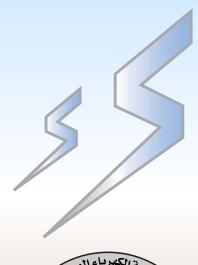
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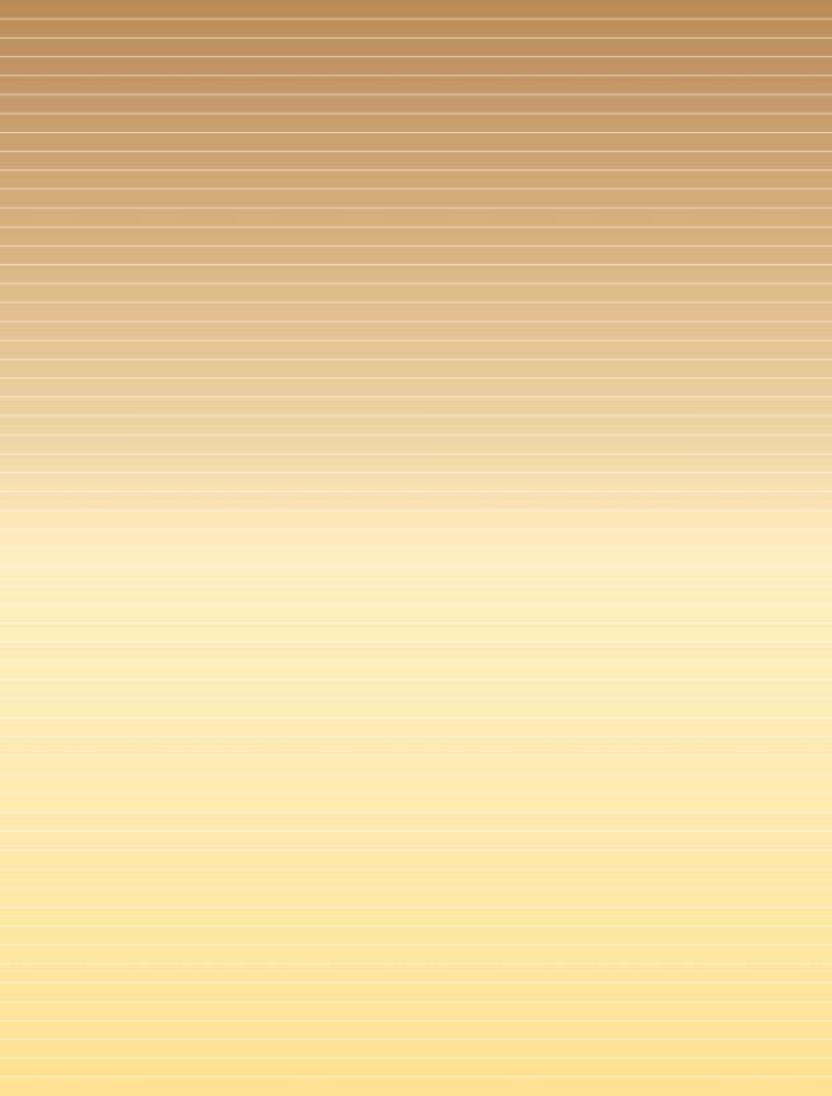
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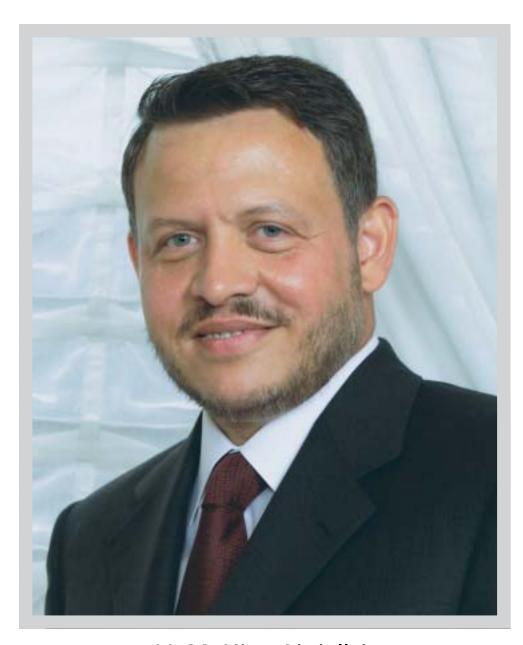




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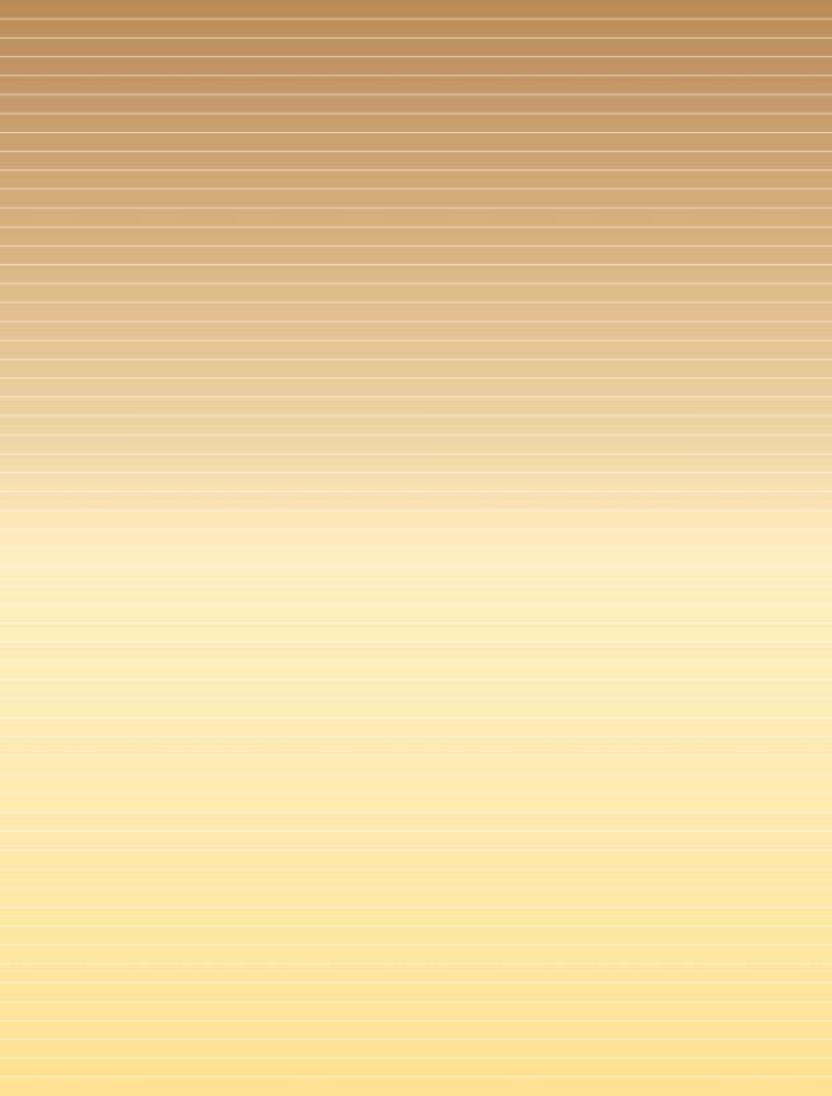
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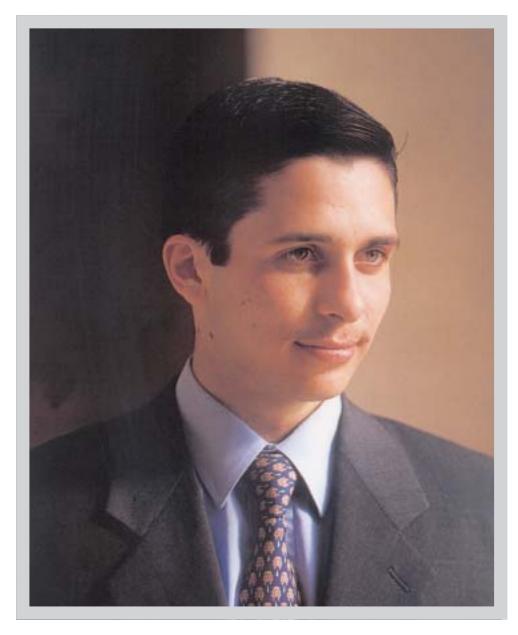




H. M. King Abdullah The Second Ben AL-Hussein

Chairman and Board Members of the National Electric Power Company are Honoured to submit the 37th Annual Report of the Year 2003 to His Majesty King Abdullah The Second Ben Al-Hussein.





H.R.H Crown Prince Hamzeh Ben Al- Hussein

## **Board of Directors**

### Chairman



H.E. Wa'el Sabri Until 4/10/2003



H.E. Daud Khalaf From 5/10/2003

### Members



H. E. A. Khreisat Vice Chairman Until 4/10/2003



Eng. Khaldoun Qutishat Vice Chairman Secretary General of Ministry of Energy & Mineral Resources From 8/4/2003



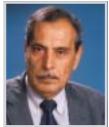
Mr. Ibrahim Al-Dwairi General Director of Budget Department



Mr. Salem Al-Khazaleh Companies Controller / Ministry of Industry and Trade Until 7/9/2003



Mr. M. Zahran Private Sector Until 7/4/2003



Mr. Rashed Al-Tenah Former General Director of Central Electricity Generating Electrification Manager Company



Mr. Ali Al-Bakhit Jordanian Rural



Dr. I. Al-Khawaldeh General Director of NTTI From 1/10/2003



Dr. M. Al-Zoubi Head of Open Market Operations Division / Central Bank of Jordan From 5/10/2003

### Managing Director of NEPCO

Dr. Ahmad Hiyasat



**Auditors** 

Messrs SABA & Co.

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## Abbreviation

NEPCO	Notice of Electric Descent Commence
	National Electric Power Company
CEGCO	Central Electricity Generating Company
EDCO	Electricity Distribution Company
JEPCO	Jordan Electric Power Company
IDECO	Irbid District Electricity Company
HTPS	Hussein Thermal Power Station
QAIA	Queen Alia International Airport
S/S	Substation
G.N.P	Gross National Product
P.S	Power Station
ATPS	Aqaba Thermal Power Station
T.T.O.E	Thousand Ton of Oil Equivalent
G.T	Gas Turbine
O/H	Overhead Line
p.a	per annum
H.F.O	Heavy Fuel Oil
Kgoe	Kilogram of oil equivalent

## Measures

JD	Jordan Dinar (10 <sup>3</sup> Fils)
$\mathbf{kV}$	Kilovolt (10 <sup>3</sup> Volt)
kVA	Kilovolt Ampere (10 <sup>3</sup> Volt Ampere)
MVA	Mega volt Ampere (10 <sup>3</sup> kVA)
$\mathbf{kW}$	Kilowatt (10 <sup>3</sup> Watt)
$\mathbf{MW}$	Megawatt (10 <sup>6</sup> Watt)
kWh	Kilowatt-hour (10 <sup>3</sup> Watt-hour)
MWh	Megawatt-hour(10^6 Watt-hour)
km	Kilometer (10 <sup>3</sup> Meter)
GWh	Gegawatt-hour (10^9 Watt-hour)

## Message from the Managing Director

National Electric Power Company (NEPCO) continued its strenuous efforts in providing its electrical services effectively by following all operational procedures and preventive and annual routine maintenance for all components of the transmission network and substations.



