



**The Korean Peninsula  
Energy Development Organization**

**Mission Statement**

The Mission of KEDO is to:

- Contribute to the strengthening of the international non-proliferation regime while improving the prospects for lasting peace and stability on the Korean Peninsula and beyond;
- Advance the implementation of the Agreed Framework between the United States and the Democratic People's Republic of Korea (DPRK), under which the DPRK agreed to freeze and ultimately dismantle its existing nuclear program, by 1) financing and constructing in the DPRK two proliferation-resistant light-water reactors of the Korean Standard Nuclear Power Plant model and 2) providing the DPRK with an alternative source of energy for heating and electricity production until the first of those reactors is completed;
- Conduct its work in a manner that meets or exceeds international standards of nuclear and conventional safety, environmental protection, and ethical business practices; and,
- Serve as an example of how a cooperative and targeted international diplomatic effort can lead to the resolution of regional security or political crises, and provide a work environment where a multinational staff, with varied cultural, social, and professional backgrounds, can work harmoniously to accomplish organizational, professional, and personal goals.

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I am pleased to submit to the Executive Board and to members of the Korean Peninsula Energy Development Organization (KEDO) the Annual Report called for under Article XII of the Agreement on the Establishment of the Korean Peninsula Energy Development Organization. The Report covers the activities of KEDO from August 1, 2001, through December 31, 2001, and contains KEDO's Audited Financial Statements for calendar year 2001. KEDO's activities during the period January 1, 2001, through July 31, 2001, were covered in KEDO's 2000/2001 Annual Report. Beginning with 2002, KEDO's Annual Report will cover both its activities and its financial statements on a calendar year basis.

The second half of 2001 was an eventful one for KEDO, both at our headquarters in New York City and at the construction site in the Democratic People's Republic of Korea (DPRK). On September 11, 2001, KEDO, its staff, and the rest of the world watched in horror as terrorists attacked the United States. The New York City metro area and its businesses were particularly hard hit by the attacks. Although KEDO's headquarters is a safe distance from the World Trade Center site, our work was impacted by the aftereffects of this horrible event. Because of concerns related to travel, we scaled back our General Conference to a small briefing for members of KEDO and rescheduled some meetings with the DPRK. Additionally, KEDO, together with its staff, made donations to several organizations providing relief services. As a multi-national organization and a member of the New York City community, we felt compelled to do our part in helping those organizations and individuals less fortunate than we.

Despite the uncertain political environment of the second half of 2001, KEDO was able to celebrate the achievement of several Light-Water Reactor (LWR) project milestones. On August 31, 2001, site preparation work was completed and on September 1, 2001, KEDO received the Construction Permit from the DPRK nuclear regulatory authority, enabling excavation to begin at the site for the power block's foundation. In early September, personnel from KEDO, its contractors, and the DPRK participated in a ceremony at the site to commemorate initiation of excavation. Participants also included workers at the construction site, who number over 1,100. Over the coming year, we can look forward to significant physical changes at the construction site, as we begin to construct the main LWR plant buildings. Through December 31, KEDO expended over \$745 million in loans from the Export-Import Bank of Korea and Japan Bank for International Cooperation in support of project implementation.

KEDO was also able to maintain a rigorous schedule of meetings with the DPRK during this five-month period, including my first trip to Pyongyang as Executive Director. During my meetings to discuss implementation of the LWR and heavy fuel oil (HFO) projects, we were able to conclude and sign the Quality Assurance and Warranties Protocol, which will enable the DPRK to participate in certain quality assurance activities. Other substantive meetings were held in this time period to discuss safety, technical, and policy-related issues. KEDO's interactions with DPRK officials not only remain imperative

to the success of our projects, we believe that such dialogue also serves as a crucial confidence-building measure on the Korean Peninsula.

Regarding the HFO project, as of December 31, 2001, KEDO had nearly completed its 2001 HFO Year (October 22, 2000 to October 21, 2001) shipments and continued to monitor the consumption of KEDO-supplied HFO at eight thermal power plants in the DPRK.

As we move forward to meet the many challenges facing the organization, we continue to look to our members, contributors, and other governments for support. In this regard, in December 2001 the European Atomic Energy Community (EU) extended its membership in KEDO for another five years and increased its annual financial contribution. Considering the important role KEDO has played and will continue to play in supporting peace and stability on the Korean Peninsula, we believe that the results of such support are well worth the investment.

This Annual Report and Audited Financial Statements provide a means to account for our activities to our member and contributing countries. I hope that this report will enhance your understanding of the current state of affairs at KEDO, and that we can rely on your continued cooperation and support for the coming years. ■

Charles Kartman  
Executive Director  
New York, December 31, 2001



The Governments of Japan, the Republic of Korea (ROK), and the United States signed the Agreement on the Establishment of the Korean Peninsula Energy Development Organization (the Agreement) on March 9, 1995, with the objective of resolving the North Korean nuclear issue, as referred to in the Agreed Framework Between the United States of America and the Democratic People's Republic of Korea (the Agreed Framework), signed in Geneva on October 21, 1994. In September 1997, the European Atomic Energy Community became a member of KEDO and joined Japan, the ROK, and the United States on KEDO's Executive Board. Other members of the Organization are the Governments of Argentina, Australia, Canada, Chile, the Czech Republic, Indonesia, New Zealand, Poland, and Uzbekistan.

As stipulated in the Agreement, the purposes of the Organization are to:

1. Provide for the financing and supply of a light-water reactor (LWR) project in the DPRK consisting of two reactors of the Korean Standard Nuclear Plant model with a capacity of approximately 1,000 megawatts each;
2. Provide for the supply of interim energy alternatives in lieu of the energy from the DPRK's graphite-moderated reactors pending construction of the first LWR unit; and,
3. Provide for the implementation of any other measures deemed necessary to accomplish the foregoing or otherwise to carry out the objective of the Agreed Framework.

The Organization will fulfill these purposes with a view toward ensuring the full implementation by the DPRK of its undertakings as described in the Agreed Framework.

### Structure and Staff of the Organization

The KEDO staff currently consists of forty-eight professional and support personnel. In accordance with the Agreement, nationals of the original members and other Executive Board members are fairly represented among the professional staff with due regard to the importance of securing the highest standards of integrity, efficiency, and technical competence.

Mr. Charles Kartman, former U.S. representative to KEDO's Executive Board, has served as Executive Director since his appointment by the Executive Board on May 1, 2001. Mr. Kyu-Hyung Cho and Mr. Akira Nakajima have served as Deputy Executive Directors since their appointments on July 31, 2000, and January 14, 2001, respectively.

Seven divisions operate under the direction of the Directors: Financing and Heavy Fuel Oil, General Affairs, Legal Affairs, Nuclear Safety and Quality Assurance, Policy and DPRK Affairs, Project Operations, and Public and External Promotion and Support.

The Financing and Heavy Fuel Oil Division is responsible for arranging for the financing of the LWR project, providing for the supply of heavy fuel oil (HFO), and for ensuring the timely delivery of HFO to the DPRK. The General Affairs Division provides overall administrative support for the Organization,

handles non-LWR contracts, and budgetary matters. The Legal Affairs Division provides advice on issues of public and private international and domestic law and directs the work of outside counsel. The Nuclear Safety and Quality Assurance Division oversees all nuclear safety and quality assurance matters related to the LWR project. The Policy and DPRK Affairs Division is responsible for coordination of protocol negotiations and other contacts with the DPRK. The Project Operations Division manages the design and construction of the LWR plants, while the Public and External Promotion and Support Division is responsible for outreach efforts to build understanding of and support for the LWR and HFO projects, including relations with the media. The U.S. architecture/engineering firm, Duke Engineering and Services, whose work is directed by the Project Operations Division, continued in its role as Technical Support Consultant, assisting KEDO in implementation of the LWR project.

### KEDO Office in Kumho

KEDO maintains eight staff from its Executive Board members at the LWR project site in Kumho, DPRK. The KEDO Office at Kumho (KOK) oversees day-to-day operations at the site and maintains contact with DPRK authorities to help ensure the smooth and expeditious implementation of the LWR project. The staff's responsibilities include ensuring the safety and security of all KEDO persons at the site, exercising all consular protection functions on behalf of all KEDO persons in the DPRK, and coordinating all contracts between KEDO's contractors and subcontractors and the DPRK company responsible for the provision of DPRK workers, goods, facilities, and other services.

### Life in Kumho

Living conditions at the site continue to improve as more modern amenities and facilities are completed to support workers at the site. A 2,108 square-meter hospital with twelve beds is nearing completion as are new facilities for religious worship. Travel to the site from South Korea has been made easier with the introduction of a new, larger and more powerful cargo-passenger boat, which operates, weather permitting, once a week. Although subject to weather-related delays, the trip by sea from Sokcho, ROK, to the nearby port of Yanghwa can now be made in approximately three hours. ■



An active schedule of meetings and negotiations with the DPRK was followed during the second half of 2001 to meet increased demands associated with issuance of the Construction Permit and the start of power block excavation. Most importantly, resolution of a number of issues at the August High Level Experts Meeting in Majon, DPRK, paved the way for the DPRK nuclear regulatory authority's issuance of the Construction Permit in early September. As reported elsewhere, extensive technical questions raised by the regulator had been addressed at various expert-level meetings, while strictly observing relevant export control laws, in the months preceding issuance of the Construction Permit. Timely resolution of these issues enabled KEDO to begin excavation work at the site, a major milestone in the LWR project.

