

**CHAPTER 11**

**Japanese-Soviet  
Energy Relations**

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# Japanese-Soviet Energy Relations

Japan's postwar energy-related trade with the Soviet Union has been limited. Although Japanese leaders are committed to cooperating in Soviet energy development in East Siberia, Japan depends on the U.S.S.R. for only a miniscule part of its energy supply. Similarly, Japan is the West's largest supplier of energy-related technology and equipment to the Soviet Union, yet these exports constitute a relatively small part of Japan's total world exports. Both of these facts reflect a situation in which Japan's political relations with the U.S.S.R. have tempered, but not precluded, energy interaction between the two countries.

A variety of factors—political economic, and energy-related—provide a mix of incentives and disincentives for Japanese energy interaction with the U.S. S. R. On the political side, Japan's orientation has been clearly toward the West. It is a member of the International Energy Agency (IEA), the Organization for Economic Cooperation and Development (OECD), and CoCorn,\* and its foreign policy has been anchored on the U. S.-Japan Security Treaty. Despite a number of persisting disputes between Japan and the Soviet Union, however, Japanese leaders consider joint energy development projects to be an important signal to the Soviet Union that they are committed to peaceful coexistence in Asia. From energy and economic perspectives, there is clear complementarity between Japan's energy import requirements and Soviet plans for energy and economic development. Japan is understandably anxious to diversify its sources of imported energy so as to reduce dependence on Middle East oil, and its

leaders have for years looked to the Soviet Union as a potential—and nearby—energy supplier. The Soviet Union also provides a significant market for Japanese energy equipment and technology exports. The balance of these factors favors a positive, albeit cautious, Japanese approach to energy relations with the Soviet Union.

A systematic look at the way in which Japanese leaders evaluate the potential risks and benefits of trade and energy cooperation with the U.S.S.R. is essential for an evaluation of past trends and future prospects for Japanese-Soviet energy relations. The purpose of this chapter is to explore from the Japanese perspective the dimensions and dynamics of Japan's energy and trade relationship with the Soviet Union. The focus underscores Japan's importance—for both the Soviet Union and for the United States.<sup>1</sup> Japan is the single most important market for Soviet timber and coal, and a potential market for gas produced in Eastern Siberia. Thus, Japanese policy is a critical factor in Soviet economic calculations in Asia. But Japan is also the strongest non-Communist economy in Asia, and Japanese cooperation is important for the success of American foreign policies, globally and toward the region. The chapter outlines the nature of Japan's trade and energy relations with the U. S. S. R.; explores the domestic organizational and international political context of Japanese policymaking; examines three primary examples of Soviet-Japanese joint energy development; and assesses likely future developments in energy relations between the two nations.

\*CoCom is the informal multilateral export control organization which includes NATO countries (minus Iceland, plus Japan).

<sup>1</sup> Allen S. Whiting, "The Japan Connection." *Siberian Development and East Asia: Threat or Promise?* (Stanford, 1981).

## JAPAN'S ENERGY AND TECHNOLOGY TRADE RELATIONS WITH CMEA DURING THE POSTWAR PERIOD

### JAPANESE ENERGY IMPORTS FROM THE SOVIET UNION

Japan is highly dependent on imported energy and other resources. It must purchase over 90 percent of the energy it consumes (see table 79). A large portion of these imports consists of oil, for Japan is more dependent on oil for its total energy requirements than any other Western nation examined here (see table 80 and ch. 12, tables 86-89). Oil accounts for more than 78 percent of the nation's total primary energy supply, and virtually all of it is purchased abroad. Japan has for years sought to relieve its dependence on the Persian Gulf, which supplies 75 percent of its imported crude oil, by decreasing the share of oil in its energy balance and by increasing imports from non-OPEC nations.

Despite this extreme energy dependence, however, Japanese energy imports from the U.S.S.R. have been small, both in value terms and as a percentage of total energy supplies. During the last 5 years, the value of all Japan's imports (including energy and other commodities) from all communist nations has annually averaged less than 5 percent of its total imports, and the relative importance of energy-related imports has actually fallen. The U.S.S.R. is the only Council for Mutual Economic Assistance (CMEA) nation that exports energy—oil and coal—in significant quantities to Japan, but the dollar value of this trade has been consistently low. In recent years the total value of all Soviet energy exports to Japan has not exceeded \$300 million annually. This amounts to less than 1 percent of all Japan's imports.

Table 81 illustrates Japan's very limited dependence on Soviet energy, which comprises a miniscule part of total Japanese energy imports and available primary energy. In recent years energy imported from the

Table 79.—International Comparison of Dependence on Imported Energy—1979 (million tons of oil equivalent)

|  | Japan | West Ger-<br>many | France | Italy             | United States |
|--|-------|-------------------|--------|-------------------|---------------|
| Total energy requirements 1979                         | 327.5 | 283.3             | 184.9  | 132.5             | 1,747.0       |
| Energy imports as percent of total energy requirements | 94%   | 67%               | 96%    | 109% <sup>b</sup> | 25.2%         |
| Oil imports as percent of total energy requirements    | 78%   | 53%               | 75%    | 91%               | 24%           |
| Gas imports as percent of total energy requirements    | 4%    | 12%               | 9%     | 10%               | 2%            |
| Coal imports as percent of total energy requirements   | 12%   | 2%                | 11%    | 7%                | 0.1%          |

Conversion factor 1,000 million tons coal equivalent (MTCE) = 6859 MTOE

<sup>a</sup>Total energy requirements by commodity - observed consumption data is used wherever available for coal and natural gas due to the limited availability of inventory data, otherwise requirements are computed by the following formula domestic primary production + imports exports international bunkers inventory changes Total energy requirements are computed only if inclusive of all commodities (oil, gas, coal, primary electric power, and net electricity imports)

<sup>b</sup>Other electricity includes net electricity Imports Graphs of total energy requirements do not account for inventory changes if production and import data are separated

<sup>c</sup>Italy re-exports imported energy

SOURCE Business Information Display *World Energy Industry*, Volume 1 First Quarter 1980

Soviet Union has not exceeded 1 percent of Japan's total primary energy requirements. Even Soviet coal, the most important of these imports, represented only 5 percent of all hard coal imports in 1979.<sup>2</sup>

<sup>2</sup>The 1979 total import figure is taken from *World Energy Industry*, while the U.S.S.R. import figure is taken from MITI data. See table 81.

During 1979 imports from the U.S.S.R. probably represented less than 3 percent of total Japanese coal imports. For the first 9 months of 1979 imports of Soviet hard coal totaled 1.7 million tons, while Japan's total coal imports from all sources for that year amounted to 60 million tons. See *Soren Too Boekikai Chosa Geppo* (hereafter Chosa Geppo) (Monthly Report of the Soviet-East European Trade Association), November 1980, p. 3; for total coal import data for 1979, see *Japan Economic Journal, Industrial Review of Japan*, 1980, p. 60,

**Table 80.—Japanese Energy Balance—1979**  
(million tons of oil equivalent)

|                             | Oil   | Gas  | Coal  | Nuclear | Hydro and Imported<br>electricity | LNG  |
|-----------------------------|-------|------|-------|---------|-----------------------------------|------|
| Total energy requirements   |       |      |       |         |                                   |      |
| 1000 percent . . . . .      | 74.0% | 0.6% | 15.5% | 1.3%    | 1.5%                              | 7.1% |
| 327.5 mtoe. . . . .         | 242.3 | 2.0  | 50.7  | 4.4     | 4.9                               | 23.2 |
| Energy imports:             |       |      |       |         |                                   |      |
| —as percent of total energy |       |      |       |         |                                   |      |
| requirements . . . . .      | 78.4% | —    | 12.1% | —       | .                                 | 3.5% |
| 308.3 mtoe. . . . .         | 256.7 | —    | 39.9  | —       | .                                 | 12.0 |
| Energy exports:             |       |      |       |         |                                   |      |
| 11.2 mtoe                   |       |      |       |         |                                   |      |

SOURCE: Business Information Display op cit.

**Table 81.—Japanese Energy Dependence—1979**  
(million tons of oil equivalent)

|  | Oil/oil<br>products | Gas | Hard coal | Nuclear | Imported<br>electricity | LNG  | Total<br>energy |
|--|---------------------|-----|-----------|---------|-------------------------|------|-----------------|
| Requirements . . . . .   | 242.3               | 2.0 | 50.7      | 4.4     | 4.9                     | 23.2 | 327.5           |
| Imports from world . . . . .                                     | 256.7               | —   | 39.9      | —       | —                       | 12.0 | 308.3           |
| Imports from U. S. S. R., . . . . .                              | 0.7                 | —   | 2.0       | .       | —                       | —    | 2.7             |
| Imports from U.S.S.R. as percent<br>of total imports . . . . .   | 0.3%                | —   | 5.0%      | —       | —                       | —    | 0.9%            |
| Imports from U.S.S.R. as<br>percent of<br>requirements . . . . . | 0.3%                | —   | 9.9%      | —       | —                       | —    | 0.8%            |

Conversion factors 1 kiloliter = 6.289 barrels, 1 barrel = 0.1358 thousand metric tons oil equivalent, 1,000 mtce = 0.6859 mtoe

SOURCE: For Imports from world Business Information Display World Energy Industry Vol. 1 No 3, First Quarter 1980 p 116 For imports from U S S R Ministry of International Trade and Industry (Japan) Energy Tokai Nenpo [Yearbook of Coal Petroleum and Coke Statistics] (Tokyo Tsusho Sangyo Chosa Kai 1979) pp. 30 39 82 176ff

From the Japanese perspective, then, Soviet energy has been relatively unimportant. From the Soviet perspective, however, Japan is a very important customer, purchasing virtually all of the lignite and more than half of the hard coal that the Soviet Union has sold to the industrialized West. In 1979, about a quarter of the U.S.S.R.'s total petroleum product exports to Japan, West Germany, France, Italy, the United Kingdom, and United States were purchased by the Japanese. In short, Japan, is presently more important to the U.S.S.R. as a customer than the U.S.S.R. is to it as an energy supplier.