During 2003, NEPCO constructed and expanded main substations 400/132, 132/33 kV and the national grid of 400, 132 kV and developed the interconnection networks with the neighbouring countries with the aim of meeting the increasing

electric loads and the electricity needs of all consumers with high continuity and reliability.

In spite of what was accomplished during the year and the previous years, which enabled NEPCO to meet the increasing electrical demand, NEPCO management is still looking forward to attaining more achievements in the future to maintain the continuity of electric supply. It aims to meet the goals of comprehensive development and economical growth in the Kingdom. This comes as a translation of the policies and directions of the Government.

On the occasion of releasing NEPCO's annual report of 2003, I have the pleasure to convey my thanks to his excellency the Chairman of the Board of Directors and the Board members for their great Cooperation and support. Also my thanks and gratitude to all my colleagues, wherever they are, for their fruitful efforts which led to upgrading the Company's efficiency and putting it on the list of distinguished companies in the country.

Meanwhile, I ask the Almighty God to guide us in the service of the country and the citizens under the leadership of His Majesty King Abdullah the Second.

Dr. Ahmad Hiyasat

**Managing Director** 

### Energy and Electricity in 2003

The government continued the completion of the procedures of privatizing the electricity sector of Jordan. This aims at the necessity of activating and developing the role of the private sector in this field and to meet the increasing demand for electricity in the coming years, which requires big investments.

To achieve this goal, the government designated a consultancy company to study the requirements of completing the privatization of the electricity companies. The privatization process will include (60%) of Central Electricity Generating Company (CEGCO), (100%) of Electricity Distribution Company (EDCO) and the government's share in Irbid District Electricity Company (IDECO) which amounts to (55.4%). The government will supervise all the procedures and steps taken in this regard through a steering committee chaired by the Minister of Energy and Mineral Resources. This Committee includes representatives of all the related sectors.

The consultant completed the first stage of the study exemplified in preparing the strategy of privatization as the final report was issued in September 2002. After the government's approval on the first stage of the study was obtained, the consultant started working on the second stage which is the selling process. This stage includes preparing the draft bidding documents and

pre-qualification of investors in addition to the draft agreements necessary for selling the companies. Upon the government's approval, the tender will be issued in mid 2004 as expected.

The year 2003 witnessed the official inauguration of the first stage of the project of the Jordanian-Egyptian gas pipeline, by his Majesty King Abdullah the Second and his Excellency President Mohammad Husni Mubarak of Egypt. The event took place on 27/7/2003. The gas pipeline of (268) km length extends from Al-Arish in Egypt to Aqaba in Jordan through Aqaba Gulf.

The second stage of the project, which is expected to be completed in mid 2005, aims at constructing a pipeline to transmit and market the Egyptian natural gas inside Jordan to meet its needs and supply the electricity generation companies, the large industries and the other sectors.

This pipeline of (380) km length extends from Aqaba city to Rehab power station in the north of Jordan. This will be followed by the third stage to export gas to Lebanon through Syria. The natural gas will be exported in future stages to Turkey and from there to Europe.

Natural gas combustion was started at the third unit of Aqaba Thermal Power Station in August 2003, followed by the fourth and fifth units in September and October respectively. Working is



His Majesty King Abdullah The Second Ben AL-Hussein and His Excellency The President Mubarak inaugrated the First stage of the Jordanian - Egyption gas pipeline

going on to convert the first and second units to utilize natural gas instead of heavy fuel. This work is expected to be completed in February and May 2004 respectively.

Compared to 2002, the year 2003 witnessed a slight improvement in the growth of some of the economical sectors accompanied by a moderate growth in the demand for electricity since the growth of the generated and imported energy was about (6.1%), and a growth of (1.3%) in the electrical loads against (8.2%) for generated and imported electrical energy and (12.4%) for the electrical loads during 2002. The decrease in the two growth rates is due to the conditions that prevailed in the area which had a great effect on the economical situation of the country.

During 2003, NEPCO carried out a number of activities in the fields of operation, annual routine and preventive maintenance for all the components of the transmission networks and substations. The Company started the process of substituting the old equipment and making retrofit maintenance for some equipment through experts from the manufacturer, in addition to introducing the data bank system and computerizing the maintenance works.

This comes out of the Company's keenness on playing its role fully alongside the other electricity companies working in the fields of generation and distribution in order to face the increasingly electrical loads and meet the needs of all consumers.

The available capacity of the Jordanian electric power system in 2003 amounted to about (1643) MW which provided a sensible generation reserve. But the procedures of converting the steam units working at Aqaba Thermal Power Station to combust the natural gas imported from Egypt instead of heavy fuel necessitated to alternate the suspension of the steam units. The decrease in the amounts of domestic natural gas extracted from Al-Risha led to suspending one of the operational gas turbines temporarily. All these created the need to increase importing electrical energy from the Egyptian side. The imported energy from Egypt in 2003 was (972) GWh against (322) GWh in the previous year.

To meet the increasing growth in demand on electricity in the kingdom, work is progressing now to convert Rehab power station to a combined cycle combusting natural gas, CEGCO added one steam turbine of (100) MW capacity to raise the total capacity of the station to (360) MW. This project is expected to be completed in the beginning of 2005. In addition to this project, a generating station of combined cycle will be constructed at Al-Samra with a generation capacity of (300) MW. The gas part of this station with a capacity of (200) MW is expected to be operational in mid 2005, and the steam part in the first half of 2006.

NEPCO continued work to achieve its stated mission to develop the national grid and the electric interconnection with neighboring



Ishtafina 132/33 kV S/S

countries, while paying attention to the standards of quality, public safety and environment, to purchase electrical energy from different sources and transmitting and selling this energy to the distribution companies, and the bulk supply consumers supplied from the national grid all over the country and exchange the electrical energy with the other countries through importing and exporting. To achieve this goal, NEPCO updated, by the end of the year, the contract agreement to exchange the electrical with the Egyptian Electricity Transmission Company for meeting the country's needs of electrical energy within the available limits during the year.

To secure the continuity of the electricity supply for the consumers, NEPCO constructed and expanded the main substations of 400/132/33 kV and 132/33 kV, and 132 kV and 400 kV transmission lines needed for connecting the main substations.

The added transforming capacities in this year, were (663) MVA and the added transmission lines were (309) km-circuit, in addition to many transmission projects, constructing new main substations and expanding the existing substations.

#### Jordanian Economy

The preliminary economic indicators showed that the Jordanian economy in 2003 was able to continue its growth as a result of the policies, procedures and measures taken by the government to tackle the structural disorders and provide the suitable environment for investment, in addition to its strenuous effort to overcome the prevailing circumstances in the area. The growth rate of the gross domestic product amounted to about (2.8%) in fixed prices. The general level of prices achieved a satisfactory stability as the cost of living index was (110.7%) against (108.2%) in 2002, which means that the inflation rate did not exceed (2.31%). The Jordanian dinar maintained its stability in the exchange rate against the dollar.

### Demand for Primary Energy

The demand for primary energy in 2003 was (5.829) million tons of oil equivalent (M.T.O.E), which means a growth rate of (10.0%) against a growth rate of (2.9%) in 2002 (table No. 5)

The average per capita consumption of primary energy in 2003 was about (1064) kg of oil equivalent (kgoe) against (994) kgoe in 2002.

The electricity sector ranked first in primary energy consumption. Its consumption share was

(34.1%) of the total primary energy consumed in 2003 against (36.7%) in 2002 (table No.11). This means that the electricity sector share of energy constitutes a high ratio of the total consumption, because it is more efficient, clean and easily used, in addition to its wide-spread distribution as it is available to more than (99.9%) of the Kingdom's population.

It is worth mentioning that CEGCO is the largest consumer of primary energy in the electricity sector, having consumed about (92.9%) of the total fuel used in electricity generation in 2003 against (92.6%) in 2002.

#### Demand for Electricity

Demand for electricity continued rising in 2003 where the total peak load in the Kingdom was (1428) MW in 2003, against (1410) MW in 2002, with a growth rate of (1.3%).

The peak load of the interconnected system was (1387) MW in August 2003, against (1370) MW in July 2002, with a growth rate of (1.2%) (table No. 12).

The generated and imported electrical energy in the Kingdom was (8966) million kWh in 2003, against (8454) million kWh in 2002, with a growth rate of (6.1%). The electricity production of the interconnected system was (8651) million kWh with a growth rate of (6.1%) against (7%) in 2002 (table No. 9).

CEGCO contributed (93.42%) of the total generated electricity in 2003, while the other parties contributed about (6.58%) of the total production.

Electricity consumption in the Kingdom amounted to (7346) million kWh in 2003, against (6906) million kWh in 2002 (tables 13 and 14), which means an annual increase of (6.4%) against (8%) in 2002.

Average per capita consumption of electricity was (1636) kWh in 2003 against (1586) kWh in 2002.

The sectorial distribution of electricity consumption in 2003 was as follows:

Sector	Consumption (GWh)	Sector Weight (%)
Industrial	2310	31.5
Domestic	2471	33.6
Commercial	1047	14.3
Water Pumping	1104	15.0
Others	414	5.6
Total	7346	100.0

#### Consumers

NEPCO and the electricity distribution companies: JEPCO, IDECO and EDCO continued to meet the needs of the new consumers by connecting (45) thousand new consumers in the Kingdom during 2003, against (52) thousand new consumers in 2002. The total number of consumers, by the end of 2003, was (1014) thousand consumers against (969) thousand in 2002, with a growth rate of (4.6%) against (5.7%) in 2002 (Tables No. 18 and 19). The number of consumers in JEPCO concession area, by the end of 2003 was (660) thousand, against (630) thousand in 2002. consumers were (226) thousand, against (216) thousand in 2002, while EDCO consumers were (128) thousand, against (124) thousand in 2002.

#### Electric Power System Projects

All the parties concerned with the electric power system development, namely MEMR, CEGCO, NEPCO and the distribution companies, continued their efforts to develop the generation capacities, transmission and distribution networks.

The most important achievements and activities in this field in 2003 can be summarized as follows:

#### Generation Projects

To meet the expected increasing demand for electrical energy in the Kingdom, in the coming years, CEGCO worked on converting Rehab Power station to a combined cycle unit burning natural gas by adding one steam turbine with a capacity of (100) MW. This will make the station's total capacity (360) MW of which, (300) MW combined cycle set and (60) MW gas turbines. The offers of the combined cycle set were received in the fourth quarter of 2002. The tender was awarded in April, 2003. expected to start commercial operation in the first quarter of 2005, which will work temporarily using diesel oil until the arrival of natural gas imported from Egypt to the centre and north of the Kingdom, which is expected to be in mid 2006.

Work continued on, in 2003, to make the necessary adjustments on ATPS to convert it to burn the natural gas instead of heavy fuel. However, such work has been commenced by the end of the year 2002 by shutting down the

generation units consequently for a period of three months to each unit to make the necessary adjustments on them. A time table was set for shutting down these units outside the summer period of 2003 to maintain the availability of the generation units during this period in order to avoid any shortage in the generation capacity. Three generation units were adjusted in 2003 and they now burn natural gas. Conversion of the two remaining units is expected to be completed in mid 2004.

In the light of discovering new quantities of natural gas in Al-Risha area, July 2003 witnessed re-operation of the fourth gas turbine at Al-Risha Power Station which was shut down because of the lack of sufficient quantities of gas. The government decided to commission CEGCO to add a fifth gas turbine of (30) MW at Al-Risha Power Station to utilize the newly discovered quantities of gas. The offers for the tender of the fifth gas turbine at Al-Risha will be received in January 2004. Awarding the tender is expected in May 2004, while the commercial operation of the turbine is expected in the summer of 2005.