At the High Level Experts Meeting beginning in late October in Hyangsan, KEDO and the DPRK reached an understanding to open direct air routes between the Kumho site and the ROK. The need for such air routes was anticipated in the Supply Agreement to provide increased travel options during the winter months, when severe weather conditions often prevent travel by sea, and faster and safer means for emergency medical evacuations. KEDO and the DPRK agreed to convene an experts meeting in early 2002 to discuss details for the opening of those direct air routes.

Other transportation issues also figured highly in the work of the high-level experts. In October the DPRK agreed to allow the number of passengers on the cargo-passenger boat, which runs between Sokcho in the ROK and Yanghwa in the DPRK, to increase from 100 to 150. This increase was consistent with the requirements at this stage of the project for moving workers to and from the site in the most efficient and cost effective manner possible. Further increases will be required as activity on the project, and the number of workers at the site, increases in the months and years ahead.

Both the August and October High Level Experts Meetings addressed issues related to the implementation of the KEDO-organized training program for the DPRK personnel responsible for the future operation and maintenance of the LWR plants. In this connection, KEDO facilitated a one-week observation tour in November of nuclear facilities in Spain and Sweden for senior DPRK management officials to familiarize them with advanced nuclear power plant systems and technology. In December, senior DPRK officials visited the LWR project reference plant and other nuclear facilities. These visits of senior DPRK officials were particularly noteworthy, as they were the first steps in KEDO's extensive training program that will take place both inside and outside the DPRK.

To strengthen further the DPRK's familiarity with the LWR project, senior DPRK officials were provided an opportunity to observe progress on the project firsthand during a comprehensive tour of the site and related facilities. KEDO plans to provide such opportunities on a regular basis as work on the project proceeds, both to ensure full understanding of LWR-related activities and to facilitate the cooperative efforts that are required for a project of this magnitude to proceed smoothly.

Intensive efforts, including two rounds of executive-level negotiations, continued in 2001 to finalize an agreement with the DPRK on contract terms for its workers at the site. The DPRK workers are needed by the prime contractor to meet critical labor needs during the construction process. In the absence of an agreed contract, in mid-April 2000 the DPRK withdrew about half of the 185 workers that were employed at the site, and the number of DPRK workers has remained just under 100 since that time. As an interim and short-term measure, the prime contractor now employs over 430 "substitute" workers from Uzbekistan to cover the shortage of DPRK workers. With a projected need for as many as 4,000 DPRK workers during peak construction periods, however, continued failure to finalize the contract terms will inevitably affect the construction schedule. KEDO negotiators have also stressed to the DPRK the importance of having a large group of trained and experienced workers from the DPRK to maintain the physical plant following completion of the project.

In October, after significant discussions among KEDO's Executive Board members and the LWR project's prime contractor and principal subcontractors, KEDO provided the DPRK with a draft Protocol Concerning Liability for Nuclear Damage. Negotiations on the protocol are scheduled to start in the near future.

During December 1-4, Executive Director Kartman made his first trip to Pyongyang where he discussed a range of issues with his counterparts within the government. During this trip Mr. Kartman signed the Quality Assurance and Warranties Protocol, laying the foundation for the participation of DPRK safety experts in the LWR project's quality assurance program. ■



From August 1, 2001, through December 31, 2001, KEDO continued work on the light-water reactor (LWR) project at the Kumho site under the Turnkey Contract (TKC) with the Korea Electric Power Corporation (KEPCO). Construction of the LWR plants entered an important new phase when in late August site grading was completed. This enabled excavation of the foundations for the main power plant buildings to begin in early September, following the issuance of the Construction Permit by the DPRK on September 1, 2001. A small ceremony to commemorate site excavation was held on September 14, 2001, with attendance by officials from KEDO, its contractors and subcontractors, and the DPRK. As of December 31, 2001, over 1,100 personnel were working at the Kumho site.

As a result of the withdrawal of roughly half of the DPRK workforce from the site in April 2000, KEPCO has maintained critical activities on the site construction schedule through the use of "substitute" labor. During this period, negotiations with the DPRK to increase its work force above approximately one hundred personnel have not been successful. In February 2001, KEDO approved the use of labor from Uzbekistan to bring the staffing levels closer to the construction plan's levels. In deployments that occurred in March, April, and September of 2001, a total of approximately 430 workers from Uzbekistan arrived at the site. Because the use of third country labor was not part of the original TKC, the housing and other support facilities at the site were insufficient to accommodate the additional workers. KEPCO has continued the construction of additional housing and ancillary facilities to support the use of Uzbek workers under a change order issued by KEDO in June 2001. As with the switchyard change mentioned below, the facilities change will be formally incorporated into the TKC by way of an amendment that must be approved by KEDO's Executive Board member countries. As of December 31, 2001, KEDO and KEPCO are negotiating an extension of the time period for use of third country workers.

A second change order to the TKC involves the power plant

switchyard. Following lengthy technical discussions, KEDO and the DPRK have agreed on a switchyard configuration that includes two 500 kilovolt (kV) transmission lines and two 220 kV transmission lines with a tie-transformer between the 500 kV and 220 kV systems. KEDO has agreed to leave space in the switchyard for one additional 500 kV transmission line and two additional 220 kV transmission lines to be added by the DPRK in the future.

**A**nother significant modification to the project involves the turbine generator (T/G). Given that the T/G supplier for the reference plant (the ROK's Ulchin 3 & 4) has declined to participate in the project, KEPCO has been proceeding with an alternate T/G supplier under an Autho-

*Right: Breakwater in background protects docking facility, which receives KEDO barges and cargo-passenger ships, and creates an inlet channel for sea water*



*Above: Power plant site excavation for Unit 1 (left) and Unit 2 (right)*



*Left: Excavation of channel for sea water used to cool the nuclear power plants*

rization to Proceed (ATP) from KEDO that became effective on February 1, 2001. This ATP authorized KEPCO to proceed with negotiations with Doosan and its subcontractor (Hitachi/Toshiba consortium) to begin preliminary work on the T/G and to prepare a fixed price proposal to supply the T/G. KEPCO provided its proposal for an amendment and fixed-price adjustment to the TKC in the fall of 2001, and initial negotiations have been concluded. The amendment to the TKC, as negotiated, was submitted to the Executive Board member countries for approval. KEPCO is continuing work on the T/G under Amendment 3 to the ATP, which extends through January 31, 2002. Material procurement is still not permitted under the terms of the ATP.

### Site Work Highlights

- Grading of the power plant site was completed on August 31, 2001, with 5.8 million cubic meters (m<sup>3</sup>) of rock and soil

removed. Power block excavation has begun, with 234,443 m<sup>3</sup> of rock and soil excavated to make way for Units 1 and 2.

- The new 2,180 m<sup>3</sup> (22,690 ft<sup>2</sup>) hospital, which will accommodate up to 12 patients, is 70% complete.
- Significant progress has been made on the ocean breakwaters that serve as the intake and discharge channels for the plant-cooling sea water and as the barge docking facility, where delivery of major components will take place. The dredging of the intake basin reached a point that allowed the first barge delivery to be made in late December even though in October a severe storm damaged both the intake and discharge breakwaters requiring repairs to be made.

**Work completed:** guardhouse and main gate, and manufacture of tetrapods for intake and discharge breakwater.

**Work continued:** training center for operation and maintenance personnel, simulator building, hospital, religious facilities (3), living quarters, permanent water supply distribution, site roads and sidewalks.

**Work started:** intake channel, third community center, sports facility, concrete batch plant, cement silo, worker training center, passenger terminal at port, restaurant and welfare center for third country workers.

### Offsite Highlights

**A**s progress continues in the construction of the LWR plants, KEDO and the DPRK are also making significant strides in implementing KEDO's training for DPRK operations and maintenance personnel. As part of KEDO's efforts to ensure that the DPRK is prepared to operate the plants, in December, nine DPRK senior managers participated in an observation tour of nuclear facilities in Sweden and Spain. This observation tour was followed by a two-week training program in the reference plant training facilities for nineteen senior managers from the DPRK. Work also continued in support of the training program, including material preparation and review of Stages 1 and 2 of the KEDO training plan, review of the draft Utility Training Plan in preparation for presenting it to the DPRK in the first quarter of 2002, and completion of the selection process procedure for choosing the first group of DPRK operations and maintenance trainees.

Design and analysis activities continued as well. The following technical documents were submitted by KEPCO and reviewed by KEDO:

- Preliminary Probabilistic Safety Assessment
- Turbine Building General Arrangement Drawings
- Environmental Parameters Report
- Design Base Drawings

Technical reviews were completed for nineteen procurement specifications and solicitations of interest in bidding to supply project materials and equipment were issued for fourteen procurement packages, including via KEDO's website. Company evaluations were completed for nineteen procurement packages, while sixty-two companies from KEDO's general member countries have been recommended over the last two years by KEDO for inclusion on KEPCO's bidder lists. KEPCO will be issuing invitations to tender to companies recommended by KEDO over the next several years.