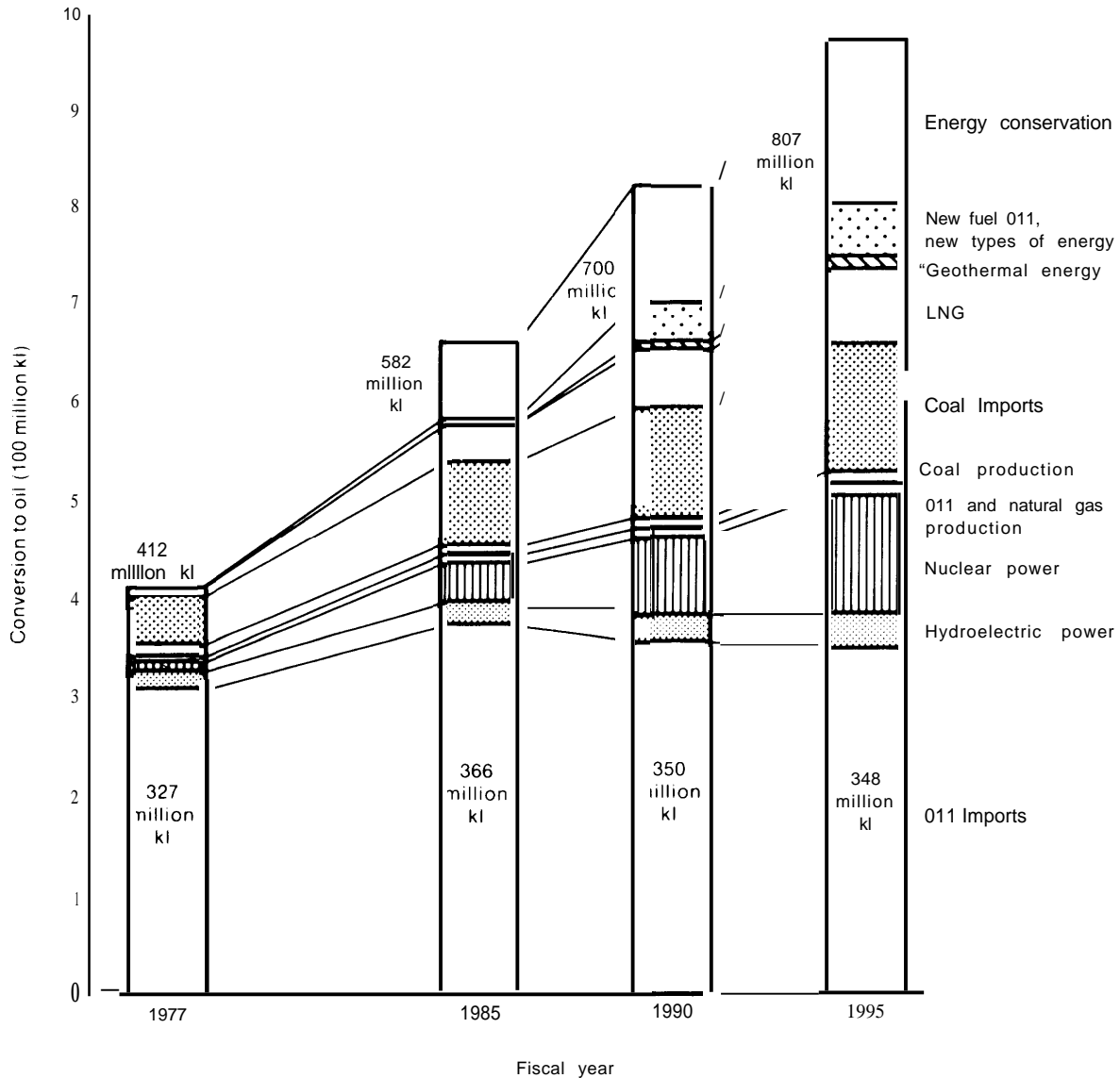
This situation may change in the years ahead, but probably only in limited ways. Current Japanese official energy forecasts suggest that, theoretically at least, Soviet energy might play a role in meeting projected needs, Japan's official long-term energy forecast, first drawn up at the end of 1979 and now under revision, shows a dramatic reduction in the use of oil over the next decade. Recent revisions for 1990 call for the share of oil in the energy supply to fall from 74 percent to 47 to 48 percent,' and

"Sekiyu Izondo, Hanbun Ikani" (Oil Dependence to be Reduced to Less Than Half), *Nihon Keizai Shimbun*, Apr. 13, 1981, p. 1.

for the proportion of oil-fired electricity generation to be reduced by nearly half—from 46 percent to about 24 percent. These ambitious plans assume rapid increases in consumption of coal, nuclear power, and liq-

uefied natural gas (LNG); rapid development of new energy sources; and continuing success in energy conservation (see fig. 27). The plans will require imports of all types of coal to rise rapidly from about 60 million tons

Figure 27.—Japan's Provisional Long-Term Energy Supply and Demand Outlook



Note The projections shown in this diagram are now under revision According to the long-term O11 supply plan published in May 1981 Japan's O11 imports during 1985 will total 308 million kl in 1985 This figure includes imports of crude oil and refined products excluding L N G The new oil supply plan reflects a reduction in oil imports to Japan from a level of 63-69 million barrels per day for 1985 set at the time of the Tokyo summit in 1979 to a level of about 57 million barrels a day for the year 1985 See Tsusho Sangyosho (MITI), *Showa 56-60 Nendo Sekiyu Kyokyu Keikaku (Oil Supply Plan for 1981- 1985)* May 27 1981

SOURCE News from MITI NR-213 (79-281 Tokyo Sept 29 1979 p 9

(40 million tons of oil equivalent (mtoe)) in 1979 to 143 million tons (98 mtoe) by 1990. Steam coal imports are expected to soar from less than 1 million tons per year in the late 1970's to more than 50 million tons (34 mtoe) by the end of the decade, as the cement and steel industries reduce their oil consumption by substituting coal, and as more coal is used to generate electricity.

Soviet coal could contribute to this planned energy transformation, but not on any massive scale. Japan is now participating in a joint effort to develop Siberian coal in South Yakutia (see below). But the projected 4 million to 6.5 million tons (2.7 to 4.4 mtoe) of coal for export to Japan which the project is expected to produce by the mid-1980's will still constitute only a small portion of Japan's anticipated 1985 coal imports of more than 100 million tons (68.59 mtoe).<sup>4</sup> In sum, Japan's urgent need to diversify its energy imports, both by geographic source and by type of energy, means that the Soviet Union will continue to be seriously considered as a potential energy supplier. At the same time, however, energy imports from the Soviet Union will not rapidly increase as a share of total supplies.

<sup>4</sup> *Nihon Keizai Shimbun*, Dec. 25, 1980. The article cites a revised delivery schedule for South Yakutian and Kuznetsk coal: 1 million tons annually 1979-82; 4.5 million tons, 1982-85; and 6.5 million tons, 1985-99. *Nihon Keizai Shimbun*, Feb. 9, 1981, reported that it is unlikely that supplies will reach 3.2 million tons by 1983.

## JAPANESE ENERGY TECHNOLOGY TRADE WITH CMEA

The second dimension of Japan's commercial relationship with the Soviet Union and Eastern Europe has been in exports of Japanese manufactured equipment and plants to CM EA. Japan has been an important contributor to both Soviet and East European economic development, and has traditionally maintained a positive overall balance of trade with CMEA. The relative volume of Japanese exports to the U. S. S. R., however, has not been large. Between 1975 and 1979, these accounted on average for less than 3 percent of Japan's total yearly exports (\$2.4 billion in 1979). As a rule, the value of Japan's exports to the U.S.S.R. has been two to four times as great as those to Eastern Europe. Thus, even if all CMEA nations are included, exports to the Soviet bloc represented less than 4 percent of Japan's total exports during most of the 1970's.<sup>5</sup> Similarly, in 1979 Soviet goods made up less than 2 percent of all Japanese imports. In fact, from the Soviet perspective overall trade with Japan has diminished in importance during the last decade, falling from a high of 12.7 percent of all Soviet trade with industrial nations in 1975 to 8.8 percent in 1980 (see table 82).

<sup>5</sup> "1979 Nen no Nisso Boeki" (Japan-U.S.S.R. Trade in 1979), *Chosa Geppo*, April 1980,

**Table 82.—Soviet-Japanese Trade—1975-80**  
(millions of rubles)

|  | 1975     | 1976     | 1977     | 1978     | 1979 a   | 1980     |
|--|----------|----------|----------|----------|----------|----------|
| A. Soviet Imports from Japan. . . . .  | 1,253.5  | 1,372.1  | 1,444.4  | 1,583.7  | 1,653.5  | 1,772.6  |
| B. Soviet exports to Japan. . . . .  | 668.9    | 748.4    | 853.4    | 736.1    | 944.4    | 950.2    |
| C. Total Japanese-Soviet trade turnover. . . . .                                       | 1,922.4  | 2,210.5  | 2,297.8  | 2,319.8  | 2,597.5  | 2,722.8  |
| D. Total trade turnover between U.S.S.R. and industrial nations <sup>b</sup> . . . . . | 15,843.9 | 18,658.1 | 18,741.6 | 19,679.9 | 25,753.8 | 31,583.1 |
| C/D . . . . .  | 12.8%    | 11.40/o  | 12.30/o  | 11.80/o  | 10.07/o  | 8.60/o   |

<sup>a</sup> Revised figures

<sup>b</sup> "Industrial nations" is a standard Soviet trade classification which includes Western Europe, North America, Japan, and Australia

SOURCE MOSCOW *Narodny Bank Press Bulletin*, 1975-1980 (*inter alia* Soviet Foreign Trade, 1975-1980, *inter alia*)

In certain industrial sectors trade with the U.S.S.R. is disproportionately important. The bulk of Japan's exports to the U.S.S.R. and Eastern Europe (86.7 percent in 1979) has been in plants and equipment for heavy industry. In 1979, almost half of these were in iron and steel.<sup>6</sup> This trade is concentrated in areas which complement Japan's own efforts to restructure its domestic industries. Heavy and petrochemical industries have for years dominated Japan's industrial structure, but current government plans foresee a diminished importance for these sectors. Exports are viewed as a way to help declining industries. Moreover, declining plant exports in 1980, due mainly to contract cancellations by the Chinese, have led Japanese plant exporters to hope for a compensating growth in CMEA markets.<sup>7</sup> Before the Soviet invasion of Afghanistan, Japanese plant exports to the U.S.S.R. and Eastern Europe were growing briskly, earning Japan about 10 percent of the world plant export market.<sup>8</sup>

Japan has made an important contribution to energy-related technology trade with the Soviet Union and Eastern Europe (see ch. 6). In 1979, Japanese worldwide energy equipment and technology exports were valued at more than 6 billion. Exports to the Soviet Union accounted for 15.9 percent and those to Eastern Europe 2.6 percent of this total. (Exports to all communist nations, including the People's Republic of China, totaled almost 30 percent of all Japan's energy-technology related exports during that year.)<sup>9</sup> Between 1975 and 1979, Japan alone supplied almost 30 percent of all Western

energy-related exports to the U.S.S.R. About 45 percent of Japan's total exports to the U.S.S.R. during 1979 were of energy-related equipment.

Such trade has been heavily concentrated in a few areas—pipes, tubes, pumps, and light vessels. Japan has not been a major manufacturer of seismic equipment for oil exploration, but Japanese companies have been important suppliers of pipe and other petroleum production equipment. Japanese exports of "tubes, pipes, and fittings" accounted for 34 to 53 percent of all trade in these commodities between the United States, Germany, France, Italy, United Kingdom, and Japan and CMEA between 1975 and 1979.<sup>10</sup> Between 1975 and 1979, Japan ranked first among Western nations in the dollar value of energy equipment and technology trade with the U.S.S.R.