#### Samra Generation Project

The Cabinet decided before the end of 2002 to commission CEGCO to carry out Al-Samra Power Station project, with a capacity of (300) MW, as a combined cycle burning natural gas. CEGCO began preparations to carry out the project and an international consultant was assigned for the project. The tender was issued in June 2003 where six offers were received in December 2003. Awarding the tender is expected in May 2004, while the project is expected to be in operation as a simple cycle in the summer of 2005 and in mid 2006 as a combined cycle.

#### The First Private Generation Project

The Ministry of Energy and Mineral Resources made the necessary preparations and arrangements to construct an electricity power generation station using the technology of combined cycle burning natural gas as a basic fuel to meet the increasing future demand for electrical energy.

An International consultant was employed in March 2002 to help in preparing the tender documents and agreements for the project which will be carried out on B.O.O. basis, with a generation capacity of (300-350) MW. The tender documents for the project were prepared while the tender is expected to be issued in mid 2004. This station is expected to be in operation as a simple cycle in the summer of 2007 and as a combined cycle in the summer of 2008.

#### Importing natural gas from Egypt

The government commissioned NEPCO to purchase natural gas from the project's Company (Fajr) and selling it to all the electricity power stations in the Kingdom. NEPCO began playing its role in this field as it is now selling gas to CEGCO to supply ATPS and paying the bills of Al-Sharq Gas Company (which implemented the Egyptian pipeline). This is being done upon temporary procedures, until the developer of the gas project (Fajr) plays its role after getting the license from the Jordanian government.

Since the inauguration of the Jordanian-Egyptian gas pipeline which was in July 2003, the burning of natural gas started at the third unit of ATPS in August 2003, followed by the fourth and fifth units in September and October of the same year respectively. Work is currently progressing to convert the first and second units to burn natural gas instead of heavy fuel. The first and second units are expected to start burning natural gas in March and May 2004 respectively. Out of the belief of NEPCO's

management in the importance of qualification and preparation of the staff to be able to go along the developments in the different fields of work, it delegated 23 employees of technical, legal and financial specializations to the Egyptian company (GASCO), which is responsible for management and operation of the natural gas network in Egypt, to have training on the affairs concerning importing and utilizing gas.

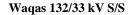
### Projects of Utilizing the Local Energy Sources in Electricity Generation

#### Natural Gas at Al-Risha:

The year 2003 witnessed the discovery of new quantities of natural gas which can be extracted and utilized from Al-Risha gas field. The extracted quantities of natural gas in 2003 increased to (288.1) million cubic meter against (254) million cubic meter in 2002 with a growth of (13.4%). The quantities of energy generated at Al-Risha Power Station increased to (744.2) GWh against (678) GWh in 2002 with a growth rate of (9.8%). This growth was a result of operating the fourth gas turbine as from July 2003. This turbine was on stand-by during 2002 and the first half of 2003 due to the non-availability of enough quantities of gas in that time.

#### Wind Energy:

The offers for constructing two power stations working on wind energy were evaluated.





The first wind form is in Al-Fjeij in Shobak area in Ma'an Governorate while the second is in Wadi Araba area. The installed capacity is (30) MW for each power station. The project will be built on a (B.O.O) basis by the private sector and under the supervision of MEMR. The total investment cost for the project is about (60-70) MUS \$.

#### Biogas:

The power station in Ruseifa area, which works on biogas, continued generation of electrical energy in a normal way during 2003 with a capacity of (1000) kW. There are plans to increase this capacity in the near future to (6000) kW.

#### NEPCO's Activities

NEPCO continued carrying out the missions assigned to it which achieve the following objectives:

- \* Construction, planning, development, operation, maintenance and management of the control systems and the transmission and electric interconnection networks.
- \* Management of the processes of purchasing, transmitting, control and selling the electrical energy inside Jordan and to the neighboring countries, in addition to conducting the planning studies in this regard.
- \* Providing services, consultancy and studies related to the electrical energy to variant parties inside and outside Jordan.
- \* Setting a comprehensive quality system for all NEPCO's activities and following up its implementation and developing it.
- \* Conducting planning studies on the electric system's needs of generation capacity, main substations and transmission lines.
- \* Purchasing the natural gas needed by the power stations and selling it to the generation companies.

In the year 2003, NEPCO was able to implement many transmission projects, in addition to carrying out various essential activities aiming at promoting and developing the national transmission network. It also started implementing another number of projects which will be completed in the coming years. The projects and activities of NEPCO can be summarized as follows:

### \* Projects of Enhancing the Electricity Supply Points to the areas of the Distribution Companies

To enhance the main electricity supply points

to the areas of the distribution companies, NEPCO implemented the following projects:

- Constructing Waqas substation of 132/33 kV, 2x63 MVA (outdoor type), double busbar of 132 kV, and a set of capacitor banks in addition to a double circuit overhead transmission line of 132 kV feeding this substation and coming from Subeihi Substation of 132/33 kV with a length of 60 km passing through Ishtafina Substation. This project aims to enhance feeding IDECO and EDCO networks in the Northern Ghor as well as the water pumping projects of the Water Authority in that area. The cost of the project was JD (6.5) million including the cost of the transmission line and the substation. The project was electrified on 22/12/2003.
- Constructing Ishtafina Substation of 132/33 kV with a capacity of 2x40 MVA (outdoor type), with a single outdoor busbar of 132 kV. This substation will be fed by the 132 kV overhead transmission line, extending between Subeihi Substation and Waqas Substation. This project aims to enhance the electric supply to IDECO network, reduce the electric loads on some of the existing substations and enhance the supply to EDCO network in the mid Ghor area. The estimated cost of the project is about JD (2) million. The project was electrified on 28/1/2004.
- Expanding Queen Alia International Airport Substation of 132/33 kV by adding two transformers of 2x80 MVA with the necessary bays of 132,33 kV and a set of capacitor banks. This project aims to enhance the electric feeding of JEPCO network. The cost of the project was JD (1.9) million and it was electrified on 28/12/2003.
- Expanding Ma'an Substation of 132/33 kV by adding a transformer of 16 MVA and switchgear panels of 33 kV. This project aims to supply Al-Hussein Ben Talal University in Ma'an and water pumping project in Wadi Mousa, which belongs to the Water Authority. The cost of the project was JD (0.42) million. It was electrified on 18/9/2003.
- Expanding Qatraneh substation of 132/33 kV, by adding six indoor bays of 33 kV. The cost of this project was JD (0.3) million. It was electrified on 23/3/2003.
- Expanding Rashadieh Substation of 132/33 kV, by adding a transformer with a capacity of 16

MVA and switchgear panels of 33 kV. This project aims to separate EDCO's feeders of Tafileh and Shobak from the feeders of Rashadieh Cement Factory. The cost of this project was JD (0.95) million. It was electrified on 10/8/2003.

- Expanding Al-Hasa Substation of 132/33 kV, by adding a 33 kV bay to feed the water pumps, in that area. The cost of this project was JD (0.16) million. It is expected to be completed and electrified in the third quarter of 2004.
- Expanding Al-Azraq Substation of 132/33/11 kV, by adding four transformer bays of 33 kV and the feeder of Al-Omari border post, in addition to a bay for the 33 kV busbar section with the aim to enhance feeding the distribution companies areas. The estimated cost of this project is about JD (143) thousand. It is expected to be completed and electrified in the second quarter of 2004.
- Expanding Ghor Al-Safi Substation of 132/33 kV, by adding two bays of 33 kV for the feeders of Ghor Al-Safi and Al-Mazra'ah. The cost of this project is about JD (133) thousand. It was electrified on 18/2/2004.
- \* Projects of Providing Electric Energy to the Industrial Estates and Large Industries

NEPCO constructed new substations of

132/33 kV, expanded existing substations of 132/33 kV and constructed transmission lines of 132 kV to supply the Industrial Estates and large consumers. NEPCO carried out the following projects:

- Constructing Al-Hassan Industrial Estate Substation 132/33 kV with a capacity of 2x80 MVA (outdoor type) with 132 kV outdoor double busbars. This project aims mainly to supply Al Hasan Industrial Estate, in addition to enhance feeding IDECO network. This substation was completed and electrified in June 2003. It was fed temporarily by opening one of the two overhead transmission line circuits, Rehab-Irbid of 132 kV. The double circuit transmission line of 132 kV (53) km length, originating from Amman North Substation 400/132 kV was completed, and it will feed this substation permanently. The line is expected to be electrified in the second guarter of 2004. The overall cost of the project and the feeding 132 kV overhead transmission lines, was JD (8.4) million.
- Constructing Aqaba Industrial Estate Substation of 132/33 kV with a capacity of 2x80 MVA, thirteen 132 kV bays, eleven 33 kV bays and capacitor banks. This substation aims to meet the increasing demand for electric energy in Aqaba area, in addition to feeding Aqaba Indsutrial Estate and King



400 kV Transmission line between Amman South and Aqaba Substations

- Hussein International Airport. The cost of the project was JD (9.73) million. It was completed and electrified on 20/4/2003.
- Expanding Al-Karak Substation of 132/33 kV by adding a transformer with a capacity of 25 MVA and switchgear panels of 33 kV. This project aims to supply Al-Karak Industrial Estate. The cost of the project was JD (0.98) million. It was electrified on 3/8/2003.
- Expanding Aqaba Substation (A2) of 132/33 kV, by adding five 132 kV busbars with a 132 kV double circuit transmission line with a length of (11) km, coming from Aqaba Substation (A2). The cost of this project was JD (1.7) million. It was completed and electrified on 22/2/2003.

### \* Projects of connecting the power stations

- Expanding Al-Risha Substation 132/11 kV by adding a 132 kV bay and a 132/11 kV transformer with a capacity of 12.5 MVA. This project aims to improve the performance of the network and increase the capability of utilizing the full power output of Al-Risha power station in case of the availability of enough gas to operate five gas units at the station. The estimated cost of the project is about JD (0.50) million. It was electrified on 11/3/2004.
- Expanding Rehab and Zerga and Al-Hassan Industrial substations 132/33 kV, four 132 kV constructing overhead transmission circuit bays and the combined cycle circuit bay at Rehab Substation and constructing two bays at Zerqa substation, in addition to replacing other electric equipment at the substation. This project aims to enhance the National Grid and increase its reliability and stability. The tender was awarded in July 2003. Expanding Zerqa Substation is expected to be completed in the third quarter of 2004, while expanding Rehab Substation and Al Hassan Industrial Substation is expected to be completed in 2004. The estimated cost of this project is about JD (3) million.
- A tender was issued to construct a 400 kV substation and a 400 kV 30 km double circuit transmission line to connect Al-Samra power station of 300 MW capacity with Amman North Substation 400/132 kV. The tender of the transmission line was awarded and it is

under construction. The total cost of the project is estimated at JD (25) million. It is expected to be completed and electrified in mid 2005.

#### \* Projects of Substations of 400/132/33 kV and Overhead Transmission Lines of 400 kV

- Constructing a 400 kV double circuit overhead transmission line to connect Qatraneh Substation of 400/132 kV with the existing 400 kV transmission line connecting Aqaba with Amman South, by breaking this line near Qatraneh Substation, and passing through it and then exiting via 400 kV overhead lines with a length of about (2.2) km. This project aims to increase the stability of the existing transmission line (Aqaba Amman South 400 kV) .The cost of this project was JD (0.62) million. It was completed on 6/12/2003.
- The tenders concerning the project of enhancing the 400 kV transmission network were awarded, with an estimated cost of JD (22) million comprising:
- Constructing Qatraneh Substation of 400/132/33 kV with a capacity of 2x240 MVA, six 400 kV bays, 33 kV capacitor banks with a capacity of 4x20 MVAr and 33 kV reactors of 2x25 MVAr capacity.
- Expanding Amman North Substation 400 kV by adding two transformers of 400/132/33 kV with a capacity of 400 MVA each, two 400 kV bays, 15 indoor double 132 kV busbar bays and 33 kV capacitor banks with a capacity of 2x20 MVAr.
- Expanding Amman South Substations of 400/132/33 kV by adding 33 kV capacitor banks with a capacity of 2x20 MVAr.