**A**lthough procurement and manufacturing of T/G components is prohibited by the Authorization to Proceed, substantial progress has been made in manufacturing the Unit 1 Reactor Vessel (cladding, rough machining, joining upper and intermediate shells), Unit 2 Reactor Vessel (final machining of intermediate shell, upper shell, outlet and inlet nozzles), Unit 1 Steam Generators (welded tube sheet to lower shell), Unit 2 Steam Generators (final machining of lower shell), Unit 1 vessel internals, and reactor coolant pump casings.

In August KEDO hosted the first export control working group meeting between the EU, Japan, ROK, and U.S. to discuss further each country's export control requirements. Also during this reporting period, the DPRK provided the first three "end user" statements to a company exporting LWR plant components. Such statements are necessary for a company to export reactor components under the export control laws of its respective country.

## Nuclear Safety Activities

KEDO's nuclear safety responsibilities are guided by its Nuclear Safety Policy, which states that all LWR project activities shall be conducted in a manner that ensures nuclear safety is accorded the highest priority and will not be compromised for any reason. This policy is carried out through a unique system, the Nuclear Safety Confirmation System (NSCS), in place since February 1998 to confirm the safety and reliability of the reactors, while overseeing all nuclear safety aspects of the LWR project.

### Nuclear Safety Confirmation System

KEDO relies heavily on outside expertise to support its safety activities through the NSCS. The key contributors to the NSCS have been the Korea Institute of Nuclear Safety (KINS), the Nuclear Safety Advisory Group (NSAG), and the International Atomic Energy Agency (IAEA). In August the IAEA finalized its report on the Agency's expert mission, conducted June 18-29, to review the Preliminary Safety Analysis Report (PSAR) for KEDO's LWR project. KEDO is now in the process of addressing issues identified by the Agency, none of

which is expected to impact the project schedule. KEDO's nuclear safety activities were also focused on evaluating KINS's safety evaluation of the PSAR and Environmental Report (ER), which was finalized in August, and in developing action plans to address several outstanding issues identified by KINS and the IAEA.

**I**n September, NSAG concluded its review of the KINS and IAEA safety reviews as well as its analysis of the PSAR and related documents. In its report, the Group commended the work of both KINS and KEPCO saying it was of the highest quality. Based on its review, the Group presented KEDO with a set of recommendations it felt should be addressed during construction or prior to completion of the Final Safety Analysis Report. Similar to the IAEA and KINS reports, KEDO is developing an action plan to address those issues highlighted by NSAG.

### Cooperative Activities with the DPRK

KEDO has been meeting with the DPRK nuclear regulatory authority, the State Nuclear Safety Regulatory Commission (SNSRC), on a periodic basis since 1998 to discuss nuclear safety-related issues. In addition to discussing the safety review of the LWR plants and timely issuance of licenses, KEDO continued to discuss with the DPRK ways in which to support the strengthening of its regulatory infrastructure.

In support of the DPRK's review of the PSAR/ER, KEDO concluded its final question and answer session with the DPRK on these documents and held an explanatory meeting on KINS's safety review in August. Subsequently, on September 1st the SNSRC issued KEDO the Construction Permit for the LWR plants. In response to DPRK questions generated during these question and answer sessions, KEDO transmitted draft PSAR/ER amendments to the DPRK in preparation for the issuance of the formal PSAR/ER amendments in February 2002.

In December, KEDO and the DPRK held the 7th Nuclear Safety Experts Meeting in Pyongyang, DPRK. The most significant outcome of the meeting was agreement by the DPRK nuclear regulator to participate in KEDO-sponsored classroom and on-the-job training in the first half of 2002. In addition, KEDO continued to provide the SNSRC with technical documents for their review and use.

### Quality Assurance Program

KEDO also maintains responsibility for providing appropriate controls over and oversight of LWR project procurement and quality-affecting activities of KEPCO and its subcontractors and suppliers. In early November, KEDO's Quality Assurance (QA) Program concluded its second audit of KEPCO and its first audit of the Korea Power Engineering Company, Inc. No non-conformances were identified during the week-long review. Other KEDO quality assurance activities included indoctrination training, management assessments, internal quality audits, and maintenance of the KEDO QA Procedure Manual. ■



In accordance with the KEDO Agreement, one of the purposes of the Organization is to provide for the supply of interim energy alternatives to the DPRK in lieu of the energy foregone due to the freeze of the DPRK's graphite-moderated reactors, pending completion of the first light-water reactor unit. The Agreed Framework states that this alternative energy will be provided in the form of heavy fuel oil (HFO) for heating and electricity production and that the amount delivered will reach a rate of 500,000 metric tons (mts) annually, in accordance with an agreed schedule of deliveries. The U.S. and DPRK agreed separately that 150,000 mts would be provided in the year ending October 21, 1995 (one year after the date of the Agreed Framework and the date chosen to represent the end of the HFO Year) and that deliveries totaling 500,000 mts would be made for each 12-month period thereafter. KEDO's Executive Board establishes the schedule and amounts of the individual HFO deliveries made by KEDO based on the Executive Board's determination of KEDO's ability to pay for those deliveries out of received or promised contributions to KEDO's HFO Account, or, if necessary, to the Unrestricted or Other Accounts when such received or promised contributions are available in support of HFO financing, as well as its determination of DPRK consumption and storage capacities. Through December 31, 2001, KEDO has delivered approximately 3.10 million mts of HFO to the DPRK.

In previous KEDO Annual Reports, HFO deliveries made during the two HFO Years covered by the report were discussed separately. To maintain consistency with the annual report's new reporting period, HFO deliveries will henceforth be discussed on a calendar year basis. A summary of the status of HFO Year deliveries at the end of the period (i.e., the calendar year) is included in the following discussion.

### HFO Deliveries in 2001

**K**EDO delivered 559,613 mts of HFO to the DPRK in the twelve month period ending December 31, 2001, at a total cost (including commodity, freight, and other charges) of approximately \$90.86 million. (Dates and amounts of the individual deliveries and breakdown of costs by month are in Appendix 3.)

KEDO's 2001 HFO obligations, including \$15.50 million in 2000 HFO Year obligations carried over into 2001 (see 2000/2001 KEDO Annual Report) and \$0.54 million in 2001 flow meter expenses, were \$106.90 million. KEDO used \$72.55 million in contributions available for HFO toward those obligations, carrying forward \$34.35 million in liabilities into 2002:

2000 Carry Over	\$(15.50) million
2001 HFO Deliveries	(90.86)
2001 Flow Meter Expenses	(.54)
<b>Total Obligations</b>	<b>\$(106.90) million</b>
2001 Contributions (see Appendix 1)	
HFO Account	72.16
Unrestricted Account	.39
<b>Sub-total</b>	<b>\$72.55</b>
Bank Loans	(15.00)
Supplier's Credit and Other Due	(19.35) <sup>(1)</sup>
<b>Net HFO liabilities, end of year</b>	<b>\$(34.35) million</b>

NOTE: (1) KEDO used this amount of contributions due in early 2002 to finance part of the cost of the final 2001 deliveries.

The 559,613 mts of HFO delivered included 105,278 mts needed in January and February 2001 to complete the supply of 500,000 mts for the 2000 HFO Year. The remaining 454,335 mts is applied toward the 500,000 mts for the 2001 HFO Year, leaving 45,665 mts to be delivered in early 2002. (NOTE: This shipment was completed in February 2002 and 2002 HFO Year shipments began in March, just prior to the printing of this Annual Report.)

**E**fforts to secure the funding needed to complete 2000/2001 HFO Year deliveries on time were hindered by the fact that HFO prices during those years were significantly higher than the average of prices paid in previous years (See chart on page 10). Although prices at the end of 2001 were much more favorable, planning for regular and timely HFO deliveries remains a challenge given the unpredictable and fluctuating HFO market.

The total amount of outstanding bank loans at the end of 2001, which are supported by that amount of the collateral fund provided by the Government of Japan (See Appendix 1) were \$15.0 million (a \$0.5 million decrease from the \$15.5 million outstanding at the end of 2000). Those \$15 million in outstanding loans, however, were repaid on a number of occasions during the year. The Government of Japan consented in each case to KEDO's securing new loans in the same amounts to pay off the corresponding amount of HFO obligations.

Interest expenses on those bank loans in 2001 totaled \$472,145 (see "Schedule of Heavy Fuel Oil Expenses" in Appendix 2). Those expenses were met out of interest received on funds in the HFO and Unrestricted Accounts.

### HFO Flow Meters

To support the judgement that, in accordance with the Agreed Framework, HFO provided by KEDO is utilized only for heating and electricity production, KEDO monitors consumption of the HFO based on measurements gathered from KEDO-installed flow meters at seven power plants and from the computerized control room of a new, small power generating facility in the DPRK. To further support estimates of consumption, additional data in the form of storage tank level readings is provided by the DPRK.

In support of this flow meter regime, the DPRK has committed to: 1) consume HFO provided by KEDO only at those seven plants and one power generating facility; 2) provide KEDO with daily flow meter readings from each of those plants on a fortnightly basis; 3) inform KEDO immediately of any malfunctions observed in the monitoring equipment; and, 4) accommodate a schedule of maintenance and upgrade visits by KEDO flow meter teams to ensure the optimal performance of the monitoring system.