Japan is undoubtedly a major exporter of energy-related equipment and technology to CMEA; opinion as to the significance of these exports differs, however. Many Japanese businessmen believe that American technology in these areas is superior to their own; U.S. manufacturers suggest that there are many items which can be produced in Japan as well as anywhere in the world. Japanese drill pipe, for example, incorporates the latest technology, including inertial welding of the tool joints at the end of the pipe, and it is widely recognized as at least comparable to that produced by American firms.<sup>11</sup> Japanese firms such as Mitsui, Sumitomo, Nippon Kokan, Kawasaki, and others have supplied quality pipelines for transporting oil and gas, as well as pipeline valves, pipeline booster stations, and pipe-laying equipment. Mitsubishi has built quality offshore semisubmersible rigs such as the Hakuryu II (White Dragon), used in exploration around Sakhalin Island. Japanese firms are capable of producing almost all of the major pieces of equipment needed

<sup>6</sup>Kin Murakami, "TaiSo Boeki no Genjo to Hatten" (Current Status and Future Prospects for Japan-U.S.S.R. Trade), *Ni Kiren Geppo* (Japan Machinery Industry Federation Monthly), November 1980, p. 4.

<sup>7</sup>Interview with President of New Japan Steel, *Nihon Keizai Shimbun*, Feb. 2, 1981, p. 3.

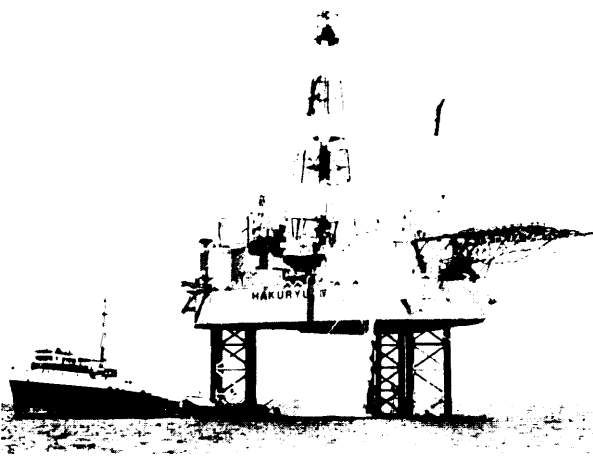
<sup>8</sup>"Plant Exports to the Soviet Union and East European Countries," *Digest of Japanese Industry and Technology*, No. 144, 1980, p. 41.

<sup>9</sup>Data from the Japan Tariff Association, *Japan Exports and Imports, Commodity by Country, 1979* (Tokyo: 1980). CC FTS categories were chosen to correspond with those developed by OTA for [U.S.] Department of Commerce data. Compiled by Stephen Sternheimer for OTA.

<sup>10</sup>U. N. SITC data, compiled by Stephen Sternheimer for OTA.

<sup>11</sup>See ch. 6, on Western Energy Equipment and Technology Exports to the U.S.S.R.





The Japanese-built Hakuryu oil rig, off Sakhalin Island

for coal mining. In almost every major category of energy technology, therefore, there are Japanese companies competing with those from the U.S. and Western Europe. In some cases, Japanese manufacturers are able to produce items at low cost, making them attractive suppliers for CMEA energy development projects.<sup>12</sup>

<sup>12</sup> Japanese steel firms have been supplying seamless pipe to the United States because American firms do not produce

In sum, past patterns of trade between Japan and the U.S.S.R. in fuels and energy-related equipment and technology show that—despite the potential for mutually beneficial exchange of Japanese equipment and know-how for Soviet energy and raw materials—the interaction between these two nations has been limited. Japan's present reliance on Soviet energy is very small. However, in certain sectors, including energy-related technology and equipment, Japan has been a major Soviet supplier. Except in specialized areas, Japanese energy equipment is on a par with equipment produced by other Western nations.

Japan's consistently positive trade balance and its low level of energy imports from the Soviet Union indicate a cautious approach to energy and trade relations. This brief outline of past patterns of interaction shows that while there are strong underlying incentives for Japanese participation in Siberian energy and economic development, there has been no rapid development of such ties. Japan has avoided dependence on the U.S.S.R. for energy, although its exports of energy-related technology have increased.

enough pipe to fill domestic demand. See "Japanese Makers of Seamless Pipe Swamped With Foreign Orders," *Asian Wall Street Journal*, 1 Dec 8, 1980.

## JAPANESE POLICY TOWARD ENERGY TRADE WITH THE CMEA: THE INSTITUTIONAL AND INTERNATIONAL POLITICAL CONTEXT

Japan's postwar policies concerning energy cooperation with the Soviet Union have developed both informally and officially. Semigovernmental and private organizations, as well as government agencies, have played important roles in exploring potential trade and joint energy projects, and in carrying out agreements. These organizations—which include the large trading companies (sogo shosha), companies manufacturing various types of machinery and equipment, Japanese utilities and other potential con-

sumers of energy, the Federation of Economic Organizations (Keidanren), the Ministry of International Trade and Industry (MITI), the Foreign Ministry, and the Export-Import Bank (Ex-Im Bank) of Japan—all participate in development and implementation of joint Japanese-Soviet energy projects. The persistence of an identifiable group of institutions responsible for these policies has ensured a degree of policy continuity. This section briefly identifies the central actors in this institutional setting, and then ex-

amines the international political context of Japanese energy trade with the U.S.S.R.

## THE DOMESTIC INSTITUTIONAL SETTING FOR POLICY

### Private Organizations

The Keidanren has played a leading role among the private organizations, companies, and institutions involved in negotiating and participating in joint Japanese-Soviet energy projects. Since the 1960's Keidanren leaders have taken a strong personal interest in prospects for Siberian development, and businessmen from Keidanren, as well as other economic organizations such as the Japan Chamber of Commerce, have participated in these negotiations with the Soviet Union.

The Keidanren's Japan-Soviet Economic Committee (*Nisso Keizai Iinkai*), which is made up of more than 100 Japanese businessmen, works to coordinate opinions among interested Japanese firms. The committee includes a number of subcommittees, each of which has primary responsibility for a particular type of project area (gas, coal, oil), and is made up of corporate executives from these firms. At times one individual or firm may exert decisive influence. An individual from Tokyo Gas, for example, has been the leading figure in negotiations over Siberian gas development.

Preparatory negotiations over potential energy development projects normally span a number of years. During this time a series of meetings are held to discuss the project's possibilities and to specify the nature of participation on both the Japanese and Soviet sides. A Soviet organization, the U. S. S. R.-Japan Business Cooperation Committee, parallels Keidanren's committee, and is headed by the Soviet First Deputy Minister of Trade. The Keidanren and Soviet committees hold discussions; a protocol agreement is signed; and finally a "general agreement" specifies the overall commitment of both

sides. The latter agreement outlines the financing, cost estimates, and plans for equipment purchases, and carries the commitment of both the governments.

In addition to their participation as members of Keidanren, a number of private trading, manufacturing, and energy companies play important roles at various stages of the development of joint energy projects. The *sogo shosha* have handled the bulk of trade between Japan and the Soviet Union since 1956. In 1980 the primary trading companies dealing with the U. S. S. R., in rank order, were Mitsubishi, Mitsui, C. Itoh, Nissho Iwai, Sumitomo, and Marubeni. The first three of these were responsible for about a third of all Soviet trade.<sup>13</sup> These companies all have Moscow offices. Since these firms are associated with other related corporations in company groups (*keiretsu*) they are in a good position to bring affiliated companies into projects as they develop. Many of the trading companies have specialized departments, comprised of Soviet area specialists, who deal in trade with CMEA. All of these factors make the trading companies important participants in the development of joint Japanese-Soviet energy projects, both during preliminary negotiations, and in later discussions of supply contracts.

Another secondary actor on the private side is the *Soren Too Boekikai*, the Association for Trade with the Soviet Union and Eastern Europe. This group specializes in economic and trade research, publishing monthly journals and assembling trade data. When requested by member firms, the Association undertakes special studies. It also arranges for visits of Soviet delegations, assists Soviet participation in Japanese trade fairs, and helps Japanese businessmen interested in trading with U.S.S.R. and Eastern Europe.

Consortiums may be formed to organize participation of Japanese firms in joint ven-

<sup>13</sup> Chosa Geppo April 1978, p. 212. See also Alexander K. Young, *The Sogo Shosha: Japan's Multinational Trading Companies* (Boulder, Colo.: Westview Press, 1979), p. 8.

tures. The Sakhalin Oil Development Corp. (SODECO), for example, is composed of firms that represent a variety of Japanese industries—manufacturers of equipment, energy corporations, banks, and trading companies engaged in joint Japanese-Soviet oil and gas development offshore Sakhalin. Such consortia spread the financial risk among a group of firms and facilitate coordination among them. The businessmen involved in joint energy projects with the Soviet Union are generally also in close touch with Japanese Government officials. In some cases, such as the unfruitful negotiations that took place over joint oil development in Tyumen, businessmen have preferred to move more positively toward cooperation than have government officials.<sup>14</sup> But despite a natural difference in the perspectives of government officials (particularly those in the Foreign Ministry) who have broad policy concerns, and Japanese businessmen interested in expanding trade, the two sides are normally in fairly close agreement.

#### Government organizations

The Ministry of Foreign Affairs is the formal coordinator of Japan overseas policies. However, in general, the ministry has been less involved in the development of specific joint Japanese-Soviet energy projects than other government agencies. Since 1956, when Japan and the Soviet Union officially resumed diplomatic relations, overall trade agreements have been reviewed and revised every 5 years. These 5-year trade agreements do not generally spell out the precise details of joint energy development projects. When a proposed project becomes a matter of political debate—and this has generally not been the case—the Ministry of Foreign Affairs can play a decisive role in the negotiations.

The government's trade and financial agencies ( MITI, the Ministry of Finance,

<sup>14</sup> Gerald L. Curtis, "The Tyumen oil Development Project and Japanese Foreign Policy Decision-Making," in *The Foreign Policy of Modern Japan*, Robert Scalapino ed. (Berkeley, Calif.: University of California Press, 1977), p. 160.

and the Ex-Im Bank) all routinely play more important roles in the development of energy projects. MITI, through its International Trade Policy Bureau, supports Japanese firms with export insurance, and tax and credit incentives. Since MITI implements the foreign exchange and trade control laws, including Export Control Division oversight of items restricted by CoCom, it plays an important role in the development of trade and exchange with the Communist nations. Through its support for the Japan National Oil Corp. and other public energy corporations, MITI has helped to provide financing for overseas energy development.