This project is considered one of the important projects to increase the capacity of electric energy exchange with the neighbouring countries, to meet the growing industrial and ordinary electric loads and improve the performance of the power system. This project is expected to be completed and electrified in the third quarter of 2004.

#### \* Projects of Underground Cables

Due to the escalating problems of transmitting electric energy over burdened cities, resulted from the difficulty of finding safer corridors for constructing new 132 kV transmission lines, and in

light of the urgent need for replacing some of the existing 132 kV overhead lines with underground cables of 132 kV, NEPCO decided to utilize the technology of 132 kV underground cables along with the overhead transmission lines. In the beginning of 2003, a tender was issued to construct about (21.5) km of underground cables, with an estimated cost of JD (17) million. The project is expected to be in operation during the year 2006 and it includes the following works to be made:

- Replacing the existing overhead lines between Tareq Substation and Al-Bayader Substation with 132 kV double circuit underground cables with a total length of (14) km.
- Connecting Amman South Substation and Abdoun Substation with 132 double circuit underground cables with a total length of (7.5) km.

## \* Project of energy measuring systems and billing centres with CEGCO

This project comprises providing, installing and operating the systems of electric energy metres between NEPCO and CEGCO. This project covers the power stations of Aqaba, Karak, Amman South, Rehab, Marka, Al-Hussein and Al-Risha in addition to establishing a billing centre at the National Control Centre of NEPCO and another billing centre at the headquarters of CEGCO with a cost of US\$ (130,000).

# Operating the Interconnected Electric System

#### a) Supervisory and Control System

NEPCO continued, during 2003, managing effectively the interconnected electric system in Jordan, and providing electricity in accordance with the adopted specifications from all the available sources (CEGCO, the Egyptian electrical interconnection) at a least economical cost while maintaining the security of the electric system. The operational studies necessary for the electric system were prepared, in addition to the operation manuals and implementing the required maintenance plans and making the necessary calculations in regard to the electric interconnection lines.

NEPCO continued the development of the control system of the National Control Centre, where 19 units of control equipment (RTU's) were provided with a cost of JD (580) thousand. Six of them were installed at a number of the main operating substations. Work is progressing to install the rest of the units. This project aims to secure the control equipment for the expansions of the National Grid, and connecting them with the Control Centre, in addition to replacing the old control equipment at the different substations.



Al-Hassan Industrial Estate 132/33 kV S/S

UPS equipments were provided, installed and operated at the Control Centre with a cost of JD (54) thousand. These equipments include two UPS with a capacity of 30 kVA each, linked to a set of batteries whose capacity can provide electric energy for two hours. These equipments will supply the exiting control system with electric energy in the case of a complete blackout on the National Grid. The year 2003 witnessed preparing a tender concerning the consultancy services for the project of developing the Control Centre/ the second stage. It is issued in the first quarter of 2004.

NEPCO installed, commissioned, maintained and operated the terminal control equipments for several substations. Maintenance works were made on the computer equipments and their auxiliaries and the systems of data communication and system data displaying units and maintaining the continuity of operating the control system and its programs.

Through self-driven efforts by NEPCO's staff and without any technical support from the manufacturer, the main control system was programmed to add two essential storage devices



132 kV Transmission line

which raise the level of data security. The main control system was also programmed to deal with the process of switching from winter to summer timing and returning automatically to the applied timing in Jordan.

#### b) The Telecommunications System

Due to the great importance of continued follow up of the technology developments in the communication systems, NEPCO carried out the following tasks:

- Plans for preventive and scheduled maintenance during 2003 for the communication equipment at NEPCO's various sites and substations.
- Completion of the project of installing a telephone switchboard for the new maintenance building at Amman South.
- Signing an agreement with Jordanian state universities to connect their electronic sites and operate their computer and Internet networks through NEPCO's optical fiber network.
- Connecting MEMR's new telephone switchboard with the switchboards of NEPCO, CEGCO and EDCO.
- Maintenance and operation of the communication channels of CEGCO and EDCO
- Project of supervision on installing developed digital carrier equipment in Iraq and operating them through ABB and Baily Controls Jordan.
- Project of connecting Al-Sharq Gas Company of Egypt with ATPS and the control centre of the gas company in Aqaba through NEPCO's optical fibre cables.

#### Electric Interconnection Projects

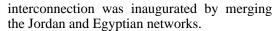
The most important achievements of NEPCO in the field of interconnection with the Arab neighbouring countries can be summarized as follows:

#### • The Seven Countries Electric Interconnection Project (EIJLLST)

This project aims to connect the electric networks of Egypt, Iraq, Jordan, Lebanon, Libya, Syria and Turkey. A brief on the work progress of the project is as follows:

#### The Jordanian - Egyptian Interconnection

- On 16/3/1999, the Jordanian - Egyptian electric



- Electric energy exchange continued between the two countries in 2003, where (972) GWh was imported from the Egyptian network to meet the Jordanian needs of electric energy during 2003, which led to several operational and economical benefits for the Jordanian network.
- An agreement was updated to exchange electric energy between the Jordanian and Egyptian sides in 2004. It was agreed also on the tariff of electric energy transmission (wheeling charges) through the networks of Egypt, Jordan and Syria which will lead to activating energy exchange between the interconnected countries.

## The Jordanian-Syrian Electric Interconnection

- This project was inaugurated and operated on 14/3/2001.
- Electric energy exchange between the Jordanian and Syrian networks continued during 2003 on the basis of return in kind. It is expected in 2004 to agree on the tariff of electric energy exchange between the two countries.

#### The Syrian-Turkish Interconnection

 Operation of the Syrian-Turkish interconnection is expected to be delayed until (UCTE) approves joining the interconnected seven countries to it which is expected to be in 2006.

## The Syrian-Lebanese Electric Interconnection

This interconnection link is expected to be operated in the second half of the year 2004.

#### General Activities of the Project of the seven Countries Electric Interconnection

The ninth ministerial meeting of their Excellencies the Ministers of Electricity and Energy of the six countries electric interconnection project was held in Damascus, in November 2003. Some of the most important decisions taken in the meeting were the following:

- Approval of Libya's official joining the six countries electric interconnection project and changing the title of the project to be the seven countries electric interconnection.
- Approval of the recommendations of the feasibility study of the establishment of a coordina-

tion control centre for the seven countries interconnection and the Arab Maghreb countries. The study was conducted by an international consultant to establish one coordinating control centre for the seven countries interconnection and the Arab Maghreb countries which will work on SCADA system. The Centre will be located in Egypt. It will work as an independent company owned by all the concerned countries. A technical-financial-legal committee will be formed to put its vision on the mechanism of establishing this company.

- To speed up the implementation of the Syria-Iraq and Iraq- Turkey electric interconnection projects.

## • The Electric Interconnection Project of the Mediterranean countries (MEDRING)

Through a consortium which includes the electric entities of some member countries of the European Union (Spain, France, Italy and Greece) and some countries of the Mediterranean region which are not members of the European Union (Jordan, Egypt, Syria, Algeria, Tunis and Turkey), NEPCO participated in conducting technical and economical feasibility studies for the electric interconnection of the Mediterranean countries. The final studies of the project have been completed and the final report was issued in mid 2003. The studies showed that the implementation of this project is feasible, technically and economically.

## • Project of Pan Arab Electric Interconnection

NEPCO participated with MEMR in preparing a draft scope of work to assign a consultant to carry out a comprehensive study on the Arab Electric interconnection in light of the existing and planned interconnection projects between the Arab countries and the neighbouring ones, and the preparation of the document of requesting the Arab funds to finance the study. This is based on the decisions of their excellencies the Ministers of Electricity and Energy, members of the executive office of the Council of the Arab Ministers concerned with the electricity affairs. The subject of this study was discussed at the meeting of the executive office which was held in Kuwait on 21/1/2003. An agreement was signed with the Arab Fund for Economical and Social Development to prepare a comprehensive report on the

Arab interconnection, based on the previous studies for the interconnection groups of the Arab countries and submit it to the General Secretariat of the Arab League.

#### **Planning Studies**

In the year 2003, NEPCO updated the study of electricity demand forecast for the period (2004-2020). This led to preparing the planning studies for the electric system's needs of generation capacities, and main 400/132 kV, 132/33 kV substations and the 400,132 kV transmission lines. NEPCO is also participating with the Egyptian Electricity Transmission Company, the Public Establishment Electricity Generation and Transmission in Syria and the Lebanese Electricity Company, to conduct an operational and planning study for the interconnected electric systems in Egypt, Jordan, Syria and Lebanon. This study is expected to be completed in the first half of 2004.

#### Load Research and Management

In the year 2003, NEPCO followed up the studies on electric load patterns of various groups of consumers, where new data on this field was acquired in addition to asserting the validity of the old data. NEPCO put plans for management of the electric system loads, a plan for energy conservation and a plan to utilize the sources of renewable energy for the coming years. These plans will be carried out after being thoroughly studied and approved.

#### Computer Technology

During 2003, NEPCO continued attaining many achievements in the field of the latest developments in computer technology and providing services for all the concerned parties inside and outside NEPCO. The most important achievements in 2003 can be summarized as follows:

- Starting implementation of the project of computer expansions, by providing, installing and operating a data integrated system with the aim of achieving a quality leap of information technology at NEPCO, based on an infrastructure of secured network and modern computers equipped with all the developed softwares.
- Starting implementation of the project of providing consultancy services in regard to establishing the Geographical Information System (GIS), funded by Swedish International

Development Cooperation Agency (SIDA).

- Holding internal and external advanced training courses in the field of information technology with the aim of utilizing this technology in light of the project of computer expansions and the quality leap of information technology at NEPCO.
- Developing, maintaining and updating the systems and software for all the financial, administrative and technical works of the three companies (NEPCO, CEGCO and EDCO).
- Conducting an overall and comprehensive maintenance for PC's (equipment, software and networks) which account to about 500. This work was carried out by the staff of the computer and informatics division.
- Management and maintenance of the Internet network for all the users at NEPCO and EDCO.
- Management of the computerization network of NEPCO and EDCO in addition to providing consultancy services to the computer network of CEGCO.

#### Quality and Public Safety

NEPCO continued its efforts to develop its services by adopting international systems for quality management and the safety of the staff and equipment. NEPCO carried out the following tasks during the year 2003:

- Following up the implementation of its quality system with the aim of carrying out the concept of extensive quality and setting out a system for quality auditing including the following aspects:
  - Technical aspect: continued following up of implementation of NEPCO's projects starting from the design and ending with final completion of work, securing the compliance with the most modern international and national specifications and standards and getting sure of carrying out the procedures through field visits to different sites of NEPCO.
  - Administrative aspect: following up the implementation of the organizational regulations, reviewing and updating them and getting sure of using the work forms at all sites of the Company.
- Enhancing the procedures of public safety by making tours to different sites of the company to get sure of the staff's compliance with the safety regulations and the availability and validity of

safety equipment, investigating the work injuries to discover their actual causes and prevent their occurance in the future, and make the necessary reports concerning the statics on the work injuries all over the sites of the Company in addition to providing guidance and warning signs on NEPCO's sites.