The flow meter systems installed by KEDO consist of the actual flow meters, data recording equipment capable of maintaining an historical record of meter readings, and power conditioning units designed to ensure that the power provided to the equipment meets the required specifications. Various

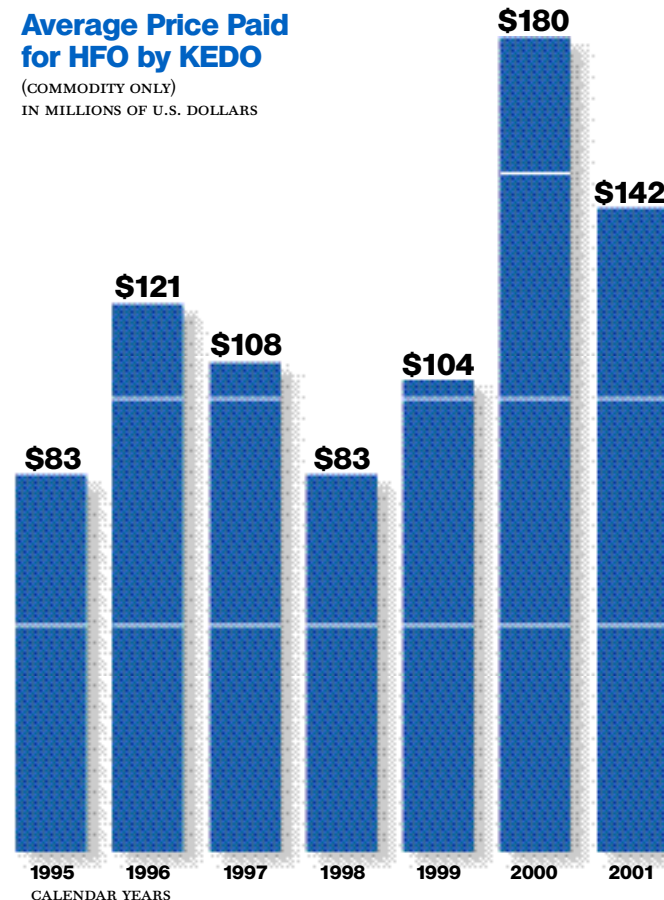
repairs and modifications have been made to the meters and related equipment over the years in response to malfunctions and other failures attributed to the effects of the harsh operating conditions found in the DPRK, including the fluctuating frequency of the local power provided to the equipment and temperature and other environmental extremes (e.g., excessive coal dust) in the power plants themselves.

Based on measurements gathered from KEDO-installed flow meters at the seven power plants and from the computerized control room at the power generating facility, or, when necessary, on consumption figures provided by the DPRK, the DPRK consumed a total of 452,605 mts of HFO during the twelve month period covered by this report, or about 107,006 mts less than the 559,611 mts HFO delivered by KEDO during the period. That 107,006 mts brought the total amount in storage at the end of the period to approximately 296,073 mts, just below the DPRK's stated maximum storage capacity. Total amounts in storage during the period ranged from a low of 198,067 mts in January to a high of 315,771 mts in November.

A number of the equipment failures and discrepancies between KEDO and DPRK estimates of consumption that began in late 2000 (see 2000/2001 KEDO Annual Report) continued for most of 2001 despite intensive efforts to resolve them. Significant progress was made, however, especially during a repair and maintenance visit in November, in understanding and correcting those failures. While the overall percentage of HFO measured by the flow meters for the entire year remained below acceptable levels, the progress made in November should result in significantly improved levels of measurement in the coming year. KEDO provisionally accepts DPRK consumption figures during periods of meter failure, provided that those figures are consistent with the operating history and capabilities of the plants in question.

NOTE: The HFO flow monitoring regime consists of ultrasonic type flow meters at the Sonbong, Chongjin, Pyongyang and Pukchang power plants and Coriolis type meters at the East Pyongyang, Suncheon and Youngbyon power plants. The ultra-sonic flow meters are particularly well-suited to the higher HFO flow conditions at the exclusively oil-fired plant at Sonbong, which consumes HFO at a higher rate than the primarily coal-fired plants at Chongjin, Pyongyang and Pukchang, which co-burn comparatively smaller amounts of HFO. Although the ultrasonic meters are slightly less accurate under certain low flow conditions at those latter three plants, such conditions are relatively rare and the combination of meter readings and storage tank level readings provided by the DPRK have provided a reliable indication of HFO consumption at the plants. The Coriolis type flow meters, which are more accurate than ultrasonic flow meters under all flow conditions, including lower flow conditions, encountered at primarily coal-fired plants, were chosen for subsequent installations at the co-fired Suncheon and East Pyongyang power plants and at the small oil-fired Youngbyon power plant. All initial installations included data recorders and back up power supply units. ■

**Average Price Paid for HFO by KEDO**  
(COMMODITY ONLY)  
IN MILLIONS OF U.S. DOLLARS



The original members of KEDO are Japan, the Republic of Korea (ROK), and the United States.

Article V(b) of the Agreement on the Establishment of the Korean Peninsula Energy Development Organization states that "additional states that support the purposes of the Organization and offer assistance, such as providing funds, goods, or services to the Organization, may, with the approval of the Executive Board, also become members of the Organization."

In accordance with Article XIV(b) of the Agreement, "states approved by the Executive Board for membership in accordance with Article V(b) may become members by submitting an instrument of acceptance of this Agreement to the Executive Director, which shall become effective on the date of receipt by the Executive Director."

The Governments of Japan, the ROK, and the United States amended the Agreement on September 19, 1997, to include international organizations, including regional integration organizations, as eligible for membership in the Organization and for representation on the Executive Board on the basis of substantial and sustained support for the Organization. At that time, KEDO and the European Atomic Energy Community (the "Community"), an organization within the European Union, concluded an accession agreement, calling for the Community's representation on the KEDO Executive Board for a term to coincide with its substantial and sustained support to KEDO.

In December 2001, KEDO and the Community concluded a five-year extension of the September 1997 KEDO-EAEC Accession Agreement. The agreement provides for an increase in the Community's contribution to KEDO from 15 to 20 million Euro per year, continued representation on KEDO's Executive Board, and increased representation on the Secretariat's staff.

The following ten states or international organizations, including regional integration organizations, are members of KEDO under Article V(b) of the Agreement, effective from the dates shown:

New Zealand	June 26, 1995
Australia	September 19, 1995
Canada	November 24, 1995
Indonesia	May 7, 1996
Chile	July 17, 1996
Argentina	September 5, 1996
European Atomic Energy Community (EAEC)	September 19, 1997
Poland	September 25, 1997
Czech Republic	February 9, 1999
Uzbekistan	December 11, 2000

NOTE: KEDO welcomes as members other states that support the work of the Organization. In practice, the following procedures are followed in admitting new members:

(1) States or entities interested in membership formally notify the Executive Director of KEDO of their interest in membership. The Executive Director promptly conveys the fact of such notification to the members of the Executive Board for their consideration.

(2) KEDO reaches agreement with the prospective member on a draft instrument of acceptance.

(3) In an Executive Board Resolution, the Executive Board approves the membership of the prospective member and authorizes the Executive Director to receive the instrument of acceptance in substantially the form agreed under Step (2) above.

(4) The executed instrument of acceptance, signed by the Minister of Foreign Affairs or other representative with full powers, is submitted to the Executive Director of KEDO. Membership becomes effective on the date the instrument of acceptance is received by the Executive Director.

Instruments of acceptance should be along the following lines:

"Pursuant to instructions from my Government, I have the honor to notify the Korean Peninsula Energy Development Organization that the Government of (name of intending member) hereby accepts the Agreement on the Establishment of the Korean Peninsula Energy Development Organization, done at New York on March 9, 1995. The present note constitutes the instrument of acceptance of the Government of (name of intending member) to the aforesaid Agreement, in accordance with Article XIV(b) thereof." ■

## Appendix 1: Financial Support

The following schedule was prepared on a cash basis of accounting and does not reflect announced financial support.