Government financial institutions are also directly involved in negotiations over energy projects with the U.S.S.R. The Ministry of Finance is authorized to provide policy guidance to financial institutions making overseas loans and investments; it normally plays an important indirect role through its budgetary oversight of the Ex-Im Bank. Through its loans, the Ex-Im Bank supplies the major share of government funding for large-scale development projects in the Soviet Union. These loans can be made to Japanese importers and exporters and to foreign governments for financing imports of Japanese plants and equipment.

Officials of the Ex-Im Bank are usually consulted by Japanese firms at a number of stages in project negotiations. Through its assessments of risk and projections of credit needs and appropriations availability, the Ex-Im Bank determines which Soviet projects should be supported, and eventually the Bank signs a loan agreement with the U.S.S.R. Bank of Foreign Trade. This establishes bank-to-bank credits used by the Soviet bank to reimburse Japanese firms.<sup>15</sup> As early project stages are completed, progress is reviewed and financing arrangements

<sup>15</sup> For a description of Japanese financing of joint Japanese-Soviet coal development in Siberia, see *Coking Coal* 11(1111/11, 1980), p. 289. According to experts, the bank provided \$4 million in loans for Siberian development projects as of 1979. See Ahen Whiting, op. cit., p. 137, and Henry Scott Stokes, "Japan Facing Complex Policy Issues About Sanctions on Soviet Union and Iran," *New York Times*, Jan. 9, 1980.

renegotiated. Under routine circumstances, the financial arrangements form the framework for development and review of joint projects.

Japanese commercial banks are legally prohibited from lending more than 25 percent of their capital funds to any one recipient; therefore, firms interested in participating in large projects often turn to the Ex-Im Bank for assistance. While project loans generally involve a combination of government credits and monies from commercial banks, the Ex-Im Bank's commercial assessment of the project is important in determining loan rates.<sup>16</sup> The Bank does not usually make public the exact proportion of the loan it provides, or the differential between the loan rate charged by it and that charged by private banks. Since its purpose is to stimulate Japanese exports, Ex-Im Bank financing is concentrated in those parts of a project that involve purchases of Japanese-manufactured plants and equipment, rather than in those involving purchases of Soviet-made goods.

The institutional and financial support provided by the Japanese Government through the bank and other agencies has been a distinguishing feature of the joint development projects in which Japanese firms have participated.<sup>17</sup> Even when Japanese Government and business officials are favorably disposed toward a project, financial considerations can delay or significantly modify it. The example of the joint Japan-U.S.S.R. oil and gas project offshore Sakhalin illustrates the central role of financial institutions.

In the first stages of the Sakhalin negotiations in the early 1970's, Keidanren's Japan-

<sup>16</sup>In 1976, the OECD instituted guidelines for lending rates charged by member nations for large-scale projects such as those established to promote Soviet energy development. Before that time, interest rates set by the Ex-Im Bank and other financial institutions could be the key determinants of whether Japanese firms or their competitors won associated export contracts. Interest rate charges continue to be a focus of negotiations over Soviet energy projects.

<sup>17</sup>Terutomo Ozawa, *Japanese Multinationalism* (Princeton, N. J.: Princeton University Press, 1980), p. 33.

Soviet Economic Committee held discussions with Soviet representatives. Once the two sides reached a preliminary understanding, Keidanren leaders undertook extensive consultations with various Japanese Government agencies. The Ministry of Foreign Affairs apparently was not extensively involved, but the Ex-Im Bank made an important contribution to these discussions through its project risk assessments. MITI officials helped to develop the consensus among Japanese parties that provided the working basis for a new round of more detailed negotiations between the Keidanren committee and the Soviets.

After both sides agreed on a protocol, discussions took place with the U.S.S.R.'s Bank of Foreign Trade. A Japanese consortium was formed to organize corporate participation in the project. This consortium, the aforementioned SODECO, signed the basic contract with the Soviet Ministry of Foreign Trade in January 1975. A "general agreement" outlined the financial participation of both sides, and set various project targets.

The formation of SODECO and the arrangements for financial backing from the Ex-Im Bank and other institutions were crucial to the progress of this project. The Japanese initially advanced risk money of \$100 million for drilling at Sakhalin. Much of that capital came from the Japanese corporate shareholders in SODECO, as well as from the Japan National Oil Corp. The Ex-Im Bank's risk assessment and its financing signaled the commitment of the Japanese Government.

### **The Political Context of Japanese-Soviet Energy Relations**

Political Relations With the U.S.S.R.—Japan's lack of indigenous energy resources and history of export-led economic growth both suggest strong incentives for cooperation in Soviet energy development. However, the historical and political context of Japanese-Soviet relations is marked by a variety of complicated and persisting dis-

putes and tradeoffs. These are important factors that Japanese policy makers weigh in their negotiations with Soviet leaders. While the political factors are usually viewed as constraints on interaction between these two nations, incentives for cautious Japanese interdependence with the U.S.S.R. can also be identified.

It is often noted that Japanese public opinion surveys demonstrate acute public dislike and distrust of the Soviet Union. This is generally assumed to indicate fundamental opposition to expanded Japanese-Soviet relations. The implications of such surveys are, however, far from clear. A recent survey of Japanese elite views on security issues indicates that Japan's policymaking leadership holds no clearly distinguishable or coherent view of the "Soviet threat."<sup>18</sup> Most of the respondents considered a Soviet military attack unlikely, supported only a modest (Japanese defense build-up, and perceived the "Soviet threat" as primarily psychological and political rather than military. Like numerous other polls on the subject, this survey provides no conclusive indications about what policy Japanese leaders are likely to initiate, but it does indicate that the Soviet Union is not perceived by them in black-and-white terms.

A second factor commonly viewed as an obstacle to increased cooperation is the Northern Islands issue (see fig. 28). Persisting disputes over territorial claims to four northern islands were reflected in the failure of Japan and the Soviet Union to conclude a peace treaty following World War II. The Northern Islands issue is a recurrent theme in the Japanese media. The problem has been recently exacerbated by a Soviet military build-up on these islands between 1978 and 1980.

The emotional significance of the issue, however, has not prevented the establishment of diplomatic relations between the two nations or the development of a number

<sup>18</sup>International Communications Agency, Office of Research, Research Memorandum, "Japanese Elite Views on Key Security Issues," Nov. 25, 1980.

of joint Siberian projects.<sup>19</sup> In other words, it is not clear that there is any direct policy link between the Northern islands and Japanese-Soviet interaction in Siberia. Publicly, the domestic salience of the issue precludes any Japanese public official from conceding the improbability of the return of the islands to Japan. Privately, however, many admit that there is no precedent for the U.S.S.R. returning territory it has occupied for so long.

**The China Factor.** -The "China Factor" is shorthand for another set of policy issues which are often assumed to inhibit Japan's interactions with the U.S.S.R. It has been suggested in the West that China and the Soviet Union pose an either/or choice for Japanese economic involvement, for reasons of both politics and competitive economics. According to this argument, Japan's historic ties to, cultural compatibility with, and nearness to China mean that priority is placed on Japanese-Chinese relations.

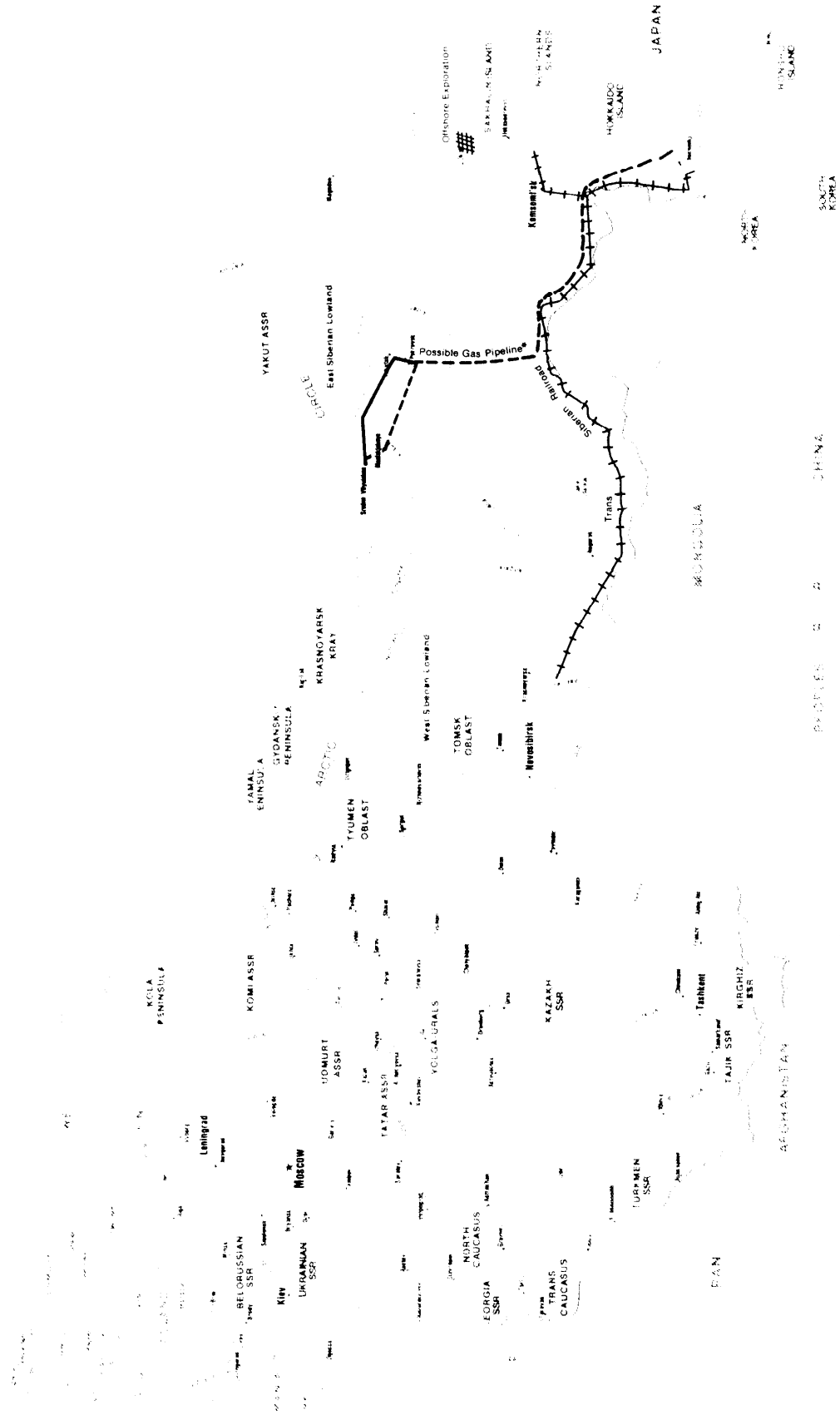
Japanese leaders nevertheless strongly disagree with the idea that they can or should choose between their two Asian neighbors. A prime concern is that the Soviet Union not be provoked to take aggressive action in Asia. Japan's basic allegiance is clearly to the United States, but Japanese leaders worry that Moscow may perceive Tokyo as cooperating (tacitly or explicitly) with Washington and Peking in an anti-Soviet alliance. As a result, Japanese leaders attempt to signal the U.S.S.R. as to Japan's peaceful intent, without alienating China.<sup>20</sup>

<sup>19</sup>Richard L. Edmonds, "Siberian Resource Development and the Japanese Economy: The Japanese Perspective," paper prepared for the Association of American Geographers Project on Soviet Natural Resources in the World Economy, August 1979.

