

Foreword



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Most of the energy resources used in Japan are obtained from foreign countries, and the Japanese energy base is very unstable. The first oil crisis, in 1973, and the second, in 1979, seriously depressed the Japanese economy, due to the sudden sharp rise of crude oil prices. Now, more than 25 years had past since the first oil crisis, and it seems that the serious memory is fading. However, the energy circumstances surrounding the world are still unstable and uncertain.

Furthermore, the problem that fossil fuels affect the global environment seriously has been intensively spotlighted in the last decade. In addition to the conventional problem of sulfur oxides (SO_x) and nitrogen oxides (NO_x), there arises the problem that a large quantity of carbon dioxide (CO₂) causes the global warming and changes the climate if it continues long-time.

In December 1997, the Third Conference of Parties to the UN Convention on Climate Change (COP3) was held in Kyoto with Japan as the host country, and a basic agreement was reached to tackle a plan to reduce greenhouse effect gases, such as carbon dioxide, among developed countries. For the realization and implementation of that agreement, various international negotiations and domestic actions are under way. Recently, COP7 was held in Marrakech, Morocco and successfully reached a multinational agreement among most of the countries.

Meanwhile, what is meant by “new and renewable energy”? If it were defined in a wide sense, new energy would refer to energy except for traditional energy such as fossil fuels and nuclear energy. Thus new energy is including solar energy, wind energy, waste to energy and so on. And renewable energy in Japan refers to hydroelectric energy and geothermal energy in addition to the above new energy.

The main role of New Energy Foundation is to promote further utilization of new and renewable energy. Subsidies are provided for the introduction of residential photovoltaic power generation systems, assistance for development of small-to-medium-scale hydroelectric power generation, wind power generation, the geothermal power generation, biomass energy, waste power generation, and cogeneration systems. Also, positive efforts are made to commercialize fuel cells, which are likely to give a big impact on the energy structure in future. Besides, NEF conducts fundamental surveys and research for the development of new/renewable energy and engages in some experimental development.

At present, renewable energy in Japan accounts for about 5% of the primary energy supply. We expect to raise the percentage to 7% in 2010 through the whole nation’s strenuous efforts. The national Government is currently studying on intensified measures to encourage new energy introduction.

NEF is trying to collaborate with overseas countries, especially in Asia. We transfer the latest Japanese technologies for exploration of the renewable energy resources, for example small-to-medium-scale hydroelectric power generation and geothermal power generation to Indonesia, the Philippines and others.

This publication reviews the current status of renewable energy in Japan and activities of New Energy Foundation. I hope that it will be a clue for the international cooperation on the introduction and application of renewable energy in the future.