### A. Chronology of Financial Support to KEDO

In U.S. Dollars

DATE	COUNTRY	ADMINISTRATION	LWR	INTEREST*	HFO	UNRESTRICTED	OTHER	TOTAL
03/09/1995	Japan	2,800,000	3,000,000 <sup>(1)</sup>					5,800,000
04/04/1995	Canada				1,054,482			1,054,482
04/05/1995	United Kingdom						1,000,000 <sup>(2)</sup>	1,000,000
04/19/1995	New Zealand				334,750			334,750
05/25/1995	Singapore					300,000		300,000
06/02/1995	ROK	1,800,000						1,800,000
06/29/1995	Australia				5,000,000			5,000,000
06/30/1995	Finland					93,833		93,833
08/07/1995	Malaysia					300,000		300,000
09/11/1995	Netherlands					500,000		500,000
10/31/1995	United States <sup>(3)</sup>	4,000,000			5,500,000			9,500,000
11/01/1995	Thailand					300,000		300,000
11/14/1995	Indonesia				324,895 <sup>(4)</sup>			324,895
<b>1995 Total</b>		<b>8,600,000</b>	<b>3,000,000</b>		<b>12,214,127</b>	<b>1,493,833</b>	<b>1,000,000</b>	<b>26,307,960</b>
01/02/1996	Finland						22,810 <sup>(5)</sup>	22,810
01/24/1996	Brunei					352,793		352,793
03/08/1996	Japan						19,000,000 <sup>(6)</sup>	19,000,000
04/02/1996	Canada						735,565 <sup>(7)</sup>	735,565
04/30/1996	Germany					1,011,485		1,011,485
04/30/1996	New Zealand				343,025			343,025
05/03/1996	Australia				1,590,000			1,590,000
05/31/1996	ROK	2,700,000						2,700,000
06/20/1996	United States				22,000,000			22,000,000
06/25/1996	Singapore					100,000		100,000
07/09/1996	Netherlands					290,192		290,192
07/15/1996	ROK		6,000,000 <sup>(1)</sup>					6,000,000
07/16/1996	EAEC**						3,792,000 <sup>(8)</sup>	3,792,000
07/23/1996	Philippines					150,000		150,000
07/24/1996	Greece					25,000		25,000
07/26/1996	Norway					250,000 <sup>(9)</sup>		250,000
08/26/1996	Argentina					200,000		200,000
09/30/1996	Finland					100,000		100,000
10/16/1996	Brunei					70,897		70,897
10/21/1996	Indonesia				325,012 <sup>(4)</sup>			325,012
11/22/1996	Switzerland					118,148		118,148
12/06/1996	EAEC						2,470,000 <sup>(10)</sup>	2,470,000
12/18/1996	New Zealand				355,700 <sup>(11)</sup>			355,700
12/27/1996	ROK	165,000						165,000
<b>1996 Total</b>		<b>2,865,000</b>	<b>6,000,000</b>		<b>24,613,737</b>	<b>2,668,515</b>	<b>26,020,375</b>	<b>62,167,627</b>
02/20/1997	Japan	3,140,000						3,140,000
03/27/1997	Japan	590,000						590,000
03/31/1997	Canada						906,454 <sup>(7)</sup>	906,454
04/22/1997	Oman					50,000		50,000
04/23/1997	Australia				1,543,200			1,543,200

\*Interest paid or foregone on LWR loans. \*\*European Atomic Energy Community.

DATE	COUNTRY	ADMINISTRATION	LWR	INTEREST*	HFO	UNRESTRICTED	OTHER	TOTAL
05/15/1997	United States	4,000,000			21,000,000			25,000,000
06/20/1997	ROK	3,000,000						3,000,000
07/07/1997	Japan	3,200,000						3,200,000
08/04/1997	Norway						250,000 <sup>(9)</sup>	250,000
09/03/1997	Singapore					100,000		100,000
10/14/1997	New Zealand				321,935			321,935
10/15/1997	EAEC					11,195,000		11,195,000
10/22/1997	Finland					75,119	18,780 <sup>(12)</sup>	93,899
11/10/1997	EAEC					17,197,497		17,197,497
12/27/1997	Hungary					10,000		10,000
<b>1997 Total</b>		<b>13,930,000</b>			<b>22,865,135</b>	<b>28,627,616</b>	<b>1,175,234</b>	<b>66,597,985</b>
01/09/1998	ROK		45,000,000 <sup>(13)</sup>					45,000,000
01/12/1998	Indonesia				325,000 <sup>(4)</sup>			325,000
02/24/1998	Japan	530,000						530,000
05/01/1998	United States	3,600,000			26,400,000			30,000,000
07/10/1998	ROK	3,500,000						3,500,000
07/17/1998	New Zealand				258,800			258,800
07/22/1998	Czech Republic					127,816		127,816
08/04/1998	United States				5,000,000			5,000,000
08/04/1998	Singapore					100,000		100,000
08/11/1998	Australia				1,207,800			1,207,800
08/27/1998	Finland					91,193		91,193
09/29/1998	United States				10,000,000			10,000,000
10/16/1998	Japan	3,067,133						3,067,133
10/27/1998	EAEC	900,000				16,740,000		17,640,000
11/06/1998	ROK	97,133						97,133
11/16/1998	United States				5,000,000			5,000,000
1998	France						503,778 <sup>(14)</sup>	503,778
<b>1998 Total</b>		<b>11,694,266</b>	<b>45,000,000</b>		<b>48,191,600</b>	<b>17,059,009</b>	<b>503,778</b>	<b>122,448,653</b>
01/11/1999	Italy					1,250,000		1,250,000
01/25/1999	Singapore					400,000		400,000
02/05/1999	United States				12,000,000			12,000,000
03/18/1999	Italy					571,429		571,429
03/22/1999	Finland					92,333		92,333
03/25/1999	Japan	432,867						432,867
03/30/1999	Canada						161,447	161,447
04/20/1999	United States	1,000,000			14,000,000			15,000,000
06/25/1999	United States	2,500,000			17,500,000			20,000,000
08/05/1999	ROK	1,700,000						1,700,000
08/17/1999	ROK	1,800,000						1,800,000
09/22/1999	New Zealand				261,150			261,150
09/24/1999	EAEC	1,227,000				14,343,000		15,570,000
10/07/1999	Mexico				99,985			99,985
10/08/1999	United States				18,100,000			18,100,000
10/20/1999	Australia				1,294,800			1,294,800
11/12/1999	Japan	3,067,133						3,067,133
1999	ROK			749,549 <sup>(15)</sup>				749,549
<b>1999 Total</b>		<b>11,727,000</b>		<b>749,549</b>	<b>63,255,935</b>	<b>16,656,762</b>	<b>161,447</b>	<b>92,550,693</b>
01/20/2000	Singapore					300,000		300,000
03/07/2000	Peru				100,000			100,000
03/20/2000	Japan	432,867						432,867
03/21/2000	Canada				665,336			665,336

DATE	COUNTRY	ADMINISTRATION	LWR	INTEREST*	HFO	UNRESTRICTED	OTHER	TOTAL
04/05/2000	United States				15,000,000			15,000,000
04/07/2000	Japan			864,085 <sup>(16)</sup>				864,085
04/20/2000	Australia				599,800			599,800
04/27/2000	Chile					20,000		20,000
05/24/2000	Finland					75,356		75,356
05/25/2000	ROK	3,000,000						3,000,000
06/16/2000	Japan	2,454,633						2,454,633
07/05/2000	EAEC	1,350,000				12,904,500		14,254,500
07/07/2000	ROK	850,000						850,000
07/10/2000	Oman					50,000		50,000
07/28/2000	Norway						249,844 <sup>(9)</sup>	249,844
08/10/2000	United States				20,000,000			20,000,000
09/11/2000	New Zealand				209,500			209,500
09/18/2000	Japan			1,530,821 <sup>(16)</sup>				1,530,821
09/25/2000	Australia				1,075,200			1,075,200
10/16/2000	United States	3,850,000			25,557,000			29,407,000
11/16/2000	Japan	962,500						962,500
2000	ROK		288,782,714 <sup>(17)</sup>					288,782,714
2000	ROK			19,335,961 <sup>(15)</sup>				19,335,961
2000	Japan		149,842,648 <sup>(18)</sup>					149,842,648
<b>2000 Total</b>		<b>12,900,000</b>	<b>438,625,362</b>	<b>21,730,867</b>	<b>63,206,836</b>	<b>13,349,856</b>	<b>249,844</b>	<b>550,062,765</b>
02/14/2001	Singapore					300,000		300,000
02/23/2001	Japan			1,970,618 <sup>(16)</sup>				1,970,618
02/23/2001	United States				54,879,000			54,879,000
03/16/2001	Canada				624,883			624,883
07/23/2001	United States	4,561,000			15,439,000			20,000,000
08/7/2001	ROK	4,561,000						4,561,000
08/22/2001	Japan	3,850,000						3,850,000
09/5/2001	Finland					76,169		76,169
09/7/2001	New Zealand				218,100			218,100
09/19/2001	Japan			2,222,970 <sup>(16)</sup>				2,222,970
09/20/2001	Australia				1,000,000			1,000,000
11/28/2001	Japan	711,000						711,000
12/31/2001	Poland					10,000		10,000
2001	ROK		232,971,583 <sup>(17)</sup>					232,971,583
2001	ROK			33,529,537 <sup>(15)</sup>				33,529,537
2001	Japan		99,844,964 <sup>(18)</sup>					99,844,964
<b>2001 Total</b>		<b>13,683,000</b>	<b>332,816,547</b>	<b>37,723,125</b>	<b>72,160,983</b>	<b>386,169</b>		<b>456,769,824</b>
<b>Grand Total</b>		<b>75,399,266</b>	<b>825,441,909<sup>(19)</sup></b>	<b>60,203,541</b>	<b>306,508,353</b>	<b>80,241,760</b>	<b>29,110,678</b>	<b>1,376,905,507</b>

\*Interest paid or foregone on LWR loans. \*\*European Atomic Energy Community.