It is interesting to note that a parallel dispute between Japan and China over the Senkaku Islands - located between Taiwan and the Ryukyus - has not inhibited joint oil development between these nations. Administered by the United States and then returned to Japan at the time of the return of Okinawa, these islands have received less media attention but the dispute over them is no less sensitive. This is another case of an unresolved conflict which has not prevented a wide range of interactions - including Japanese participation in offshore oil development in other areas near China.

<sup>20</sup>Flitig, op. cit.

Figure 28.—Soviet East Siberia and Japan



SOURCE: Office of Technology Assessment

Possible route

To this end, Japanese leaders both in and out of government depict cooperation in Siberian energy development as necessary to Japan's political interest—not for abstract reasons such as winning good will, but in order to reduce perceptions of hostility. Sakhalin offshore oil and gas development is a prime example. Sakhalin was contested by Japan and the Soviet Union for nearly a half century, finally falling under Soviet control in the final stages of World War I after the U.S.S.R. hastily renounced a neutrality treaty and entered the war against Japan. If the island represents a symbolically sensitive piece of lost territory, the oil and gas resources there are also strategic commodities important for both Japan and the U.S.S.R. Japanese participation in the development of these resources symbolizes commitment to peaceful cooperation in the Asian region. Japan's Sakhalin "signal" has continued—despite the Soviet invasion of Afghanistan. Furthermore, China has not protested joint energy development there. Indeed, the same Japanese firm exploring for oil offshore Sakhalin won the first foreign contract to explore in the Bohai Gulf near China.

Nor does it appear that such signals involve unusually great economic risks, at least compared to those incurred in participation in energy and development projects in other nations. Following China's readjustment of national planning priorities in 1980-81, Japanese contracts valued at \$1.5 billion were canceled as projects were postponed. While China has indicated its willingness to renegotiate the bulk of these contracts, the incident cautions against overly optimistic expectations about the China market. No similar renegotiation or reversal has affected Japanese-Soviet interaction since the abortive Tyumen pipeline proposal of 1974-75, which ended before any contracts were signed. Nor is there any concrete evidence that firms which participate in Chinese economic development are denied access to the Soviet market, or vice versa. Indeed, a number of Japanese firms have figured prominently (and simultaneously) in both Soviet and Chinese development proj -

ects, supported by export credits from the Japanese Ex-Im Bank.

**Policy Stance.** — Contrary to popular stereotypes, it appears that Japan attitude toward energy cooperation with the U.S.S.R. is based on a careful assessment of both political and economic tradeoffs. Politically, Japan hopes to avoid strong association with either China or the U.S.S.R. Economically, Japan needs diversified sources of energy and prospers through expanded plant, equipment, and technology exports. The Japanese organizations and institutions involved in formulating policy toward energy cooperation with the U.S.S.R. naturally weigh the potential risks and benefits of various projects from different perspectives—financial, political, energy, and trade. However, there appears to be widespread agreement on the broad outlines of Japanese policy regarding Japanese-Soviet interaction. This is best described as cautiously optimistic. Disagreements within Japan's policymaking leadership inevitably arise over the details of specific projects, and recur when international political or economic conditions change—but the general orientation of Japanese policy has been fairly consistent. For Japanese policy makers who are officially committed to diversifying Japan's energy supplies—both by types of fuels and geographic sources—both the Soviet Union and China are viewed as potential alternatives. During the 1980's Japan hopes to import a modest amount of oil from China, some gas from the Soviet Union, and considerable coal from both.

The Soviet Union is thus viewed as a potential supplier of additional energy—in limited increments. So long as the U.S.S.R. remains merely one among many more-or-less equal suppliers, the Japanese believe that the political leverage likely to accrue through a threat of a cutoff will be minimal, if not nonexistent. A further and commonly held extension of this view is that to the extent that the Soviet Union relies on Japan for capital, technology, and equipment to develop its energy resources, the likelihood

of political manipulation or pressure is reduced and international tensions obviated.

Japan's willingness to cooperate with the Soviet Union in developing the latter's energy resources is in no sense an unbounded commitment. Informally and unofficially, Japanese leaders often cite 20 percent as the maximum safe level of reliance on Soviet imports for any commodity, energy included. Japanese are quick to point out that this falls well below the dependence of a number of West European nations in some fuels, and that actual Japanese energy imports from the Soviet Union are likely to fall far short of this level in the next few years. Another indication of the bounds to Japanese cooperation is the fact that, despite Soviet proposals, Japan has not entered into comprehensive trade agreements lasting longer than 5 years. "Additionally, Japanese leaders have been reluctant to move ahead in some cases of Siberian development without American approval, and even participation. This reluctance is illustrated by the case of the now dormant proposed gas development project in Yakutia (see below), in which Japanese firms under the leadership of Tokyo Gas strongly requested American participation.

While Japan's positive attitude toward energy and trade interaction with the U.S.S.R. has been cautious, at the same time there is little sympathy among Japanese leaders for a policy of strong controls over trade and technology exports to the Soviet Union. Nor do they support the idea of at-

<sup>1</sup>Soren Too Boekikai, *Showa 53 nendo Nisso Keizai semmonka kaigi hokokusho* (Report of the 1978 Conference of Japanese and Soviet Economic Experts) (Tokyo: Soren Too Boekikai, 1979), p. 40.

tempting to employ trade as a political lever in order to promote long-term Western security interests. Despite the continuing concern, particularly of Foreign Ministry officials, that Japan not take a position that isolates it from the United States and Western Europe, expanded controls on both equipment and technology trade are viewed as intrinsically unattractive options.

This position is in part based on the apparently widespread view within the Japanese bureaucracy that where there is trade, there is bound to be some technology leakage. Japan participates in CoCorn and Japanese leaders believe that some export controls are feasible and necessary. But MITI officials in particular contend that controls on technology transfer are both difficult to construct and to implement. Such controls, they say, are best applied to limiting the sale of spare parts and manufacturing know-how, and then only to technology that is easily identifiable and separate from products.

In sum, the political context of Japanese-Soviet energy relations includes complicated and persisting issues such as the Northern Islands dispute and the "China factor." These lie behind Japan's policy of cautious interaction with the U.S.S.R. The economic and cultural complementarity of Japan and China make it unlikely that Japan's relationship with the Soviet Union will be promoted to a position of equal importance with its relationship with China. However, from the Japanese perspective, it is important that, in principle at least, Japan offer similar opportunities for economic cooperation to both nations. Japan's "omnidirectional diplomacy" thus implies involvement with *both* China and the U.S.S.R. in energy development and trade.

## JAPANESE PARTICIPATION IN SIBERIAN ENERGY DEVELOPMENT

Japanese-Soviet energy development projects have been beset by repeated problems and delays. Joint development of oil in

Tyumen never even began, despite the interest of Japanese firms. Oil and gas development offshore Sakhalin is progressing



very slowly; 5 years after the signing of the initial agreement, the exploration stage has still not been completed. Technical problems elsewhere have caused coal shipments from the Soviet Union to fall below anticipated levels.

The following sections describe three key Japanese-Soviet energy projects—Yakutian natural gas and coal development schemes and the Sakhalin offshore oil and gas project—analyzing the nature and prospective results of Japanese participation. These are the most significant examples of Japanese-Soviet joint energy cooperation to date, and illustrate the type of interactions likely to be feasible in years ahead.

### YAKUTIAN NATURAL GAS

The Yakutian gas development project is a trilateral effort involving Japan, the Soviet Union, and the United States. Since the early negotiations, Japanese firms and organizations have taken the lead. Japanese participation is organized in a consortium of 21 firms called Siberia Natural Gas. The consortium includes major trading companies, utilities, banks, steelmaker, and other plant exporters. Hiroshi Anzai, President of Tokyo Gas and Chairman of Keidanren's Japan-U.S.S.R. Joint Economic Committee's subcommittee on gas, is Chairman of the consortium, and has been the leading figure in the development of the project. El Paso Natural Gas, Occidental Petroleum, and Bechtel Inc. were involved on the American side.

At the time of the preliminary negotiations and signing of the first contracts in 1975, the extent of Yakutian gas reserves had not been determined.<sup>22</sup> Under the terms of the original agreement, the beginning of actual production would await initial exploration, during which an anticipated 1 trillion cubic meters of gas reserves would be

verified. This stage is now 90 percent completed but production has yet to commence. When and if it does, one-third of the gas will be retained by the U.S.S.R. and the other two-thirds divided equally between Japan and the United States at prevailing market prices—roughly 7.5 million tons of LNG annually to each country over a period of 25 years.<sup>23</sup>

Initial estimates of development costs for Yakutian gas stood at \$3.4 billion. A loan of \$50 million—half from Japan's Ex-Im Bank and half from the Bank of America—was provided for purchases of exploration equipment. The bulk of the Japanese financing came directly from the Ex-Im Bank, with only about 20 percent supplied by private companies.<sup>24</sup> U.S. law (i.e., Jackson-Vanik Amendment), however, precluded U.S. Export-Import Bank loans to the Soviet Union,

The project developed slowly, due to delays caused by cold weather and export licensing problems with the shipment of a U.S. computer. By the time of the Soviet invasion of Afghanistan, proved reserves were still about 10-percent short of the target: after the invasion, a tripartite meeting scheduled for the spring of 1980 was canceled. It has now been tabled. At this meeting a second general agreement to cover the next stage of the project was to have been developed. Those involved believe that it will take at least another year to conclude a second-stage agreement, and that even under such best-case conditions, actual commercial production of gas will not begin until 1987. Moreover, in formal Japanese estimates suggest that the costs of the project may climb to \$7 billion to \$8 billion, double the initial figure.

In addition to the costs for exploration and production, huge investments will be required to complete the necessary infrastructure. Gas produced in Yakutia was to be shipped by a new pipeline to the Soviet port of Olga on the Pacific Coast, where liquefac-

<sup>22</sup> U.S. Senate *U.S. Trade and Investment in the Soviet Union and Eastern Europe*, staff report for the Subcommittee on Multinational Corporations, Committee on Foreign Relations (Washington, D. C.: U.S. Government Printing Office, 1974), p. 19.

<sup>23</sup> Soren Too Boekikai, *Handbook of the U.S.S.R.* (Tokyo: Soren Too Boekikai, 1978), pp 44-46.