- Educating the staff in regard to the quality and public safety through lectures, seminars, courses and workshops.
- Continued paying attention to the scientific research by getting scientific material and the findings of studies and research through the pamphlets and papers issued by the international unions and societies which deal with electricity affairs, developing cooperation with the Jordanian universities in the field of scientific research in addition to holding lectures and seminars specialized in manufacturing equipment of electric systems and control systems.

#### Electric Training Centre

NEPCO's Electric Training Centre achieved the following tasks:

#### 1- In the field of training

The number of training programs carried out by the centre during 2003 was (55) training programs attended by (439) trainees with an efficiency estimate of (3652) man-day as follows:

- 27 programs dedicated to NEPCO staff attended by (271) technicians with an efficiency rate of (7193) man-day.
- 26 programs for local entities and companies attended by (128) trainees, estimated at (844) man-day.
- Two external programs for the National Electricity Authority of Sudan, attended by (40) trainees with an efficiency rate of (610) man-day.
- The centre supervised training of six employees from EDCO on site, and (25) trainees from NEPCO at the different sites within the long term training program.

#### 2- In the field of productive projects

• The Centre carried out, in 2003, the works of maintenance and supervision on air conditioning units at the NEPCO's

headquarter where 20 air conditioners were maintained during this year.

- The Centre manufactured the spare parts necessary for some equipment at the different departments of the Company.
- The Centre carried out maintenance works for thirty transformers at Queen Alia International Airport.
- The Centre studied and distributed the electric loads at NEPCO's headquarter and rehabilitated the electrical installations at the staff's rest house in Amman.

#### Consultancies and International Services

In the year 2003, NEPCO continued providing a number of services and consultancies, inside and outside Jordan as follows:

- NEPCO provided consultancy works and supervision on supplying and constructing the two projects of 33 kV distribution networks (the Fourth Energy A) and (Al-Qafr Al-Sidda and Naderah) in Yemen.
- Assisting in implementing the quality system and technical control at the Public Electricity Authority of Yemen.
- Delegating a number of experts to Arab and foreign countries on short missions through Baily Controls Jordan, and delegating some experts to North Korea through the United Nations.
- Training regular teams from the National Electricity Authority of Sudan in the financial fields
- Providing several technical and consultancy services (administrative, technical, financial and computer) to a number of local entities and companies.
- Setting up and implementing technical training programs for the engineers and technicians of local electricity companies and in the brotherly Arab countries.
- Preparing a technical and financial offer for consultancy works, and supervision and management of the project of Mareb-Sana'a transmission line of 400 kV in addition to the substations of the Public Electricity Authority of Yemen.

#### Manpower and Training

By the end of 2003, the number of NEPCO's employees was (901) distributed as follows:

(18.6%)
(36.4%)
(15.7%)
(11.9%)
(17.4%)

Out of the belief of the Company's management in the importance of continuous development of the staff capatilities and upgrading their performance to be able to go along with the persistent developments in the different fields of work, NEPCO pays special attention to the training process, as for preparing a training plan and carrying out training programs inside and outside Jordan with the aim of upgrading the efficiency of the staff and developing their skills to acquire the ability of interaction with the future directions of the Company.

The training index for the year 2003 was (1.6%) against (2.55 %) in 2002.

#### Financial Performance

The most important financial indicators for NEPCO in 2003 can be summarized as follows:

- The revenue of electric energy sales amounted to JD (263.2) million in 2003 against JD (238.8) million in 2002, with an increase of JD (24.4) million and a growth rate of (10.22%) while the increase in sales volume was (534.8) GWh which means a growth rate of (7.5%).
- The operation expenditures were JD (266.0) million in 2003, against JD (218.8) million in 2002, with a growth rate of (21.6%). This was reflected on the operational profit, which led to its decrease in 2003 to (4.6%) against (8.4%) in 2002. This comes as a result of increasing the cost of purchased electric energy. The value of purchased electric energy represents (92.2%) of the total expenditures in 2003 against (91.9%) in 2002.
- The value of purchased electric energy in 2003 was JD (231.7) million against JD (201.1) million in 2002 with a growth rate of (15.22%) while the growth rate of purchased energy was (7.14%).

- The interest on loans and the bank expenditures was JD (5.7) million in 2003, against JD (5.9) million in 2002 with a drop of (3.4%). The drop in loan interests are due to:
  - 1- Starting of repaying the installments of the two loans for the Arab Fund, 301,311,while noticing the decrease in money drawal from them in 2003.
  - 2- The policy applied from the beginning of 2001 for early loans repayment which led to a decrease in the long term loan ratio to the total assets for 2003 to (24.6%) against (25.5%) in 2002. This led to a decrease in its credits and consequently, a drop in the interest.
  - 3- Some of the Islamic loans were already repaid.
  - 4- The fifth entrustment dues were paid.
- The net profits before tax, amounted to JD (4.21) million in 2003 against JD (3.03) million in 2002 with an increase of JD (1.18) million. The most important reasons for the increase in net profit in 2003, against that of 2002 are as follows:
  - 1- Capitalization of the reimbursements of the litigation filed, and considered it as a capital expenditure, which is capitalized in the assets, and paid by ten years, based on the regulatory commission decision.
  - 2- Return the provision of the litigation filed which amounts to JD (5000000) to the income statement.
- The net book revenue of the fixed assets was JD (313) million in the end of 2003 against JD (306.1) million in the end of 2002, with an increase of (2.3%). According to this, the return on the average net fixed assets was (1.36%) while covering the burdens of debt service was (115%).
- Current ratio in 2003 was (1.06) times against (1.37) times in 2002.
- The total revenue of electric energy sales compared with the average fixed assets in 2003 was (85.0%) against (77.5%) in 2002. An evident growth in this rate is well noticed which shows good utilization of NEPCO's assets, where this rate in 2001, and 2000 was (68.8%) and (65.6%) respectively.

Table (1)
SIGNIFICANT FIGURES FOR ELECTRICITY SECTOR IN JORDAN

	2002	2003	Growth 2003/2002 (%)
Peak load of Jordan (MW)	1410	1428	1.3
Available Capacity (MW)	1788	1788	-
Generated Energy (GWh)	8132	7994	-1.7
Steam Units	7205	6858	-4.8
Diesel Units	71	78	9.9
Gas Turbines / Diesel	115	262	127.8
Gas Turbines / N.Gas	680	746	9.7
Hydro Units	53	41	-22.6
Wind Energy	3	3	-
Biogas	5	6	20.0
Consumed Energy (GWh)	6906	7346	6.4
Energy Exported (GWh)	1.1	3.7	236.4
Energy Imported (GWh)	322	972	201.9
Loss Percentage (%)*	18.30	18.02	-
Average (kWh) Consumed Per Capita	1586	1636	3.2
<b>Electricity Fuel Consumption (Thousands Tons)**</b>	2013	2054	2.0
Heavy Fuel	1763	1509	-14.4
N.Gas	195	447	129.2
Diesel	55	98	78.2
National Grid Transmission Lines			
132 kV and above (km-Circuit)	3037	3346	10.2
<b>Substations Installed Capacities</b>			
132/33kV (MVA)	2670	3333	24.8
No. Of Consumers (Thousands)	969	1014	4.6
Population Under Supply (Thousands)	5324	5475	2.8
Percentage Of Population Under Supply (%)			
All Jordan	99.9	99.9	-
Rural	99.8	99.8	-
No. Of Employees	6765	6835	1.0

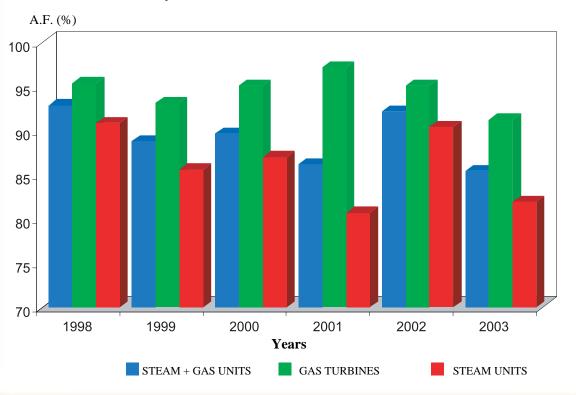
<sup>\*</sup> It includes the auxiliary consumption of the power stations

<sup>\*\*</sup> Equivalent Heavy Fuel Oil

Table (2)
NEPCO's Significant Figures

	1999	2000	2001	2002	2003	Growth 2003/2002 (%)
Peak load For Interconnected system (MW)	1099	1206	1225	1370	1387	1.2
Purchased Energy (GWh)	6235	6535	6937	7436	7967	7.1
Sold Energy and Consumed Energy at						
Company's sites (GWh)	6047	6321	6684	7139	7674	7.5
Loss Percentage (%)	3.01	3.27	3.70	4.13	3.81	-
National Grid Transmission Lines						
132 kV and above (km-Circuit)	3026	3026	3026	3037	3346	10.2
Substation Installed Capacities						
132/33kV (MVA)	2149	2304	2607	2670	3333	24.8
Substation Installed Capacities						
400/132/33 kV (MVA)	1280	1280	1280	1280	1280	-
No. Of Employees	728	750	807	861	901	4.6
NEPCO's Fixed Assets (Million JD )	318	323	333	339	354	4.4

 $Fig~(1) \\ Availability~Factor~of~Generation~Units~For~The~Period~(1998~-~2003)$ 



Table(3)

Performance Indicators For Electricity Sector in Jordan

	1999	2000	2001	2002	2003	Growth 2003/2002 (%)
1. Manpower Indicators						
Annual Productivity (MWh / Employee)	1081	1074	1117	1175	1238	5.4
Installed Capacity (MW / Employee)	0.23	0.24	0.23	0.24	0.24	-
No. of Consumers Per Employee	129	134	138	143	148	3.5
2. Financial Indicators						
Total Cost per kWh Sold (Fils)	41.59	41.76	40.44	42.68	42.90	0.5
Fuel Cost per kWh Sold (Fils)	18.57	18.22	17.52	19.43	19.72	1.5
Non Fuel Cost Per kWh Sold (Fils)	23.02	23.54	22.92	23.25	23.18	-0.3
Heavy Fuel Price (JD / TON)*	60.21	60.21	60.21	67.40	69.76	3.5
3. Technical Indicators						
Thermal Efficiency of Generating plants (%)	34.90	35.00	35.80	35.80	34.50	-
Availability of Generation Units (%)	88.83	89.69	86.20	92.12	85.44	-
Total Energy losses (%)	17.88	17.43	18.24	18.30	18.02	-
Generation losses (%)	6.71	6.82	6.71	6.64	6.56	-
Transmission & Distribution losses (%)	11.75	11.25	12.46	13.60	13.97	-

<sup>\*</sup> The price represents the average price during the year

Table(4)

NEPCO's Performance Indicators

	1999	2000	2001	2002	2003	Growth 2003/2002 (%)
1. Manpower Indicators						
Annual Productivity (GWh Sold per Employee)	8.2	8.4	8.3	8.3	8.5	2.4
Transforming installed Capacity						
(MVA / Employee)	5.3	5.1	5.2	4.8	5.3	10.4
2. Financial Indicators						
Total Cost per kWh Sold (Fils)	30.77	30.52	30.52	31.52	34.05	8.0
Cost of energy Purchased (Fils/kWh sold)	26.72	25.85	26.93	28.21	30.23	7.2
Other Cost per kWh sold (Fils)	4.05	4.67	3.59	3.31	3.82	15.4
Revenue per kWh (Fils)	31.96	32.14	32.05	33.50	34.45	2.8
Return on Average Net Electrical Assets (%)	2.94	4.80	4.13	4.09	1.36	-
Self Financing Ratio (%)	26.27	38.0	44.40	25.56	10.5	-
Dept Coverage Ratio (%)	128.4	150.0	136.0	123.2	115.0	-
3. Technical Indicators						
Transmission losses (%)	3.01	3.27	3.70	4.13	3.81	-

