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COAL-FIRED PLANTS MAKE A COMEBACK

Electricity companies that shifted from coal to oil and then to nuclear power over the past few decades are now witnessing coal's revival. Coal is cheap and the supply is secure, but coal-fired power plants cannot be set up in hurry, and a full resurrection may have to wait until the next century.

In 1965 hydroelectricity accounted for 42 percent of Japan's electricity supply, coal for 32 percent, and oil for 25 percent. After that, however, there was a shift away from coal-fired facilities to oil-fired facilities to oil-fired plants, which were cheap and easy to handle, and at the same time the construction of nuclear power stations became more advanced. By 1979 the share of Japan's electricity provided by coal had fallen to less than 4 percent of the total, while oil-fired electricity rose to 47 percent and nuclear energy to 12 percent. From 1980 the share taken up by coal began to rise but in 1991 still accounted for less than 8 percent of the total, while oil-fired electricity made up 30 percent, liquefied natural gas 22 percent, and nuclear energy 19 percent.

The transition was speeded along by the effects of oil crises in the early and late 1970s. Worries grew that the supply of Middle Eastern on which Japan depended, would become unstable and that prices would shoot

up to still higher levels. This prompted electricity companies to concentrate their efforts on nuclear power. Local opposition to reactor sites was strong, however, and progress was far from smooth.

With the rapidly changing in the energy situation, companies began to take another look at the possibilities offered by coal. Coal sources are varied, ranging from the major supplier Australia to China, South Africa, and the United States, and so the supply is secure. Moreover, coal prices differ little from those of oil and natural gas. There is an abundance buried underground, providing a potential of 200 to 300 years' supply. These advantages are the reasons behind the recent proliferation of coal-fired power stations. Currently 24 coal-fired electricity plants are in operation, 14 having been built since the second oil crisis, while a further 7 are under construction.

Meanwhile remarkable technological advances have reduced the environmental damage incurred by coal-fired stations. There was a time when chimneys belching smoke from the incineration of coal were a prime cause of pollution, but contemporary dust collectors are very efficient at removing particles of soot, and further facilities remove the sulfur and nitrogen oxides.

Since coal-fired generation requires storage space, measures must be taken to prevent the dispersal of coal dust disposal sites also have to be provided for the large quantities of ash left over after combustion. For these reasons it is said to be impossible to locate new coal-fired stations in areas like Tokyo bay o Osaka bay. Even so, the technology to

make use of ash in materials such as cement is becoming more advanced, and as much as 50 percent of the ash once discarded is now made use of. In the future it may no longer be necessary to find disposal sites for ash.

Combustion technology is also becoming more advanced. The main trend is to mix coal with lime before incinerating it at 800 degrees centigrade (just half the temperature at which coal is usually burnt in power plants) and removing the lime with sulfur oxides. This method does way with the need for desulfurization, simplifying the equipment needed for the job.

With these efforts coal-fired stations are undergoing a revival. Since it takes a long time to conduct environmental impact studies and to gain the understanding of local residents, establishing locations for the plants will be a slow process that could take from 10 to 20 years.

(The material herein is based on domestic Japanese news sources and is offered for reference purposes. It does not necessarily represent the policy or views of the Japanese Government or of the Ministry of Foreign Affairs.)

MAIN SOURCES OF ELECTRICITY GENERATION

(10,000 KILOWATTS)

	WATER	OIL	COAL	LING	ENERGY	OTHERS
1965	1,527	905	1,168	50	----	------
PERCENT OF TOTAL	41.8	24.8	32.0	1.4		
1970	1,892	2,363	1,387	120	132	1
PERCENT OF TOTAL	32.1	40.1	23.5	2.0	2.2	0.0
1975	2,379	5,899	564	470	660	2
PERCENT OF TOTAL	23.9	59.1	5.7	4.7	6.6	0.0
1980	2,867	5,948	526	1,971	1,551	73
PERCENT OF TOTAL	22.2	46.0	4.1	15.2	12.0	0.6
1985	3,319	5,526	1,034	2,855	2,452	238
PERCENT OF TOTAL	21.5	35.8	6.7	18.5	15.9	1.5

1986	3,454	5,474	1,169	2,923	2,568	238
PERCENT OF TOTAL	21.8	34.6	7.4	18.5	16.2	1.5
1987	3,523	5,538	1,139	3,128	2,788	178
PERCENT OF TOTAL	21.6	34.0	7.0	19.2	17.1	1.1
1988	3,613	5,463	1,112	3,306	2,870	118
PERCENT OF TOTAL	21.9	33.1	6.7	20.1	17.4	0.7
1989	3,632	5,474	1,169	3,476	2,928	118
PERCENT OF TOTAL	21.6	32.6	7.0	20.7	17.4	0.7
1990	3,645	5,471	1,242	3,878	3,148	124
PERCENT OF TOTAL	20.8	31.2	7.1	22.1	18.0	0.7
1991	3,773	5,428	1,362	3,949	3,324	124
PERCENT OF TOTAL	21.0	30.2	7.6	22.0	18.5	0.7

SOURCE: FIGURES ARE TAKEN FROM THE AGENCY OF NATURAL ENERGY RESOURCES DATA.

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República
Palacio de la Moneda
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