### B. Total Financial Support by Country March 1995 through December 2001

Argentina	200,000	Greece	25,000	Oman	100,000
Australia	13,310,800	Hungary	10,000	Peru	100,000
Brunei	423,690	Indonesia	974,907	Philippines	150,000
Canada	4,148,167	Italy	1,821,429	Poland	10,000
Chile	20,000	Japan	292,603,930 <sup>(21)</sup>	ROK	604,542,477 <sup>(22)</sup>
Czech Republic	127,816	Malaysia	300,000	Singapore	1,600,000
EAEC	82,118,997 <sup>(20)</sup>	Mexico	99,985	Switzerland	118,148
Finland	645,593	Netherlands	790,192	Thailand	300,000
France	503,778	New Zealand	2,302,960	United Kingdom	1,000,000
Germany	1,011,485	Norway	749,844	United States	310,886,000

### Notes to Appendix 1:

- (1) For pre-project services and site survey.
- (2) For "non-proliferation aspects of KEDO activity." Approximately \$400,000 of this amount was spent in 1998 on a study by a UK contractor on management of spent fuel from the DPRK's experimental reactor. The remaining \$600,000 was utilized for non-proliferation aspects of KEDO activity in 1998, as follows: \$260,000 on heavy fuel oil and \$340,000 on a study by a Canadian contractor on management of spent fuel from the DPRK's experimental reactor.
- (3) Amount listed under "HFO" was provided for 1995 HFO Year deliveries before KEDO was established on March 9, 1995.
- (4) Value of in-kind provision of heavy fuel oil.
- (5) For payment for services by Finnish contractors. Consulting services provided in September 1996 at cost of \$20,000. By subsequent agreement with the Government of Finland, remainder of \$2,810 was made available in support of heavy fuel oil purchases.
- (6) "Collateral Fund" to be used as needed to support the financing of KEDO expenses in case of a liquidity shortfall.
- (7) For the work of the consortium, to include the supply of interim conventional energy, activities related to the provision of new nuclear reactors, and management of spent fuel from existing gas-graphite reactors.
- (8) First installment of \$6,262,000 provided by the EAEC in 1996.
- (9) For heavy fuel oil or other non-nuclear energy purposes.
- (10) \$500,000 of this amount has been set aside to support "means existing within the European Union in the scientific, industrial and technological field."
- (11) Advance payment of 1998.
- (12) For payment of expenses associated with the participation of a Finnish expert in nuclear safety-related activities of KEDO.
- (13) The ROK provided \$45 million in January 1998 in support of KEDO activities, in the form of a KEXIM loan to meet the cost of work performed under the Preliminary Works Contract.
- (14) France earmarked 10 million Francs for support of KEDO in December 1995, the use of which was tied to the provision of services by French contractors. Three million Francs of that amount (the equivalent of which in U.S. dollars is shown here) was utilized for a study carried out in 1998 related to the management of spent fuel from the DPRK's experimental reactor. As noted in (2) above, KEDO also received a total of \$740,000 of available amount in the "Other" category for similar studies in 1998 by one UK and one Canadian contractor.
- (15) Amount the ROK paid in the form of interest for the ROK government bond issued to raise funds for the South-North Korea Cooperation Fund, the source of the KEXIM loan. The numbers were provided by the ROK.
- (16) Provided by Japan for KEDO's payment of interest to JBIC, in accordance with Article III of the Agreement between KEDO and the Government of Japan on the Provision of Financing for the Implementation of the Light-Water Reactor Project.
- (17) Provided by the ROK in the form of an KEXIM loan to meet the cost of work performed under the Turnkey Contract. \$45,000,000 out of the Year 2000 installments was used to repay the 1/9/98 KEXIM loan referenced in footnote (13).
- (18) Provided by Japan in the form of a JBIC loan to meet the cost of work performed under the Turnkey Contract.
- (19) The Grand Total reflects the fact that the Year 2000 KEXIM loan included the \$45,000,000 used to repay the 1/9/98 KEXIM loan, as explained in footnote (17), instead of simply adding the \$45,000,000 of 1/9/98 and the Year 2000 KEXIM loan together with the other LWR numbers.
- (20) Because KEDO's schedule of received financial support is prepared on a cash basis of accounting and does not reflect announced financial support, this amount does not include the \$17,700,000 contribution received from the EAEC on January 7, 2002. This contribution is included in KEDO's 2001 financial statement and will be reported in Appendix 2 "Financial Support" of KEDO's 2002 Annual Report.
- (21) This amount includes \$19,000,000 provided by Japan in 1996 as a "Collateral Fund," the LWR-related support to meet the cost of work performed under the TKC, and the interest-related support for KEDO's payment of interest to JBIC. Please see Footnotes (6), (16), and (18) above.
- (22) This amount includes LWR-related support to meet the cost of work performed under the TKC and interest-related support paid, according to the ROK, in the form of interest for the ROK government bond issued to raise funding for the South-North Korea Cooperation Fund, the source of the KEXIM loan. Please see Footnotes (15) and (17) above. The consideration in footnote (19) is made in this table, too. ■

KEXIM: Export-Import Bank of Korea  
JBIC: Japan Bank for International Cooperation



The Korean Peninsula Energy Development Organization

Financial Statements and Supplementary Schedule

December 31, 2001



Report of Independent Accountants

To The Executive Board of  
The Korean Peninsula Energy Development Organization

We have audited the accompanying statement of financial position of The Korean Peninsula Energy Development Organization (the "Organization") at December 31, 2001, and the related statements of activities and cash flows for the year then ended. These financial statements are the responsibility of the Organization's management. Our responsibility is to express an opinion on these financial statements based on our audit. The prior year summarized comparative information has been derived from the Organization's 2000 financial statements, which were audited, before the restatement described in Note 1 (j), by other independent accountants, whose report dated April 4, 2001, expressed an unqualified opinion on those statements, but included an explanatory paragraph that described the uncertainty of repayment by the Government of North Korea for the cost of two light-water reactors.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of The Korean Peninsula Energy Development Organization at December 31, 2001, and the changes in its net assets and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

We also audited the adjustments described in Note 1 (j) that were applied to restate the 2000 financial statements. In our opinion, such adjustments are appropriate and have been properly applied.

As discussed in Note 1, the Government of North Korea has agreed to repay the cost of the two light-water reactors to the Organization over a 20-year term after the completion of each of the light-water reactors. The repayment amount will be determined jointly by the Government of North Korea and the Organization and therefore is uncertain.

Our audit was conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplementary information presented on Schedule 1 is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

*PricewaterhouseCoopers LLP*  
March 25, 2002

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The Korean Peninsula Energy Development Organization

Year Ended December 31, 2001

(with comparative financial information as of December 31, 2000)

Assets

	2001	2000
Cash and cash equivalents	\$34,825,482	\$42,996,615
Cash restricted for collateral (note 4)	19,000,000	19,000,000
Contributions receivable, net (note 2)	17,710,000	14,350,750
Furniture, equipment, and leasehold improvements, net (note 3)	1,001,254	1,189,010
Other assets	307,065	452,864
Light-Water Reactor Project (note 8)	793,714,590	462,224,653
<b>Total assets</b>	<b>\$866,558,391</b>	<b>\$540,213,892</b>

Liabilities and Net Assets

Liabilities:		
Accounts payable and accrued expenses	\$3,988,479	\$2,976,892
Suppliers' credit for Heavy Fuel Oil (note 1)	18,900,409	-
Notes payable (note 4)	15,000,000	15,500,000
Due to contractor (note 10)	50,198,228	51,279,207
Loans payable (note 9)	683,521,942	401,184,226
<b>Total liabilities</b>	<b>771,609,058</b>	<b>470,940,325</b>
Net assets:		
Unrestricted	47,863,769	24,371,457
Temporarily restricted (note 6)	47,085,564	44,902,110
<b>Total net assets</b>	<b>94,949,333</b>	<b>69,273,567</b>
<b>Total liabilities and net assets</b>	<b>\$866,558,391</b>	<b>\$540,213,892</b>

SEE ACCOMPANYING NOTES TO FINANCIAL STATEMENTS.

## Statement of Activities

### The Korean Peninsula Energy Development Organization

Year Ended December 31, 2001  
(with comparative financial information as of December 31, 2000)

	UNRESTRICTED	TEMPORARILY RESTRICTED	TOTAL	
			2001	2000
<b>Revenues:</b>				
Contributions	\$376,169	\$89,205,883	\$89,582,052	\$77,692,359
Contributed and imputed interest (note 9)	—	37,723,125	37,723,125	16,239,208
Interest income	3,335,531	—	3,335,531	4,218,241
Foreign exchange gain	39,012,058	—	39,012,058	35,113,148
Net assets released from restrictions	124,745,554	(124,745,554)	—	—
<b>Total revenues</b>	<b>167,469,312</b>	<b>2,183,454</b>	<b>169,652,766</b>	<b>133,262,956</b>
<b>Expenses:</b>				
Program Services:				
Heavy fuel oil	92,021,086	—	92,021,086	78,892,027
Light-Water Reactor Project interest expense (notes 9 and 10)	37,386,393	—	37,386,393	18,416,855
Project survey and other than heavy fuel oil	7,000	—	7,000	—
<b>Total Program Services</b>	<b>129,414,479</b>	<b>—</b>	<b>129,414,479</b>	<b>97,308,882</b>
Supporting Services: Administration	14,562,521	—	14,562,521	11,941,179
<b>Total expenses</b>	<b>143,977,000</b>	<b>—</b>	<b>143,977,000</b>	<b>109,250,061</b>
Increase in net assets	23,492,312	2,183,454	25,675,766	24,012,895
<b>Net assets at beginning of year</b>	<b>24,371,457</b>	<b>44,902,110</b>	<b>69,273,567</b>	<b>45,260,672</b>
<b>Net assets at end of year</b>	<b>\$47,863,769</b>	<b>\$47,085,564</b>	<b>\$94,949,333</b>	<b>\$69,273,567</b>

SEE ACCOMPANYING NOTES TO FINANCIAL STATEMENTS.