<sup>24</sup> Raymond S. Mathieson, *Japan's Role in Soviet Economic Growth* (New York: Praeger, 1979), p. 112.

tion plants and additional port facilities will be constructed. Original plans called for the United States and Japan to share the costs. The planned pipeline would be longer than the 1,700-mile Orenburg pipeline and would run over extremely cold and mountainous terrain. Japanese experts view this venture as being at least on a par with the efforts which will be required to construct the gas export pipeline across West Siberia to Western Europe. The cost of the equipment (pipeline and liquefaction facilities) needed for the next stages of the project will be very large, and any previous consensus that might have existed regarding who should pay for facilities to be built within the Soviet Union has broken down.

For the Japanese, Yakutian gas offers a market for energy equipment and technology and a source of LNG. To date, Japanese firms have supplied drill pipe and bits, gas detectors and masks. The Japanese firm IHI Heavy Industries has apparently offered to sell 36-MW compressors for the pipeline, and there will certainly be opportunities for sales of a variety of other Japanese equipment if the gas is actually developed.

But even assuming that all goes according to plan, it is not likely that Yakutia will render Japan greatly dependent on Soviet natural gas. The planned 7.5 million tons of LNG, to be supplied to Japan by the year 1990, will amount to less than 15 percent of Japan's projected total LNG imports for that year (45 million tons), or a little more than 1 percent of Japan's total primary energy supply. Soviet gas from Sakhalin (see below) might add 3.5 million tons per year, however. The two projects together, therefore, could provide one-quarter of Japan's gas imports by 1990 (see table 83).

These considerations belong to the future, however. With delay in proving reserves, mounting cost estimates, and delays due to international political tensions, the ultimate fate of the tripartite Yakutian gas project remains uncertain. Participants continue to maintain that it is economically and technically feasible, but there is little likelihood

**Table 83.—Projected Japanese Energy Imports from the U.S.S.R. During the 1980's (million tons of oil equivalent)**

|  | Coal             | Oil                | Gas<br>(liquefied<br>natural gas<br>-LNG) |
|--|------------------|--------------------|---|
| A. 1979 Imports from<br>the U.S.S.R. . . . .                                       | 2.0              | 0.683              |   |
| B. Projected incremental<br>i reports<br>from U.S.S.R. +<br>1979 imports . . . . . | 6.4 <sup>a</sup> | 2.051 <sup>b</sup> | 2.4—1985c<br>5.1—1990                     |
| C. Projected <i>total</i> Japanese<br>imports from<br>all sources, 1985 . . . . .  | 69.2             | 312                | 19.8                                      |
| D. projected <i>total</i> Japanese<br>imports from<br>all sources, 1990, . . . . . | 98.0             | 294                | 308                                       |
| B/C . . . . .  | 9.2%             | 0.65%              | 12.1% <sup>d</sup>                        |
| B/D . . . . .  | 6.5%             | 0.69%              | 24.3% <sup>d</sup>                        |

Conversions 1000 metric tons coal = 0.6859 1,000 metric tons oil equivalent  
1000 barrels day = 0.1358 1,000 metric tons oil equivalent  
1 kiloliter 6.28 U.S. barrels.

<sup>a</sup> Assumes 65 million tons (4.4 mtoe) additional coal imports from South Yakutia.

<sup>b</sup> Assumes 10,000 barrels/day (1.6 mtoe) additional oil from Sakhalin

<sup>c</sup> Assumes 35 million tons from Sakhalin (2.4 mtoe) + 7.5 million tons (5.1 mtoe) from South Yakutia. In all likelihood, the Yakutia gas will not come on stream until 1990 or later.

<sup>d</sup> LNG reports from all sources will provide 72 percent of Japan's primary energy supply in 1985 and 90 percent in 1990 according to official Japanese Government forecast

SOURCES Ministry of International Trade (Japan) *Energy Tokei Nenpo* (Tokyo: Tsuko Sangyo Chosa Kai 1979) and Japanese government long-term energy forecast

that all three parties will quickly move ahead in the current international environment.

## SOUTH YAKUTIAN COAL

In contrast to the situation with Yakutian gas, where adequate recoverable reserves have not yet been established, a sufficient amount of coking coal, much of it located in thick seams, is known to exist in the area, and feasibility studies by the Soviets and on-site inspection by Japanese experts have led to the joint development of the Siberian Yakutian coalfields. Although South Yakutian production is still very small, "generally high-quality coal has been mined here for a number of years.

<sup>20</sup>1980 *Coking Coal Manual*, op. cit., pp. 290-92

An initial agreement, signed in 1974, provided \$450 million in Japanese credits for Yakutia, \$60 million of which were to be spent within the U.S.S.R. for onsite costs connected with the labor force. The rest of the credits were set up to facilitate Soviet purchases of plant and machinery. The loan period extended from 1975 through 1982, with repayments in the form of coking coal to begin in 1983. Japan is to receive 85 million tons of medium-quality coking coal by the end of the century. In addition, the general agreement provides for the import of Soviet coal from the Kuznetsk basin at a rate of 1 million tons annually from 1979 to 1999.

The South Yakutian coal project encountered no major negotiation problems, but technical obstacles appear to have further delayed delivery schedules of both Kuznetsk and Yakutian coal. In December 1980, a revised timetable projected exports of 4.5 million tons to Japan between 1982 and 1985; and exports of 6.5 million tons between 1985 and 1999.<sup>26</sup> In the opinion of Japanese experts, schedules may be set back by as much as 2 years, due to difficulties associated with the use of equipment in such harsh climates.<sup>27</sup> In addition, inadequacies in the "coal chain" on the Soviet side—insufficient numbers of coal tankers and poorly developed transportation facilities—may raise further difficulties. A 400-km section of railroad connecting the mine site to the Trans-Siberian Railroad was completed in 1978. The city of Neryungri and nearby regions of Chulman are expected to experience a population influx, and the progress of regional infrastructure development will greatly influence the delivery schedules of coal produced in the mines.

Japan has sold the U.S.S.R. a variety of coal mining equipment for use in South Yakutia. This has included coal rotors, draglines, coal-washing and sorting equipment,

and earth-moving and excavation equipment. The Komatsu Co. has sold 190 bulldozers for the project, worth about \$40 million. Other Japanese companies have supplied transport vehicles, electric locomotives, a crusher station, coal-washing equipment, and a coal terminal. The latter went into operation in 1978.<sup>28</sup> (Since U.S. firms are able to produce larger capacity trucks, draglines, and excavators than are available elsewhere, some American equipment has also been used here.<sup>29</sup>) Japanese firms expect to have expanded opportunities for sales as the project continues.

Even if produced on schedule, Yakutian coal is unlikely to provide a major portion of Japan's future coal imports. If Japan's imports reach the projected 100 million tons by 1985, 4 million to 6.5 million tons per year of South Yakutian coal would make up less than 1 percent of 1985 total Japanese primary energy supplies. In 1979, Japan imported about 2.0 million tons of Soviet coal (about 50 percent below the level contracted), all of it from the Kuznetsk basin. Even combined with this, Yakutian coal will still represent well under 10 percent of Japan's total imports of coal in 1990—a much lower percentage than supplies from the United States, Canada, or Australia (see table 83).

Yakutian coal development has progressed more rapidly than the tripartite gas effort, but deliveries from this area are not scheduled to start before 1983 and even then may not proceed before the latter part of the decade. Nevertheless, the Yakutian project is one of the centerpieces of joint Japanese-Soviet energy development. At the end of 1980, after holding up new loans for Siberian development in the wake of the invasion of Afghanistan, the Japanese Government approved a loan of \$42.3 million for this project.<sup>30</sup> This, as much as anything, demonstrates its importance to Japan.

<sup>26</sup> Nihon Keizai *Shimbun*, Dec. 25, 1980.

<sup>27</sup> "Information in English on South Yakutian coal reserves is scanty. The Central Intelligence Agency (CIA) expects that the Neryungri mine, which will supply Japan, will produce 13 million tons of coal after 1985. CIA, *U.S.S.R. Coal Industry Problems and Prospects*, Pill 80-10154, March 1980, p. 15.

<sup>28</sup> Mathieson, op. cit., pp. 76-78; *Soviet Geography*, February 1979, pp. 125-126.

<sup>29</sup> *Ibid.*, p. 77.

<sup>30</sup> *Asian Wall Street Journal*, Dec. 29, 1980.

## SAKHALIN OFFSHORE OIL AND GAS

Sakhalin Island is located between Japan and the continental Soviet Union (see fig. 28), about 50 miles from the northernmost Japanese island of Hokkaido; at points on its northwest coast, the island is even closer to the continental Soviet Union. Japan's participation in Sakhalin onshore oil development began before World War II, when the southern half of the island was Japanese territory. Offshore development dates from the 1960's, when Japanese oil refiners, as well as Gulf Oil Corp. (which had been supplying independent Japanese firms with oil from other regions) became interested in the project. Inspections began at the site in the early 1970's.

As noted above, Japanese participation here is organized through the consortium SODECO. SODECO is comprised of 18 corporate shareholders, the largest of which is a public corporation—the Japan National Oil Corp. (JNOC). JNOC holds more than 40 percent of the equity, as well as stock in a number of other shareholding firms. Japanese oil and trading companies also have shares in the project, and Gulf Oil holds about 5.7 percent of the total equity.<sup>31</sup>

In 1975, SODECO and the Soviet Union signed a basic agreement. The contract provided some \$100 million to \$150 million in Japanese credits, to be used for exploration equipment, including excavators, drilling rigs, drill casing, and computers. In return, for 10 years Japan is to receive 50 percent of any crude oil or gas produced offshore at a discounted price.<sup>32</sup>

The Soviet Union is the project operator. Day-to-day operation is supervised by a secretariat which has offices on Sakhalin Island. Onsite work teams are composed of technicians from a variety of different companies and nationalities. On the Japanese

side, technical experts from the various participating companies are periodically "detailed" to the project, allowing the consortium to draw on a wide range of skills. Working in teams with Western technicians, Soviets gain "hands on" experience in operating the equipment.

The U.S.S.R. is contributing money as well as labor to the project. Soviet expenses have run about \$100 million, paid in rubles to cover the costs of labor and construction for the 1980-82 exploration period. To date, SODECO and other Japanese sources such as the Ex-Im Bank have probably provided as much as \$170 million.

Western technology has played an important role at Sakhalin. In 1976, SODECO leased a French geophysical vessel and computer equipment, and a variety of Japanese-manufactured rigs have been used. The semisubmersible White Dragon II, built by Mitsui, as well as the Okha jack-up rig, built by the same firm to a design patented by Armco, have been used for offshore test drilling. In July, 1979, the marine department of C. Itoh trading company sold a Mitsui-Livingston Class I I I jack-up rig for use at Sakhalin. This rig was especially designed for very cold conditions.<sup>33</sup>

One of the project's most important technological requirements will be for ice-penetrating rigs. Because of the thickness of ice around Sakhalin, Western technology developed for the Alaskan slope cannot be used without modification. In instances where specialized equipment is needed, American companies will probably be given market opportunities. However, the general pattern to date has been for Japanese firms to do the basic hull construction, finally assembling the rigs with equipment from a variety of companies.