Table (5)

Gross National Product and Energy Demand in Jordan

year	GNP In Current Price (Million JD)*	Cost of Living Index (%) (1990=100%)	GNP Growth in Real Terms (%)	Total Energy Demand (Fuel) (1000 ton)	Total Energy Demand Growth (%)
1990	2428.8	100.0	-	3306	5.5
1991	2634.0	108.2	0.2	3272	-1.0
1992	3306.8	112.5	20.7	3770	15.2
1993	3709.6	117.8	7.1	3935	4.4
1994	4249.2	122.8	9.9	4152	5.5
1995	4656.8	125.7	7.1	4400	6.0
1996	4799.9	133.9	-3.2	4590	4.3
1997	5090.1	137.9	3.0	4673	1.8
1998	5604.0	142.2	6.8	4784	2.4
1999	5758.7	143.0	2.2	4755	-0.6
2000	6084.6	144.0	4.9	5114	7.5
2001	6443.2	146.6	4.0	5150	0.7
2002	6791.1	149.3	3.5	5299	2.9
2003	7137.5**	152.7	2.8	5829	10.0

<sup>\*</sup> Central Bank Figures

<sup>\*\*</sup> Estimated

Table(6)
Cost Of Energy Relative To The National Economy

	Cost of C	Consumed Crude Oil R	elative to
Year	Export (%)	Import (%)	GNP (%)
1997	32.3	12.6	7.2
1998	26.9	11.1	5.4
1999	33.4	14.3	6.5
2000	48.9	17.4	9.3
2001	39.5	16.4	8.9
2002	36.3	17.1	9.0
2003*	39.2	17.7	9.8

<sup>\*</sup> Estimated

Table (7)

Electricity Demand Forecast in Jordan \*

Year	Max. Demand		Electric	al Energy
	MW	Growth (%)	GWh	Growth (%)
2003 (actual)	1428	1.3	8966	6.1
2004	1503	5.3	9356	4.3
2005	1576	4.9	9906	5.9
2006	1656	5.1	10439	5.4
2007	1732	4.6	10926	4.7
2008	1795	3.6	11325	3.7
2009	1861	3.7	11733	3.6
2010	1925	3.4	12133	3.4
2015	2208	2.8	14019	2.9
2020	2515	2.6	15905	2.6

<sup>\*</sup> Includes Energy Imported

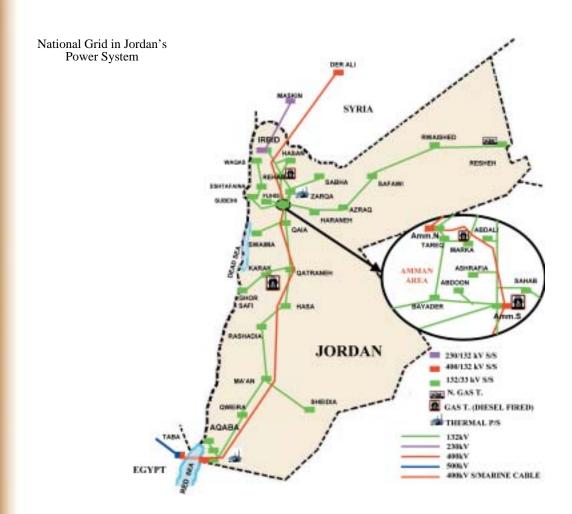
## Electrical Power System in Jordan

The interconnected system in Jordan consists of the main generating power stations, 132 kV and 400 kV transmission network, This transmission network interconnects the power stations with the load centers and different areas in the kingdom. The system also includes the 230 kV, 400 kV tie lines with Syria and 400 kV tie line with Egypt and the distribution networks which serve about (99.9%) of the total population in Jordan. In addition to that, the electrical power system in Jordan includes some private power stations, which are synchronized with the rest of the power stations in the intergrated network and

there are a few private power stations, which are not connected with the interconnected network and serve only their owners.

The total system installed capacity at the end of 2003 was (1788) MW, of which (1643) MW is the capacity of the interconnected system, this means that the interconnected system constitutes (91.9%) of the total installed capacity in Jordan.

The total length of 132 kV network and above is about 3346 km-circuit and the total installed capacity of the substations is 4801 MVA.



Table(8)

Main Operating Components of The Electrical Power System in Jordan

### A- Generating Plants Available Capacity (MW)

Year	Steam	<b>Diesel Engines</b>	Diesel	N.Gas	<b>Hydro Units</b>	Wind	Biogas	Total
1999*	1013	43	353	120	10	1.4	1	1541
2000	1013	43	353	120	10	1.4	1	1541
2001	1013	43	353	120	10	1.4	1	1541
2002	1013	43	453	120	12	1.4	1	1643
2003	1013	43	453	120	12	1.4	1	1643

<sup>\*</sup>All the generation units were transferred to CEGCO

### **B-Substations Installed Capacity (MVA)**

Year	400/132/33	230/132	132/33	132/6	66/33	132/11
1998	1280	200	2149	75	10	-
1999	1280	200	2149	75	10	-
2000	1280	200	2304	75	10	-
2001	1280	200	2607	75	10	-
2002	1280	100	2670	75	-	12.5
2003	1280	100	3333	75	-	12.5

### **C- HV Transmission Lines Length (km-Circuit)**

Year	400 kV	230 kV	132 kV	66 kV*
1998	670	17	2124	17
1999	809	17	2200	17
2000	809	17	2200	17
2001	809	17	2200	17
2002	809	17	2211	17
2003	817	17	2512	17

<sup>\*</sup> Converted to Work on 33 (kV)

### D- Distribution Networks of (JEPCO, IDECO & EDCO) as of end 2003

### **D-1-Distrbution Lines (km)**

as of end 2003

	Voltage (kV)						
_	33	11	6.6	0.4			
a- Overhead Lines	7144.8	1210.7	6.8	22862.8			
b- Underground Cables	886.0	2117.3	5.9	3317.4			
D-2-Substations (MVA)	33,11,6.6/0.4	33/11,6.6		11/6.6/0.4			
Capacities of Substations	1746.4	1695.1		2464.0			

## Electrical Energy in Jordan

### Generated Energy

The generated energy for the purpose of local consumption amounted to (7994) GWh in 2003, compared to (8132) GWh in 2002 representing an annual growth of (-1.7%) Compared to (7.7%) in 2002.

GEGCO produced (7468) GWh in 2003 compared to (7615) in 2002 GWh representing an annual growth of (-1.9%).

The industrial companies produced (505) GWh. Table (9&10).

The share in the generated energy was as follows:

CEGCO	(93.42%)
King Talal Dam	(0.18%)
Jordan Biogas Company	(0.08%)
Industrial companies	(6.32%)

From the above percentage, it is clear that CEGCO covers the largest part of the kingdom electrical demand since it participated in about (93%) of the generated energy.

Table(9)

Electrical Energy Generated and Imported In Jordan (GWh)

	1998	1999	2000	2001	2002	2003	Growth 2003/2002 (%)
1.Interconnected System	6520	6897	7170	7616	8150	8651	6.1
NEPCO	6287	-	-	-	-	-	-
CEGCO*	-	6636	6934	7132	7615	7468	-1.9
Potash Co.	105	96	108	115	95	96	1.1
Cement Factory	34	21	19	25	10	10	-
Indo-Jordan Chemicals Co.	81	85	52	65	93	84	-9.7
King Talal Dam	13	14	9	7	10	15	50.0
Jordan Biogas company	-	-	3	5	5	6	20.0
Imported Energy	_	45	45	267	322	972	201.9
2. Other Large Industries	223	227	253	200	304	315	3.6
Refinery	83	85	87	87	93	92	-1.1
Fertilizer Co.	128	130	152	97	153	156	2.0
Hussein Iron Factory	12	12	14	16	15	16	6.7
United Iron & Steal	-	-	-	-	43	51	18.6
Manufacturing Co.							
3. Others	2	2	-	-	-	-	-
Total	6745	7126	7423	7816	8454	8966	
Growth Rate (%)	7.7	5.6	4.2	5.3	8.2	6.1	

<sup>\*</sup> All NEPCO's generating units were transferred to CEGCO from the beginning of 1999

Table (10)

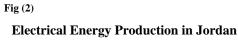
Electrical Energy Production by Type of Generation in Jordan (GWh)

	1998	1999	2000	2001	2002	2003	Growth 2003/2002 (%)
1. Electricity Sector	6302	6652	6946	7144	7630	7489	-1.8
Steam Units	4850	5745	6079	6240	6771	6430	-5.0
Gas Turbines / Diesel	666	147	78	83	115	262	127.8
Gas Turbines / N.Gas	687	734	742	769	680	746	9.7
Diesel Engines / HFO	83	9.0	2	1	3	1	-66.7
Hydro Units	13	14	39	43	53	41	-22.6
Wind Energy	3	3	3	3	3	3	-
Biogas	-	-	3	5	5	6	20.0
2. Industrial Sector	443	429	432	405	502	505	0.6
Steam Units	397	396	399	364	434	428	-1.4
Diesel Engines / HFO	46	33	33	41	68	77	13.2
Total	6745	7081	7378	7549	8132	7994	-1.7

Table (11)

All Jordan Fuel Consumption For Electricity Generation (Thousand Tons Of Oil Equivalent)

	1998	1999	2000	2001	2002	2003	Growth 2003/2002 (%)
1. Electricity Sector	1632	1620	1681	1701	1802	1845	2.4
NEPCO	1632	-	-	-	-	-	
CEGCO	-	1620	1681	1701	1802	1845	2.4
2.Industrial Companies with	119	128	129	119	145	141	-2.8
Self Generation							
Total	1751	1748	1810	1820	1947	1986	2.0
All Jordan Fuel Consumption	4784	4755	5114	5150	5299	5829	10.0
<b>Electricity Fuel Consumption</b>							
to Total Fuel Consumption (%)	36.6	36.8	35.4	35.3	36.7	34.1	-



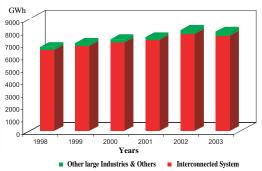
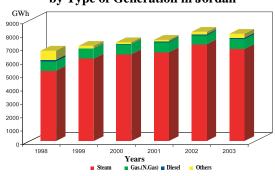


Fig (3)

Electrical Energy Production
by Type of Generation in Jordan



### **Power Demand**

The peak load in the Jordanian power system in 2003 was (1428) MW compared with (1410) MW in 2002 representing an annual growth of (1.3%).

The annual peak load for the interconnected system amounted to (1387) MW during august 2003 compared with (1370) MW in 2002, representing an annual growth rate of (1.2%). Fig. (4), shows the daily load curves for the interconnected system during 2002, 2003.