## Statement of Cash Flows

### The Korean Peninsula Energy Development Organization

Year Ended December 31, 2001  
(with comparative financial information as of December 31, 2000)

	2001	2000
<b>Cash flows from operating activities:</b>		
Increase in net assets	\$25,675,766	\$24,012,895
Adjustments to reconcile increase in net assets to net cash provided by (used in) operating activities:		
Depreciation	272,603	314,197
Foreign exchange gain	(39,012,058)	(35,113,148)
Changes in assets and liabilities:		
(Increase) decrease in contributions receivable	(3,359,250)	14,316,498
Decrease (increase) in other assets	145,799	(30,045)
Increase in accounts payable and accrued expenses	1,011,587	1,295,945
Increase in suppliers' credits payable for heavy fuel oil	18,900,409	—
(Decrease) increase in due to contractor	(1,080,979)	14,104,471
<b>Net cash provided by operating activities</b>	<b>2,553,877</b>	<b>18,900,813</b>
<b>Cash flows from investing activities:</b>		
Light-Water Reactor Project expenditures	(331,489,937)	(380,488,348)
Other expenditures	(84,847)	(76,116)
<b>Net cash used in investing activities</b>	<b>(331,574,784)</b>	<b>(380,564,464)</b>
<b>Cash flows from financing activities:</b>		
Proceeds from notes payable	102,000,000	71,000,000
Repayments of notes payable	(102,000,000)	(71,000,000)
Proceeds from loans payable	321,349,774	437,225,252
Repayments of loans payable	—	(44,736,393)
<b>Net cash provided by financing activities</b>	<b>320,849,774</b>	<b>392,488,859</b>
<b>Net (decrease) increase in cash and cash equivalents</b>	<b>(8,171,133)</b>	<b>30,825,208</b>
<b>Cash and cash equivalents at beginning of year</b>	<b>61,996,615</b>	<b>31,171,407</b>
<b>Cash and cash equivalents at end of year</b>	<b>\$53,825,482</b>	<b>\$61,996,615</b>
<b>Supplemental cash flow information:</b>		
Interest paid during the year	\$3,903,397	\$1,625,000
In-kind contribution (interest-free loans)	\$33,529,537	\$15,566,446

SEE ACCOMPANYING NOTES TO FINANCIAL STATEMENTS.

## Notes to the Financial Statements

December 31, 2001 (with summarized financial information for the year ended December 31, 2000)

### 1. Description of Organization and Summary of Significant Accounting Policies

#### Description of Organization

The Korean Peninsula Energy Development Organization (the "Organization") was established on March 9, 1995 to advance the implementation of the "Agreed Framework" signed by the United States of America and the Democratic People's Republic of Korea ("DPRK") in 1994. The founding members of the Organization are Japan, the Republic of Korea and the United States of America. Those three founding members were joined on the Organization's Executive Board in 1997 by the European Atomic Energy Community.

The purpose of the Organization is to (i) provide for the financing and supply of a light-water reactor project in the DPRK consisting of two reactors of the Korean standard nuclear plant model with a capacity of approximately 1,000 megawatts each; (ii) provide for the supply of interim energy alternatives in lieu of the energy from the DPRK's graphite-moderated reactors pending construction of the first light-water reactor unit in the form of 500,000 metric tons of heavy fuel oil each year; and (iii) provide for the implementation of any other measures deemed necessary to accomplish the foregoing or otherwise to carry out the objectives of the Agreed Framework.

The Organization is dependent on contributions from governments to carry out its objectives and cover its operating costs. In 2001, nine countries and the European Atomic Energy Community provided all of the Organization's contributions. In 2000, thirteen countries and the European Atomic Energy Community provided all of the Organization's contributions. The Organization has been designated by the President of the United States of America as a public international organization entitled to enjoy privileges, exemptions and immunities as an international organization under the International Organizations Immunities Act, 22 U.S.C. §§288-288f. As such, the Organization is also classified as an international organization under Section 7701(a)(18) of the Internal Revenue Code (the "Code"), and is entitled to an exemption from Federal income taxes under Section 892 of the Code.

#### Summary of Significant Accounting Policies

##### a. Basis of Presentation

The accompanying financial statements have been prepared on the accrual basis in accordance with accounting principles generally accepted in the United States of America. As an international organization exempt from Federal income taxes, the Organization follows accounting standards applicable to not-for-profit organizations. Under these standards, net assets and revenues, expenses, gains and losses are classified based on the existence or absence of donor-imposed restrictions. Accordingly, the net assets of the Organization and changes therein are classified and reported as follows:

**Unrestricted net assets:** Net assets that are not subject to donor-imposed stipulations.

**Temporarily restricted net assets:** Net assets subject to donor-imposed stipulations that will be met either by actions of the Organization and/or the passage of time.

**Permanently restricted net assets:** Net assets subject to donor-imposed stipulations that they be maintained perma-

nently. The organization does not have any permanently restricted net assets.

Revenues are reported as increases in unrestricted net assets unless use of the related asset is limited by donor-imposed restrictions. Expenses are reported as decreases in unrestricted net assets. Gains and losses on investments and other assets or liabilities are reported as increases or decreases in unrestricted net assets unless their use is restricted by explicit donor stipulation or by law. Expirations of temporary restrictions on net assets (i.e., the donor-stipulated purpose has been fulfilled and/or the stipulated time period has elapsed) are reported as net assets released from restrictions.

##### b. Contributions

Contributions, which include unconditional promises to give, are recognized as revenues in the period received.

##### c. Cash Equivalents

Cash equivalents represent highly liquid debt instruments with original maturities of three months or less.

##### d. Depreciation

Depreciation of furniture, equipment, and leasehold improvements is provided on a straight-line basis. Furniture, equipment, and automobiles are depreciated over their estimated useful lives, ranging from five to ten years. Leasehold improvements are depreciated over their useful lives or life of the lease, whichever is shorter.

##### e. Light-Water Reactor Project

Expenditures for the Light-Water Reactor ("LWR") Project have been capitalized at cost. According to the Supply Agreement between the Organization and the Government of the DPRK, the Government of the DPRK has agreed to repay for the two light-water reactors from the Organization on a long-term interest-free basis over a twenty-year term beginning three years after the completion of the LWR Project. The amount to be repaid will be jointly determined by the Organization and the Government of the DPRK based on the examination by each side of the technical description of the LWR project, the then fair and reasonable market value of the LWR project, and the contract price paid by the Organization to its contractors and subcontractors for costs outlined in the Supply Agreement. Negotiations relating to the repayment terms which will occur in the future may or may not result in a repayment amount that differs from the costs capitalized. This difference, if any, cannot be reasonably estimated at this time and, accordingly, has not been provided for in the accompanying financial statements.

In an October 1999 Memorandum of Understanding ("Memorandum") the Government of the DPRK agreed to indemnify the Organization from any claims arising out of Environmental Harm, as defined in the Memorandum.

##### f. Accounting Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and disclosures of contingencies at the date of the financial statements and revenues and expenses recognized during the

reporting period. Significant estimates include the carrying value of the LWR project, imputed interest and the carrying value of contributions receivable. Actual results could differ from those estimates.

##### g. Fair Value of Financial Instruments

The carrying amount of financial instruments other than loans payable approximates fair value. The fair value of loans payable is not readily determinable due to the uncertainty of the repayment period.

##### h. Foreign Currency Translation

The Organization has transactions involving various currency denominations, including those relating to its contributions and loans payable. The Organization translates its foreign currency denominated assets and liabilities into U.S. dollars at the rate in effect at the balance sheet date. At December 31, 2001 and 2000, such foreign currency rates for U.S. dollars were as follows:

AMOUNT DUE IN	2001	2000
Euro	1.13443	1.06157
France (Franc)	—	6.96345
New Zealand (Dollar)	—	0.4415
South Korea (Won)	1,313.50	1,264.90
Japan (Yen)	131.60	114.35

The translation of these amounts into U.S. dollars should not be construed as representing that foreign currencies have been, could have been or could be converted into U.S. dollars at these rates. The adjustment resulting from this translation is recorded as a foreign exchange gain or loss in the statement of activities.

##### i. Comparative Information

The accompanying statement of activities is presented with comparative information for the year ended December 31, 2000 in total but not by net asset class. Such information does not include sufficient detail to constitute a presentation in conformity with accounting principles generally accepted in the United States of America. Accordingly, such information should be read in conjunction with the Organization's financial statements for the year ended December 31, 2000.

##### j. Reclassification

Certain prior year balances have been reclassified to conform to current year presentation. Specifically, \$19 million of permanently restricted net assets have been reclassified to temporarily restricted based on management's reassessment of the contribution. In addition, approximately \$9 million of unrestricted net assets were reclassified to temporarily restricted based on management's assessment that certain restrictions were not met. These reclassifications have been reflected in the December 31, 2000 balance sheet.

##### k. Suppliers' Credit for Heavy Fuel Oil

This amount represents payables to vendor for Heavy Fuel Oil purchases.