The last phase of test drilling has now begun, with exploration concentrated in two fields, where 13 test wells have been drilled, seven of which have proved promising. Three more test wells will be sunk in 1982 to

<sup>31</sup> *Japan Petroleum and Energy Handbook* (Tokyo: Japan Petroleum Consultants, 1975), pp. 118-19.

<sup>32</sup> *Sor(-n '00) Boekikai, II(?) dbook (JP the U ' S S. R)* (Tokyo: Soren Too Boekikai, 1978), p. 446.

<sup>33</sup> *C. Itoh News*, No. 48, September-October 1979, pp. 5-6

complete the exploration phase. If all goes well thereafter, plant construction and the installation of equipment will begin. This is scheduled to be completed by 1986, when a third stage will feature production and shipment of LNG.<sup>34</sup> The final stages of the project will involve the *most* costly outlays. Costs of building an LNG plant, extending the pipeline system on the island, tankers, and receiving facilities could add \$5 billion to investment requirements.

An oil discovery has already been made in the Sea of Okhotsk, northeast of Sakhalin,<sup>35</sup> and as exploration has progressed, prospects for gas production have appeared more and more promising. Test wells sunk in the same area have confirmed gas reserves adequate to produce 5 bcm annually and oil deposits producing 6,600 bcm (0.328 mtoe/yr).<sup>36</sup>

In recent months, the major point of discussion among project participants has been how offshore gas will be transported to Japan. The initial Soviet proposal was to build a north-south pipeline on Sakhalin, with an underwater connecting link to Hokkaido. The U.S.S.R. favored the pipeline because it would be cheap and technically feasible to build, given the shallow waters. The Japanese have opposed this plan for security reasons, i.e., the pipeline might tie the northern part of Japan too strongly to one Soviet source of energy, and because it entails piping gas to the rural island of Hokkaido, where demand is low and where domestic coal production is significant.

At the beginning of 1981, agreement was reached on a different option—construction of LNG facilities on Sakhalin.<sup>37</sup> Japanese LNG tankers will transport the LNG directly to areas on the island of Honshu where demand is strong. As mentioned above, this plan will involve huge capital outlays for

<sup>34</sup> Information on Sakhalin project stages from SODECO officials in Tokyo, Japan, March, 1981, and from *Nihon Keizai Shimbun*, June 9, 1981.

<sup>35</sup> Mathi[-s]n, op.cit., p. 99.

<sup>36</sup> *Industry News*, Dec. 8, 1980; *Nihon Keizai Shimbun*, Nov. 11, 1980 (Converted at 1 kiloliter = 6,2898 barrels); and June 9, 1981, for information on test wells.

<sup>37</sup> "Nisso A Gkade Goi" (Japan and U.S.S.R. Agree on LNG Facility 111+1, *Nihon Keizai Shimbun*, Feb. 2, 1981,

building an extended pipeline to the LNG facilities, the construction of the liquefaction plants, and the related harbor and loading facilities. While many details must still be worked out and the financing arranged, the agreement in principle indicates serious commitment by both sides to the continuance and development of the project.

Problems in U.S. participation have also delayed Sakhalin development. The export license for drilling equipment to be supplied by an American division of Armco was temporarily held up by the U.S. Department of Commerce.<sup>38</sup> This led to concern that American equipment could not arrive in time for the very short Sakhalin drilling season. After clarifications were sought by both the Japanese firm assembling the rig for SODECO and the U.S. firm, the export license was reinstated. The decision was taken quickly enough so that drilling proceeded on schedule.

Other problems have been largely technical, and generally related to the cold climate and difficult terrain. The ice around Sakhalin is so thick that drilling can only be carried out during a few months of the year, and special equipment is needed. Test rigs have been hauled out and then transported back to Japan when the drilling season ends. Storms and difficult weather conditions have periodically damaged equipment. This does have one bright side. Experience with drilling offshore Sakhalin will be invaluable to the U.S.S.R. as it exploits its potential for offshore exploration in other very cold regions.

The Japanese do not expect Sakhalin to ever provide them with large quantities of oil. But the hoped-for 3 million to 3.5 million tons of LNG per year would be a significant contribution to Japan's LNG imports which are expected to reach 29 million tons by 1985, and 45 million tons by 1990. Sakhalin gas alone could represent more than 10 percent of Japanese LNG imports in 1985, but it is far from certain that deliveries will begin

<sup>38</sup> Based on interview with officials from National Supply, a division of Armco in March 1981.

so soon. If LNG makes up the expected 7.2 percent of Japan's total primary energy supply in 1985, the contribution of Sakhalin gas to Japan's overall energy supply will be minimal—less than 1 percent of total primary energy in 1990 (see table 83). If Sakhalin gas came onstream at 3.5 million tons per year, and if Yakutian natural gas were available at the projected 7 million tons per year, Japan could receive almost 24 percent of its LNG imports from the Soviet Union in 1990. This is optimistic, however, considering the delays that have developed at Yakutia and the fact that the decision was only recently made to set up an LNG facility on Sakhalin, the financing for which must still be worked out. It seems more probable that Sakhalin development will progress more quickly than Yakutian. Prospects for Soviet natural gas are fairly certain. Therefore, a respectable contribution to Japan's energy needs may be anticipated.

In the final analysis, the real significance of the Sakhalin project is as a test case for joint Japanese-Soviet development. With the Yakutian gas project stalled, and Siberian coal development proceeding slowly, Sakhalin remains the brightest spot in Soviet-Japanese energy cooperation for the next decade. For the Japanese, it offers a potential for diversification of energy supplies as well as a market for equipment and technology. For the Soviets, it offers a chance to develop exploration expertise and perhaps production capability in offshore oil and gas. Should Sakhalin become a significant source of energy to Japan, the proximity of the island to Japanese territory would certainly heighten chances for interchange between Soviet and Japanese industrial and technical personnel.

### **OTHER PROSPECTS FOR JAPANESE PARTICIPATION IN SOVIET ENERGY DEVELOPMENT**

A few other areas of Japanese energy technology assistance to the U.S.S.R. are also worth mentioning. The Japanese

Science and Technology Agency has signed an agreement with the U.S.S.R. State Committee on Science and Technology to promote scientific and technical exchanges between the two nations. These exchanges do not appear so far to have directly aided energy development. Between 1968 and 1978, the U.S.S.R. sent more than 100 missions to Japan under the auspices of the agreement, but only about 12 percent of these were even peripherally related to energy.<sup>39</sup> During the 1970's these energy-related missions visited power plants, and factories producing generators and steel pipe. One recent Soviet delegation has studied high-voltage transmission technology, necessary to bring power generated in Siberia to the European U.S.S.R. Missions from East European nations have focused primarily on the study of Japanese energy conservation techniques.

Another potential area for energy technology transfer between Japan and the U.S.S.R. is in nuclear power. The Soviet Union has approached Japan several times with requests for cooperation in this area, but although Japan and the Soviet Union signed a Cooperative Agreement on the Peaceful Use of Nuclear Energy in 1978, there have been few results. Initially the Soviets hoped to obtain a pressurized water reactor which Mitsubishi manufactures under license from Westinghouse, but these negotiations never proceeded far. Exports of nuclear reactors are controlled by CoCom, and Japan announced in 1978 that it was in principle willing to fabricate a nuclear reactor for the U. S. S. R., but only if construction was to Soviet design.

Japan has a large, well-integrated and technologically sophisticated nuclear industry. There is natural interest in exporting its equipment and technology for peaceful purposes. However, exports to other Asian neighbors are more likely than to the Soviet Union. As of 1981, the only Japanese sale to the U.S.S.R. in the area of nuclear power pro-

<sup>39</sup>Soren Too Boekikai, *Soren keizai to taigi kagaku gijutsu kyoryoku* (Tokyo: Soren Too Boekiaki, 1978), pp. 94-97.

duction has been a 15,000-ton press for manufacturing heads for atomic vessels. This utilized a type of manufacturing process already well-established in the U.S.S.R.

The U.S.S.R. has offered to provide uranium enrichment services for Japan: Difficulties with the U.S. over consignment commitments led in 1976 to the Chairman of Keidanren's energy policy committee broaching the possibility of using either French or Soviet enrichment services.<sup>40</sup> The U.S.S.R. offered in 1977 to enrich and return Japanese-supplied uranium. Japan, with long-term enrichment contracts with the United States and France, would consider purchasing enriched uranium from the U.S.S.R. on a commercial basis, but was not interested in providing the feedstock. Nothing more came of this deal.

In a few instances, Japan has actually imported energy technology from the Soviet Union. Japanese steel companies have purchased Soviet technology for the treatment of coking coal and for top furnace gas turbines, which have reportedly resulted in significant energy conservation. Most of these transactions, however, occurred in the

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<sup>40</sup>“SEJic>hi Mat sune,” Genshiryokuhatsudenniokerukaku-nenryo • a ikoru no kakuritsuni t • u it e, *Keidanren Geppo*, August 1976, pp. 516-19.

late 1960's and early 1970's. Today perhaps the only area in which Japanese energy experts are studying Soviet techniques is in high voltage electricity transmission.

This overview of Japanese participation in Soviet energy development reveals cautious participation on the part of Japanese firms. Joint Japanese-Soviet energy projects have evolved slowly and unevenly. Japanese firms, like their counterparts in the United States and Western Europe, produce equipment and possess technology which can assist Soviet energy development. As Japanese firms develop their technological expertise in electronics and other areas, there may be even greater demand for their products in the U.S.S.R. In militarily sensitive areas like nuclear power, however, the Japanese have been reluctant to deal with the Soviet Union. Security issues aside, Japanese businessmen have been inclined to participate in technology trade, both because of the prospect of expanded worldwide energy supplies and because of the potential market for Japanese exports, although this predisposition has been tempered to some extent by the changing shape of international politics following the Soviet invasion of Afghanistan. The final section of this chapter briefly reviews these recent developments in Japan's trade and energy relations with the Soviet Union.