The generating unites share in covering the system peak load (1387) MW was as follows:

Steam Units	69.94%
Gas Units (burning Diesel)	15.86%
Gas Units (burning Natural Gas)	6.13%
Other Companies	1.44%
Imported from Egypt	6.63%

Table (12)

System Peak Loads (MW)

	A	ll Jordan (MW	Interconnected System		
year	Local	Imported	Total	(MW)	Growth (%)
1998	1060	_	1060	1020	5.0
1999	1125	12	1137	1099	7.7
2000	1229	9	1238	1206	9.7
2001	1068	187	1255	1225	1.6
2002	1298	112	1410	1370	11.8
2003	1343	85	1428	1387	1.2

Fig (4)
Interconnected System Daily Load Curve for (2002 - 2003)

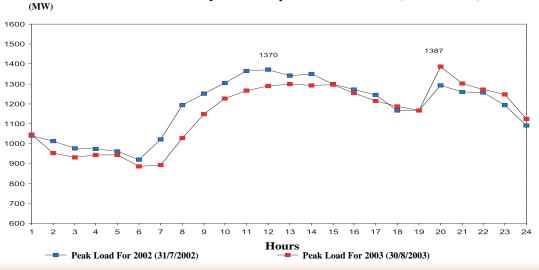


Fig (5)
Monthly Evening, Morning & Minimum Loads for 2003

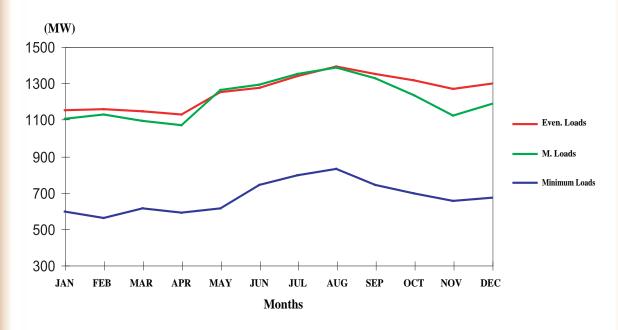
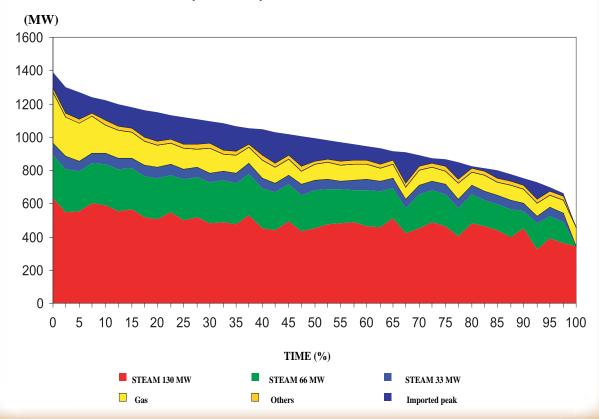


Fig (6)

Interconnected System Yearly Load Duration Curve For The Year 2003



## Electrical Energy Consumption

Electricity consumption in Jordan for 2003 amounted to (7346) GWh compared with (6906) GWh in 2002, representing an annual growth of (6.4%).

The average annual growth rate of electrical energy consumption during the last five years amounted to (5.2 %).

It is worth mentioning that the large consumers were transferred from NEPCO to EDCO from the beginning of 1999.

EDCO's responsibility Covers all consumers in NEPCO's concession areas and water projects (Subeihi & Wadi Arab) and Fertilizers Factory in Aqaba.

The distribution of electrical consumption by type of sectors in 2003 was as follows:

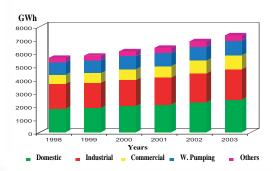
Sector	Consumption (%)	Growth 2003/2002
	(70)	(%)
Domestic	33.6	8.8
Industrial	31.5	5.3
Commercial	14.3	7.8
Water Pumping	15.0	5.7
Street Lighting	2.7	5.7
Others	2.9	-10.0

Table (13)

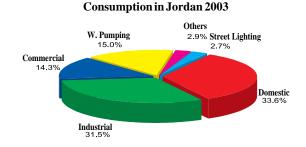
Electrical Energy Consumption by Sector Type (GWh)

	Domestic	Industrial	Commercial	Water Pumping	Street Lighting	Others	Total
EDCO	311.4	113.8	104.4	528.9	39.5	19.1	1117.1
JEPCO	1646.3	903.0	805.0	340.3	101.5	176.8	3972.9
IDECO	512.9	111.7	92.5	234.9	59.8	11.3	1023.1
<b>Industrial Companies</b>	-	1181.3	-	-	-	-	1181.3
Other Companies	-	-	45.0	-	-	6.2	51.2
Total 2003	2470.6	2309.8	1046.9	1104.1	200.8	213.4	7345.6
2002	2270	2193	971	1045	190	237	6906
2001	2110	2024	880	981	178	219	6392
2000	1981	1974	805	990	173	210	6133
1999	1835	1915	720	973	161	206	5810
1998	1780	1902	677	945	148	182	5634

Fig (7)
Electrical Energy Consumption (1998 - 2003)



ig (ð)



Sectorial Dustribution of Electrical Energy

Table (14)

Electrical Energy Consumption in Jordan (GWh)

	1998	1999	2000	2001	2002	2003	Growth 2003/2002 (%)
1. NEPCO's Areas	540.3	-	-	-	-	-	-
2. EDCO's Areas	-	906.7	919.0	969.7	1009.7	1117.1	10.6
3. JEPCO's Areas	2954.9	3077.5	3298.0	3506.9	3728.8	3972.9	6.5
4. IDECO's Areas	733.5	770.1	822.6	886.6	967.6	1023.1	5.7
5. Industrial Companies	1072.9	997.4	1035.9	978.0	1147.1	1181.3	3.0
Refinery	94.4	89.2	92.2	90.0	97.5	99.7	2.3
Cement Factory	163.4	154.8	129.8	161.2	194.6	199.3	2.4
EL-Hasa Phosphate	85.1	86.7	79.5	68.4	70.9	68.0	-4.1
Sheidiyah Phosphate	25.6	25.4	62.0	32.7	58.4	55.1	-5.7
Potash Co.	302.7	290.8	302.8	289.1	288.7	292.4	1.3
Fertilizer Co.*	171.4	120.9	165.7	90.4	142.1	159.6	12.3
South Cement Co.	143.5	139.2	143.4	172.7	189.3	181.6	-4.1
Hussein Iron Factory**	11.5	11.3	12.8	14.6	14.2	15.1	6.3
Indo-Jordan Chemicals Co.	75.3	79.1	47.7	58.9	48.7	43.9	-9.9
United Iron & Steal Manufacturing Co.**	-	-	-	-	39.6	48.1	21.5
Jordan Magnesia Co.	-	-	-	-	0.3	8.8	-
Jordan Bromine Co.	-	-	-	-	2.8	9.7	246.4
6. Queen Alia Airport	45.4	45.0	45.6	44.2	45.5	45.0	-1.1
7. Water Authority***	272.1	-	-	-	-	-	
8. Haraneh B.Station	13.1	11.9	11.8	6.8	6.9	6.2	-10.1
9. Others	1.5	1.5	-	-	-	-	-
Grand Total	5633.7	5810.1	6132.9	6392.2	6905.6	7345.6	6.4

<sup>\*</sup> EDCO's sales to Fertilizer Co. from 1999 to 2003 are not included

#### Domestic and Commercial Electricity Consumption



<sup>\*\*</sup> The consumption from self generation

<sup>\*\*\*</sup> The year 1999 energy sales to W.A was transferred to EDCO

Table (15)

NEPCO's Purchased Energy (GWh)

	Purchased energy (GWh)						
	1999	2000	2001	2002	2003	Growth 2003/2002 (%)	
A. CEGCO	6173.6	6481.0	6661.3	7102.1	6977.3	-1.8	
Aqaba Thermal P.S	3616.5	3933.5	4022.6	4688.9	3815.1	-18.6	
Hussein Thermal P.S.	1675.8	1726.0	1789.1	1617.2	2158.3	33.5	
Risha / N. Gas	730.1	743.2	766.4	678.0	744.2	9.8	
Gas & Diesel Units	148.2	75.6	80.5	115.0	256.7	123.2	
Wind Energy	3.0	2.7	2.7	3.0	3.0	-	
B. Others	61.3	<b>54.2</b>	275.2	334.3	990.0	196.1	
King Talal Dam	13.7	8.8	6.7	10.1	15.3	51.5	
Indo-Jordan Chemicals CO.	2.8	0.9	1.5	2.4	2.4	-	
Imported Energy from Egypt	44.8	44.5	267	321.8	972.3	202.1	
Total	6234.9	6535.2	6936.5	7436.4	7967.3	7.1	

Table (16)

NEPCO's Electrical Energy Sales (GWh)

	1998	1999	2000	2001	2002	2003	Growth 2003/2002 (%)
A. Distribution Companies	4118.6	5335.9	5642.5	6020.5	6399.9	6917.2	8.1
JEPCO	3261.7	3410.1	3639.3	3883.0	4140.4	4478.0	8.2
EDCO	-	1026.0	1042.3	1107.4	1151.6	1283.2	11.4
IDECO	856.9	899.8	960.9	1030.1	1107.9	1156.0	4.3
B. Large Consumers	991.5	655.3	668.0	652.9	729.5	746.9	2.4
Refinery Co.	14.3	10.1	11.4	8.6	10.8	13.7	26.9
Cement Co.	131.0	134.8	111.9	137.5	185.6	190.2	2.5
South Cement Co.	143.5	139.2	143.4	172.5	189.3	181.6	-4.1
Potash Co.	204.7	202.2	202.4	182.2	200.7	202.9	1.1
El-Hasa Phosphate Co.	85.1	86.7	79.5	68.4	70.9	68.0	-4.1
Sheidiyah Phosphate	25.6	25.4	62.0	32.7	16.7	20.8	24.6
QAIA	45.4	45.0	45.6	44.2	45.5	45.0	-1.1
Fertilizer Co. *	52.4	-	-	-	-	-	-
Jordan Magnesia Co.	-	-	-	-	0.3	8.8	-
Jordan Bromine Co.	-	-	-	-	2.8	9.7	246.4
Water Authority *	272.1	-	-	-	-	-	-
Haraneh	13.1	11.9	11.8	6.8	6.9	6.2	-10.1
Exported Energy	4.3	-	-	-	-	-	-
C. Retail Sales	540.3	-	-	-	-	-	-
Total	5650.4	5991.2	6310.5	6673.4	7129.4	7664.1	7.5

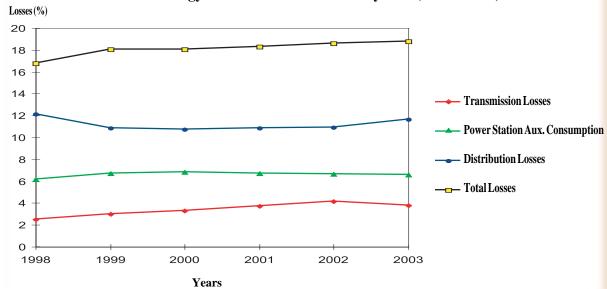
<sup>\*</sup> The energy sales from the year 1999 was transferred to EDCO

Table (17)
Interconnected System Network Losses (GWh)

	1998	1999	2000	2001	2002	2003
1. Generation Losses						
Generated Energy	6520	6852	7125	7349	7828	7679
Sent Out Energy	6120	6392	6639	6856	7308	7175
Losses (%)	6.13	6.71	6.82	6.71	6.64	6.56
2. Transmission Losses*						
Sent Out Energy	5705	6270	6535	6897	7436	7967
Bulk Sales	5562	6081	6321	6642	7129	7664
Losses (%)	2.51	3.01	3.27	3.70	4.13	3.81
3. Distribution Losses**						
Sent Out Energy	4813	5336	5646	6026	6405	6923
Sold Energy	4229	4758	5038	5366	5701	6113
Losses (%)	12.13	10.83	10.77	10.95	10.99	11.70
4. Interconnected System Losses						
Generated and Purchased Energy	6520	6897	7170	7616	8150	8651
Consumed Energy***	5425	5654	5872	6217	6629	7021
Losses (%)	16.79	18.02	18.10	18.37	18.66	18.84

<sup>\*</sup> Transmission lines (400, 132 kV)

Fig (9) Electrical Energy Losses / Interconnected System (1998 - 2003)



<sup>\*\*</sup> It does not include Industrial Companies Networks.