##### 2. Contributions Receivable

Contributions receivable consist of the following at December 31, 2001 and 2000:

	2001	2000
Amounts due in:		
Less than one year	\$17,710,000	15,786,820
	<b>17,710,000</b>	<b>15,786,820</b>
Less:		
Allowance for uncollectible receivables	—	(1,436,070)
	<b>\$17,710,000</b>	<b>\$14,350,750</b>

At December 31, 2000, the Organization had a contribution receivable of \$14,350,750 from one donor. This receivable was due in 2001. During 2001, the receivable was replaced with an intention to contribute an amount up to 20 million Euros per year for five years, with payments beginning in 2001. As of December 31, 2001, only the first payment was unconditionally committed to the Organization, as such a contribution receivable of \$17,700,000 was recorded. The remaining balance will be recognized when received by the Organization or when unconditionally committed by the donor.

##### 3. Furniture, Equipment, and Leasehold Improvements

Furniture, equipment, and leasehold improvements consist of the following at December 31, 2001 and 2000:

	2001	2000
Furniture	\$382,491	382,491
Equipment	1,926,540	1,879,917
Automobiles	54,200	43,856
Leasehold improvements	250,700	222,820
	<b>2,613,931</b>	<b>2,529,084</b>
Less accumulated depreciation and amortization	(1,612,677)	(1,340,074)
	<b>\$1,001,254</b>	<b>\$1,189,010</b>

##### 4. Notes Payable

At December 31, 2001 and 2000, the Organization's notes payable outstanding are as follows:

DUE DATE	INTEREST RATE	AMOUNT
2001:		
January 7, 2002	2.65%	\$6,000,000
January 14, 2002	2.41%	1,000,000
January 24, 2002	2.45%	4,000,000
January 24, 2002	2.45%	4,000,000
		<b>15,000,000</b>
2000:		
February 9, 2000	6.72%	\$6,000,000
February 22, 2000	6.72%	5,000,000
March 12, 2000	6.72%	4,500,000
		<b>\$15,500,000</b>

Interest expense on notes payable amounted to \$472,145 and \$738,689 in 2001 and 2000, respectively. These amounts were incurred in connection with the Heavy Fuel Oil activities of the organization, as such, this interest expense is included in Heavy Fuel Oil in the statement of activities.

The above notes payable are collateralized by certificates of deposit which are included in cash and cash equivalents and are valued at approximately \$19,000,000 at December 31, 2001 and 2000.

##### 5. Pension Plan

The Organization has a money purchase defined contribution pension plan covering substantially all employees. Employees become eligible to participate after three months of service.

The Korean Peninsula Energy Development Organization

Year ended December 31, 2001  
(with summarized financial information as of December 31, 2000)

	2001	2000
Commodity, freight and demurrage	\$90,654,986	\$77,198,979
Interest	472,145	738,689
Technical services—flow meters	519,492	588,158
Freight forwarding service fees	75,196	95,065
Insurance	131,586	104,778
Depreciation	151,807	151,796
Other	15,874	14,562
<b>Total expenses</b>	<b>\$92,021,086</b>	<b>\$78,892,027</b>

The organization contributes, with a trustee, an amount equal to 16.667% of an employee's annual compensation. Employees vest immediately in the organization's contribution. The plan is fully funded by the Organization. Pension expense for the years ended December 31, 2001 and 2000 amounted to \$784,868 and \$727,192, respectively.

**6. Temporarily Restricted and Permanently Restricted Net Assets**

Temporarily restricted net assets were released from restrictions for the following purposes during 2001 and 2000.

	2001	2000
Administration	\$14,562,521	\$11,941,179
Heavy fuel oil	72,160,983	78,892,027
Project survey and other than heavy fuel oil	7,000	5,889
Imputed interest	33,529,537	16,239,208
Loan interest	3,849,989	2,177,647
Future period	635,524	20,015,609
	<b>\$124,745,554</b>	<b>\$129,271,559</b>

Temporarily restricted net assets at December 31, 2001 and 2000 were available for the following purposes or for future periods:

	2001	2000
Collateral	\$19,000,000	\$19,000,000
Administration	8,359,369	9,238,890
Site survey	236,494	236,494
Project survey and other than heavy fuel oil	1,162,676	1,169,676
Loan interest	617,024	273,426
Future period	17,710,000	14,983,624
	<b>\$47,085,563</b>	<b>\$44,902,110</b>

**7. Lease Commitments**

The Organization rents office space in New York City under a lease agreement which expires on September 30, 2005. Rent expense for the years ended December 31, 2001 and 2000 was \$745,296 and \$537,196, respectively.

The future minimum lease payments at December 31, 2001 follows:

YEAR ENDING DECEMBER 31	AMOUNT
2002	\$719,652
2003	730,726
2004	746,451
2005	543,152
	<b>\$2,739,981</b>

**8. Light-Water Reactor Project**

Under a Preliminary Works Contract ("PWC") signed in 1997 between the Organization and Korea Electric Power Corporation ("KEPCO"), the prime contractor, the Organization began capitalizing costs related to the construction of the LWR Project which included site activities for grading and infrastructure development under the PWC. On December 15, 1999, the Organization and KEPCO signed the Turnkey Contract ("TKC"), which became effective on February 3, 2000 and supercedes the PWC and will govern the entire scope of the LWR project under which the light-water reactor plants will be designed, constructed, and commissioned under the terms of the Agreed Framework discussed in note 1. Capitalized costs will not be depreciated due to the fact that the Government of the DPRK, under the Supply Agreement, will repay the LWR project (see note 1(e)).

**9. Loans Payable**

To finance the preliminary construction of the LWR Project, the Organization entered into an interest-free loan facility agreement in 1998 ("Loan Facility A") with a bank to borrow up to \$45,000,000. The amount outstanding at December 31, 1999 of \$44,736,393 was paid in full on February 24, 2000 through a disbursement from Loan Facility B.

On December 15, 1999, the Organization entered into another interest-free loan facility agreement ("Loan Facility B") with the same bank to borrow up to 3.542 trillion Won (which is equivalent to \$2,697 million at December 31, 2001). The amount of Loan Facility B will be adjusted, as necessary, to ensure that the total equals 70% of the Actual Costs of the LWR Project, as defined in the agreement. The proceeds of Loan Facility B are to be used to finance the construction of the two LWR units. The amount of the loan will be allocated to both LWR units. The loan is due in 34 equal semiannual installments after a certain grace period following the completion of each LWR unit. Total disbursements made from Loan Facility B as of December 31, 2001 and December 31, 2000, amounted to \$476,756,744 and \$257,677,449, respectively. Imputed interest of \$33,529,537 (an interest rate of 9.17% as provided by the Government of Republic of Korea) and \$15,566,446 (an interest rate of 9.98% as provided by the Government of Republic of Korea) on the loan has been reflected as revenues-contributed and imputed interest and Light-Water Reactor Project interest expense in the statement of activities for the year ended December 31, 2001 and December 31, 2000, respectively.

On January 31, 2000, the Organization entered into a loan facility agreement ("Loan Facility C") with another bank to cover additional costs of the LWR Project. Loan Facility C allows the Organization to borrow up to ¥116.5 billion (which is equivalent to \$885 million at December 31, 2001.) The interest rate is, as defined, the higher of the Japanese-yen long-term prime rate less 0.2% or the Fiscal Investment and Loans Program Rate. The interest rate in effect was, 1.90% as of December 31, 2001. Interest is payable on each February 16 and August 16. Interest expense for this loan amounted to \$3,849,989 and \$2,177,647 for the year ended December 31, 2001 and December 31, 2000, respectively. In a separate agreement, the Government of Japan has agreed to extend a grant to the Organization to pay the interest, of which \$4,193,587 and \$2,449,823 was received during 2001 and 2000, respectively and is included in revenues-contributed and imputed interest in the statement of activities. The amount of the loan will be allocated to both LWR units. The loan is due in 34 equal semiannual installments after a certain grace period, as defined, following the completion of each LWR unit. The balance outstanding amounted to \$206,765,198 and \$143,506,777 as of December 31, 2001 and December 31, 2000, respectively.

**10. Due to Contractor**

Amounts due to contractor of \$50,198,228 as of December 31, 2001 and \$51,279,207 as of December 31, 2000 represent unpaid invoices for costs associated with the TKC between the Organization and KEPCO. The balances were paid in January and February in the following year, in accordance with the procedures set forth in the TKC. ■

## Appendix 3: HFO Deliveries

### 2001 Deliveries

MONTH OF DELIVERY	AMOUNT DELIVERED IN METRIC TONS	TOTAL COST (COMMODITY PLUS FREIGHT)	COST PER METRIC TON
January	54,319	8,757,246	158
February	55,787	10,044,760	180
March	54,319	8,575,246	164
April	54,782	9,085,295	166
May	53,827	9,526,182	177
June	53,998	9,239,388	171
July	44,877	7,326,238	163
August	42,002	6,468,407	154
September	45,173	7,423,735	164
October	46,109	7,540,220	164
November	-	-	-
December	54,271	6,478,523	120
<b>Totals</b>	<b>559,613</b>	<b>90,654,986</b>	<b>162</b>

Other (Marine insurance and freight forwarding services): \$206,782

**Total Cost: \$90,861,768**