## RECENT DEVELOPMENTS IN JAPANESE-SOVIET RELATIONS: PROSPECTS FOR THE FUTURE

The worsening of U.S.-Soviet relations following the invasion of Afghanistan, and the second oil crisis triggered by the suspension of oil production in Iran, have provided a new context for Japan's interactions with the U.S.S.R. Beginning in early January, 1980, when President Carter ordered sanctions, Japan's policy toward the U.S.S.R. has been under review and reconsideration. American policy, as it gradually evolved, included expanded restrictions on the export of products (such as grain and phosphoric acid used in the manufacture of fertilizer)

and of high technology, particularly computers. The U.S. Department of Commerce was to act on all applications to export industrial technology for manufacturing oil and gas production and exploration equipment with a presumption of denial,<sup>41</sup>

Japan, like the West European nations, actually increased its exports to the U.S.S.R. during the period of the sanctions, although

<sup>41</sup>“U.S.-U.S.S.R. Trade After Afghanistan,” *Business America* (Washington, D.C.: U.S. Department of Commerce Publication, Apr. 7, 1980), p. 12.

probably not as much as would otherwise have been the case. During 1980, Japanese exports to the U.S.S.R. rose almost 25 percent over the 1979 levels. The Japanese response to the U.S.-initiated sanctions was thus similar to that of Western Europe—lukewarm (see ch. 12). Officially, Japanese policy prohibited the extension of new government credits for the U. S. S. R., and suspended high-level diplomatic exchanges. This effectively froze all financing through the Japanese Ex-Im Bank. At the private level, however, trade continued unabated.

During most of 1980, those joint energy projects already underway were continued, with no new official funding. Japan's official policy thus amounted to a kind of holding pattern—maintaining prior commitments, but studiously avoiding their extension or the initiation of any new ones. This policy was pursued despite the fact that the Soviet Union both warned Japan about possible Soviet retaliation if it participated in such sanctions,<sup>42</sup> and invited it to join in the pipeline project designed to carry Soviet gas from West Siberia to Western Europe.<sup>43</sup>

By the end of 1980, Japanese businessmen were publicly criticizing the sanctions, arguing that government policy disadvantaged Japanese firms vis-a-vis their competitors in Western Europe but had no real effect on Soviet foreign policy." Industrial leaders in Japan claimed that the sanctions accounted for the loss of 14 plant export contracts worth some \$4 billion to \$5 billion. They pointed to examples of trade lost to other Western nations which failed to participate in the sanctions. For example, the planned export of an electrical steel sheet plant by the U.S. firm Armco International and Nippon Steel Corp. fell through after more than 3 years of preliminary negotiations. The contract was awarded to the French firm

Creusôt Loire.<sup>45</sup> In other cases vacillations in U.S. policy—e.g., denying license applications for Sakhalin drilling equipment and then reinstating them,<sup>46</sup> as well as the decision to grant export licenses to the American firm Caterpillar for pipelaying equipment (an item which Japanese firms were also interested in selling to the Soviet Union) were carefully noted in the Japanese press.

By the end of 1980, there were indications that the Japanese government was ready to relax the measures it had imposed. It made a significant step in approving new loans, which were reported to carry a 7.25-percent interest rate repayable over a 5-year period, through its Ex-Im Bank for the continuation and expansion of two Siberian development projects. The loans included \$42.3 million for coal development in South Yakutia, and \$96.3 million for a Siberian forest resource development project. In return, the Soviet Union committed itself to increased exports of coking coal to Japan.<sup>47</sup>

In April 1981, the Japanese Government resumed official trade talks with the Soviet Union. These had been suspended, although the previous bilateral trade agreement had expired. Under the new trade accord, which runs until 1985, Japan will import about 90 Soviet commodities including coal and oil; in return the U.S.S.R. will import items in 70 different categories from Japan. Another signal of a thaw in the trade freeze was the announcement in late January 1981, that agreement had been reached over the construction of the Sakhalin LNG facility.<sup>48</sup> Finally, additional new loans of \$949 million for two Siberian development projects were approved in June 1981, evidence of the loosening of sanctions following the U.S. decision to end the grain embargo. The bulk of this money is for forestry, with about \$40 million earmarked for coal development.<sup>49</sup> The loans will allow the U.S.S.R. to purchase

<sup>42</sup> *Asian Wall Street Weekly*, May 12, 1980.

<sup>43</sup> "Soren Daikei Shakkano Yosei" (U.S.S.R. Asks for Large-Scale Loans), *Yomiuri Shimbun*, Sept. 9, 1980.

<sup>44</sup> *Asian Wall Street Journal*, Nov. 10, 1980; "Japan Fears Sanctions Breakdown," *Washington Post*, Sept. 23, 1980.

<sup>45</sup> See *Japan Economic Journal*, Sept. 2, 1980, p. 1.

<sup>46</sup> *Soviet Business and Trade*, May 21, 1980.

<sup>47</sup> *Asian Wall Street Journal*, Dec. 29, 1980.

<sup>48</sup> "Nisso, LNGka de Goi" (Japan and the Soviet Union Agree on I. N(1), *Nihon Keizai*, Jan. 28, 1981.

<sup>49</sup> *New York Times*, June 11, 1981.



equipment and services from Japanese firms.

The U.S.S.R. has also sought Japanese participation in the West Siberian gas pipeline project. At present, there are no firm indications of the role Japan might play, but the Soviet Union has been calling for Japanese financing amounting to as much as \$3 billion. Japan would not receive gas, but its prospects for sales of large diameter pipe and other related commodities and equipment are good. The Soviet Union has apparently approached two Japanese firms—Hitachi and Marubeni—about the possibility of buying at least 10 gas boosters, each worth more than \$1 million, and Nippon Electric Co. was reported to be considering bidding on contracts for the central pipeline control system.<sup>50</sup> The Japanese firm Komatsu is negotiating for a sale of pipeline laying equipment worth \$1.5 million to the U.S.S.R.<sup>51</sup> In late May 1981, press reports indicated that Japan's four largest steel firms had reached agreement with the Soviet Union to supply 750,000 metric tons of large diameter pipe over the next year. It was further reported that the Japanese Ex-Im Bank would extend \$500 million in credit for the sale. Evidently the pipe is to be supplied on a regular commercial basis, without any clear specification that it will be used for the West Siberian project.

All of these developments reflect significant controversy within Japan over the economic sanctions, and a general reconsideration of policies toward the Soviet

Union during the last year and a half. Throughout most of that period official Japanese foreign policy statements showed a chill in relations with the Soviet Union. The 1980 Foreign Ministry Blue Book, for example, stressed the need for close alliance with the free world in a period of growing international tensions.<sup>52</sup> Additionally, February 7 was designated as "Northern Islands Day,"<sup>53</sup> While there were apparently a variety of domestic political reasons for the decision to institute the new commemorative day, the choice, as well as the rising salience of defense issues, reflected growing concern with East-West tension,

By mid-1981, however, signs were that Japanese leaders were moving back to their cautious but positive approach to energy and trade with the Soviet Union. Soon after his appointment, Foreign Minister Sonoda announced plans to "review" policies toward the Soviet Union with an eye toward renewing Japan's "omnidirectional diplomacy."<sup>54</sup> The events of the 18 months following the Soviet invasion of Afghanistan illustrate the fact that international political tensions can act as an effective brake on Japan-Soviet energy and trade relations. Even in the presence of such conditions, however, Japanese leaders tend to favor continuing cooperative energy development. For Japan Government and business leaders, questions of trade with and technology transfer to the Soviet Union are just as much energy and economic as they are political issues.

<sup>50</sup> "Russia Said to Offer One Billion Dollar Contract to Japanese Firms," *Asian Wall Street Journal*, Apr. 27, 1981. "Niden, Taiso Shodan Kaiso" (NEC Begins Talks With the Soviet Union), *Nihon Keizai*, Feb. 4, 1981.

<sup>51</sup> *NY Times*, May 20, 1981. There were \$152 million in credits reportedly extended by the Japanese Government to cover Soviet purchases of pipelayers and bulldozers from Komatsu Co. for a pipeline from Urengoy, south of Yamburg in West Siberia. See *New York Times*, Aug. 20, 1981.

"Statements by Cabinet Secretary Miyazawa, 'Caution Necessary About the Soviet Union,'" *Yomiuri Shimbun*, Sept. 12, 1980.

<sup>52</sup> "Hoppo Ryodo Yoron Moriage" (Whipping Up Public Opinion About the Northern Islands), *Nihon Keizai Shim bun* (Jan. 6, 1981); "Kono Koe Todoke Hoppo Ryodo" (Northern Islands Campaign), *Nihon Keizai Shim bun*, Jan. 23, 1981.

<sup>53</sup> "Taiso Seizai Rosen o Shussen" (Toward a Revision of Sanctions on Trade With the Soviet Union), *Nihon Keizai Shim bun*, May 21, 1981, p. 2.

## SUMMARY AND CONCLUSIONS

This overview of past patterns of interaction between Japan and the Soviet Union, as well as recent developments during the period of economic sanctions following the invasion of Afghanistan, leads to the conclusion that Japan will probably continue to pursue a positive approach to energy relations with the Soviet Union. Available data indicate that it is unlikely that Japan will **become very dependent on the Soviet Union for energy in the next decade—even if all the projects currently underway come to fruition.** Table 83 shows projections for Japanese imports of Soviet energy as a percentage of the nation's total energy imports, and total primary energy supply. If Japan imports 6.5 million tons of coal from South Yakutia, and if other Soviet fuels such as gas from Sakhalin are available as planned, the Soviet Union will still supply only about 3 percent of Japan's total energy imports, and about 2.2 percent of the nation's total primary energy. The only sector in which Soviet energy would be of more than marginal significance is gas, where it could account for nearly one-quarter of Japanese imports by 1990. Even this, however, is a relatively small portion of total Japanese energy requirements. Thus, in contrast to some West European countries, Japan does not risk any significant degree of "energy dependence" on the U.S.S.R.

While it is unlikely that Japan will become very dependent on Soviet energy in the years ahead, it is certain that Japan will remain a very important supplier of energy-related equipment to the Soviet Union. Japan's unique geographical proximity to the East Siberian energy development projects ensures a continuing Japanese role in Siberian energy development. Over the last 5 years,

Japan has ranked first among all Western nations as an exporter of such equipment to the U.S.S.R. A few industrial sectors play a dominant role in this trade—and Japanese business leaders from those sectors have traditionally taken the lead in trade negotiations with the U.S.S.R. In the last analysis, Japan may be much more important as a supplier of energy-related equipment to the Soviet Union than the U.S.S.R. is to the continued dynamism of Japanese trade worldwide. Japan's energy-related exports to the U.S.S.R. make up only a tiny portion of total Japanese exports to all nations worldwide, but Japan is the largest supplier in dollar value of energy equipment to the U.S.S.R. Any policies aimed at affecting the volume or nature of Western energy-related exports to the U.S.S.R. must necessarily take into consideration the role of Japan.

When the variety of economic, energy, and political factors influencing Japanese-Soviet energy relations are weighed, the result is a general Japanese orientation that favors expanded energy and trade interaction. The potential gains—in increased exports, diversified energy supplies, and political signals to Moscow that Japan is committed to peaceful coexistence in Asia—appear normally to outweigh the persisting political disputes and the technical and financial constraints on joint energy development efforts with the Soviet Union. Only under extraordinary circumstances would Japanese leaders support proposals for a policy of embargo or leverage against the U.S.S.R. From the Japanese perspective, the benefits of expanded but limited energy and trade relations with the Soviet Union clearly counterbalance the potential risks.