in fiscal 2011, we have conducted environmental assessments. We are canvassing the views of local residents as well as the local government, and hope to create a new power plant that will harmonize smoothly with the natural surroundings cherished by the community.

In addition, we are taking the following measures to improve the local environment: rigorous management of chemical substances such as PCB and dioxin; greening power plant sites to achieve more harmony with the natural environment and areas of scenic beauty in the area; and trialing the "greening of the sea" (by planting coral and seaweed) around our power generation facilities.

Conducting a survey of plant and animal life as part of an Environmental Assessment

Environmental protection facilities at a power plant
As part of an overall policy of removing harmful chemicals from smoke emitted by our power plants, they are equipped with desulphurization and denitrification equipment.

Creation of sustainable resource reuse system

OEPC is promoting the use of a three-pronged system for handling the waste products generated by its operations. The three-point system incorporates the concepts of "reduce, reuse, and recycle" as a way of optimally utilizing the Earth's limited natural resources. For example, we use the coal ash and gypsum created by the combustion process at our coal-fired power plants as raw materials for cement, as an alternative to sand in the production of synthetic stone materials, and as an agricultural soil improvement agent. In December 2004 we designated Pozotech, a road-surfacing material made from coal ash, as a recycling material for use in Okinawa Prefecture. We aim to expand its use in construction projects.

Road surfaced with OEPC's Pozotech

Artificial gravel

Recycled toilet paper
We collect used paper from our offices and supply it to local paper manufacturers, who recycle it into toilet paper.

Harmony with society

June is environmental month at OEPC. We undertake a range of activities such as raising employee environmental awareness at our head office and power stations, and participating in beach- and highway-cleaning activities and tree-planting organized by local governments.

To promote greening activities as part of our afforestation and global-warming prevention measures, we are turning the former US military shooting range Cape Zampa Park, Yomitan village, into a recreational forest, Zampa Shiosai no Mori, in cooperation with Okinawa Prefecture and Yomitan.

A tree-planting event at "Zampa Shiosai no Mori"

Green energy

The management environment for OEPC is becoming increasingly severe. Not only do we have to comply with commitments to reduce carbon dioxide emissions under the Kyoto Protocol, new Japanese legislation directly covering the electric power utilities obligates us to develop new energy sources. In addition, the market in which we operate is threatening to become more competitive as a result of the entry of independent power providers into the newly deregulated power market. The research staff of OEPC are conducting a variety of studies aimed at finding effective solutions to these urgent issues that face the Company's management. These research initiatives are described below.

Biomass energy

The term "biomass energy," also called simply "biomass," refers to the solar energy stored by plants through the process of photosynthesis, by means of which they utilize sunlight to create their tissues. Unlike fossil fuels, biomass is a renewable energy source. No matter how many times biomass is converted into other forms of energy and utilized by mankind, the carbon dioxide thus released was originally taken from the atmosphere by the plants to form their mass. The process thus does not constitute the addition of any further carbon dioxide to the atmosphere (it is carbon neutral).

We are currently studying the various forms and volumes of biomass available in Okinawa Prefecture for use as a fuel in power generation. One likely candidate is the use of wood chips and sawdust, as well as pressed sludge as a fuel source after mixture with coal.

Carbonized sewage sludge

Wood chips

Research into redox flow cell storage battery systems

To level loads and stabilize systems, the Company is researching and trialling redox flow battery facilities.

Although electricity is a very versatile form of energy that can be easily utilized for a wide variety of purposes, its biggest drawback is that it cannot easily be stored. Redox flow cell batteries, however, are capable of storing a considerable amount of electricity, and can be effectively employed to store power at night, when demand is low, for use in the daytime. This is a very efficient way of utilizing a power supply system. At OEPC, we are also studying ways of utilizing redox flow cell batteries to overcome the principal drawback of such natural and renewable energy sources as wind power and solar energy, namely, that the level of power fluctuates almost constantly. Storing the electric power in redox flow cell batteries for use later would be one way of leveling-out such fluctuations in power supply, opening up the way to more extensive employment of clean and renewable energy.

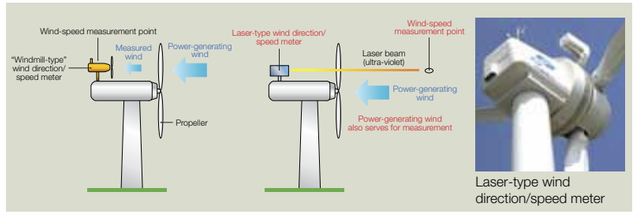
Research into new energy sources

Wind-powered electricity generation is a classic example of "clean" energy, in that it employs a renewable natural energy source. The drawback is that it is dependent on the force of the wind, which varies almost constantly. Thus, if wind-power generation facilities are added to a small-scale power supply system, the stability (i.e., the reliability) of the power supply would be compromised. Because of this, at our Iheya wind-powered generating station, we have installed the world's first wind direction and wind-speed prediction system utilizing a laser beam device. Staff at the station are conducting research into ways of controlling wind-powered generation to produce a leveled-out power output through the accurate forecasting of fluctuations in wind strength.

Additionally, from fiscal 2001 to fiscal 2004, OEPC participated in joint research carried out by Japanese and Thai researchers under the aegis of Japan's New Energy Development Organization (NEDO), and in collaboration with NEDO, OEPC staff conducted verification studies on a solar power generation system that is believed to a prime candidate for practical introduction by Japanese industry.

An international joint research project into solar power generation (Thailand)

Wind power generators — comparison of conventional direction-control system and laser-type system



Laser-type wind direction/speed meter

Field tests on an industrial solar power system are being carried out at a facility on Kita-Daito Island.

New Energy Facilities (As of March 31, 2006)

Wind Power Generation Facilities

Name	Capacity (kW)	Started
Miyako Wind Power Research Facility	600	March 2003
Ginoza Wind Power Research Facility	250, 500 x 2	Sept. 1998
Tarama Wind Power Research Facility	280	July 1999
Hateruma Wind Power Research Facility	280	July 1999
Aguni Wind Power Research Facility	250	March 2000
Tonaki Wind Power Research Facility	250	March 2001
Yonaguni Wind Power Research Facility	600 x 2	March 2002
Iheya Wind Power Research Facility	300	Aug. 2003

Solar Power Generation Facilities

Name	Capacity (kW)	Started
Tokashiki Solar Power Research Facility	204	April 1988
Zamami Solar Power Research Facility	46	May 1988
Miyako Solar Power Research Facility	490	Sept. 1994
Urasoe Branch Solar Power Generation System	10	May 1998
Naha Branch Solar Power Generation System	12	Dec. 1999
Miyako Branch Solar Power Generation System	10	Jan. 2001
Yaeyama Branch Solar Power Generation System	10	March 2001
Kita-Daito Solar Power Research Facility	40	March 2001
Solar Power Generation EV Station Testing Facility	2	March 2003

Utilizing coal ash to make organic fertilizer

Coal ash left over after the combustion of coal at thermal power stations contains constituent substances that have been shown to be effective in promoting plant growth. To turn it into a practical fertilizer, the ash is mixed with organic materials such as rice bran, fish meal, and oilseed husks, and then allowed to ferment. By reusing what would otherwise be solid waste produced by our operations, we are contributing to the preservation of the environment.

We are also making efficient use of this fertilizer in creating the Zampa Shiosai no Mori, with the goal of promoting greening as part of our global warming measures.

Growing vegetables using coal ash as fertilizer (Kin Town)