<sup>\*\*\*</sup> Include the total exported energy and the consumed energy in Substations, the National Control Center, and the Electric Training Center.

Table (18)
Number of Consumers in Jordan (Thousand)

	1998	1999	2000	2001	2002	2003	Growth 2003/2002 (%)
NEPCO	105.0	0.011*	0.011*	0.012*	0.016*	0.014*	-12.5
EDCO	-	110.4	112.2	118.7	123.5	127.6	3.3
JEPCO	510.0	537.3	564.2	593.6	629.7	660.2	4.8
IDECO	177.4	185.7	195.4	204.8	215.8	226.0	4.7
Others	0.2	0.2	-	-	-	-	-
Total	792.6	833.6	871.8	917.1	969.0	1013.8	4.6
Population Under Supply	4745	4895	5033	5177	5324	5475	2.8
(Thousands)							
Population Under Supply							
as Percentage of Total (%)	99.8	99.9	99.9	99.9	99.9	99.9	-

<sup>\*</sup> This represents the distribution Companies and the large industrial consumers and the other large Consumers.

Table(19)
Number of Consumers by Type of Consumption for 2003

	Domestic	Industrial	Commercial	W.Pumping	Governmental	Others	Distribution Companies	Total
1. NEPCO's Areas	-	9	2	-	-	-	3	14
2. EDCO's Areas	104406	1191	15147	1838	3183	1798	-	127563
3. JEPCO's Areas	538839	9082	98279	970	5762	7298	-	660230
4. IDECO's Areas	193044	3253	24697	1175	1405	2379	-	225953
Total	836289	13535	138125	3983	10350	11475	3	1013760

Table (20)
Rural Electrification in Jordan as of end 2003

Area	Total	Villages	Electrific	ed Villages	Populatio	illages and n Electrified of the total
	Villages	Population (000's)	Villages	Population (000's)	Villages (%)	Population (%)
Amman & Balqa	333	612	333	612	100.0	100.0
Irbid and Mafraq	345	874	345	874	100.0	100.0
Jordan Valley	72	170	72	169	100.0	99.4
Karak	118	183	118	182	100.0	99.5
Ma'an, Aqaba & Shoubak	92	104	92	103	100.0	99.0
Tafila	39	42	39	41	100.0	97.6
Total	999	1985	999	1981	100.0	99.8

Table(21)
Population Supplied With Electricity in Jordan

Year	Total Po (000	-	Population (000		(%) of Po Under	opulation Supply
	Kingdom	Rural	Kingdom	Rural	Kingdom	Rural
1998	4756	1715	4745	1706	99.8	99.5
1999	4900	1777	4895	1768	99.9	99.5
2000	5039	1826	5033	1820	99.9	99.7
2001	5182	1878	5177	1874	99.9	99.8
2002	5329	1931	5324	1927	99.9	99.8
2003	5480	1985	5475	1981	99.9	99.8



**Rural Electrification in Jordan** 

Table (22)
Electricity Tariff as of end 2003

	From16/6/2002
1. Bulk Supply Tariff	
A- Electricity Companies	
Peak load (JD/kW/Month)	2.4
Day Energy (Fils/kWh)	31.4
Night Energy (Fils/kWh)	21.4
B- Large Industries	
Peak load (JD/kW/Month)	2.4
Day Energy (Fils/kWh)	48
Night Energy (Fils/kWh)	33.5
2. Retail Tariff	
a. Domestic (Fils/kWh)	
First Block : From 1-160 kWh/Month	31
Second Block : From 161-300 kWh/Month	55
Third Block : From 301-500 kWh/Month	64
Fourth Block : More Than 500 kWh/Month	80
b. Flat Rate Tariff For T.V and Broadcasting Stations (Fils/kWh)	60
c. Commercial (Fils/kWh)	62
d. Small Industries (Fils/kWh)	38
e. Medium Industries	
Peak load (JD/kW/Month)	3.05
Day Energy (Fils/kWh)	35
Night Energy (Fils/kWh)	25
f. Agriculture (Fils/kWh)	26
g. Water Pumping (Fils/kWh)	38
h. Hotels (Fils/kWh)	60
i. Street Lighting (Fils/kWh)*	25
Notice	
1. Monthly Minimum Charge	
a. Domestic (JD/Month)	1
b. Other Consumers (JD/Month)	1.25

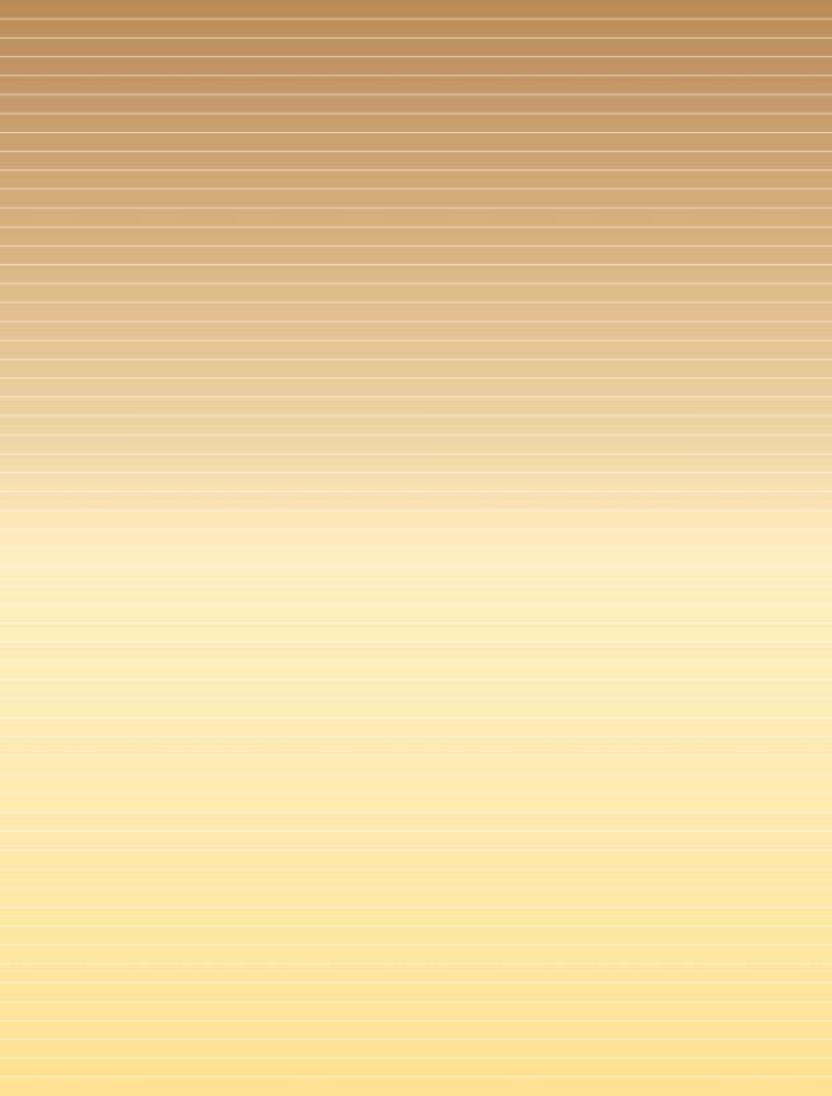
<sup>\*</sup> Applied for Consumption Which Exceeds The Average Level of 1988 Consumption

The Hashemite Kingdom of Jordan

NATIONAL ELECTRIC POWER COMPANY



FINANCIAL STATEMENTS



### **Auditor's Report**

AM/ 8604 To the Board of Directors National Electric Power Company Amman - Jordan

We have audited the accompanying balance sheet of National Electric Power Company (a Public Shareholding Limited Company) as of December 31, 2003 and the related statements of income, changes in shareholders' equity and cash flows for the year then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit. We have previously audited the financial statements of National Electric Power Company for the year ended December 31, 2002 and issued our qualified report thereon dated April 22, 2003.

We conducted our audit in accordance with International Standards on Auditing, except as discussed in paragraph (2) below. 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 statements presentation. We believe that our audit provides a reasonable basis for our opinion.

- 1. On February 2, 2000, a foreign consulting firm was appointed to study and make recommendations on electricity selling prices (tariff), as well as to study the allocation of the loans payable by National Electric Power Company over the three companies that resulted from its restructuring. Moreover, the consultant issued his report during the year 2002, and no decision relating to his recommendations has been taken yet. The accompanying financial statements (as well as the opening balance sheet as of January 1, 1999) may have to be amended in accordance with the final results of this study or as per the Council of Ministers' resolutions concerning this matter.
- 2. As stated in Note (36), no final settlement has been reached yet with the Income Tax Department regarding the income tax for the years from 1997 to 2002. The Company has made a down payment of JD 1,404,552, classified as account receivable within assets, to the Income Tax Department for the tax liability which will face Company. However, we were unable to assess the final income tax liability which might face the Company. According to management, the amounts taken as provision are adequate to cover this income tax liability.

In our opinion, except for the effect, if any, of what is mentioned in paragraph (2) above, and except for what is stated in paragraph (1) above, the accompanying financial statements present fairly, in all material respects, the financial position of National Electric Power Company as of December 31, 2003 and the results of its operations and its cash flows for the year then ended in conformity with the Law and with International Financial Reporting Standards, and we recommend that the General Assembly of shareholders take the above points into consideration upon approving these financial statements.

The Company maintains proper accounting records, and the accompanying financial statements are in agreement therewith and with the financial date presented in the Board of Directors' report.

- 1. As mentioned in Note (35d), most of the loans payable which were re-allocated to the Electricity Distribution Company and Central Electricity Generating Company are formally due from the National Electric Power Company, in accordance with the borrowing agreements.
- 2. As stated in Note (2b), legal compensations have been capitalized in accordance with the resolution of the Electricity Sector Regulatory Commission. In the prior year, such amounts were charged to the statement of income.
- 3. As mentioned in Notes (10 and 16) to the financial statements, fixed assets include leased assets registered in the name of the lending bank against long-term liabilities. Ownership title of these assets shall be transferred to the Company at the end of the lease period.
- 4. As stated in Note (38) to the financial statements, and based on the recommendation of the Minister of Energy and Mineral Resources, who is also the Chairman of the Board of Directors of the Electricity Sector Regulatory Commission, the Company made the following adjustments to the Company's financial statements for the year ended December 31, 2003, on which we have already issued our audit report dated March 28, 2004:
- a. Adjusting of the power purchase value which was previously shown in the financial statements at JD 229,073,749 to become JD 231,650,006, and adjusting the balance of Central Electricity Generating Company power purchase which was stated in the financial statements within "accounts payable and other credit balances" at JD 26,531,065 to become JD 29,107,322.
- b. Adjusting the balance of prior years' expenses-net which was stated in the financial statements at JD 46,020 to become JD 580,769, and adjusting the balance of the Central Electricity Generating Company shown in the financial statements within accounts receivable at JD 4,998 to become zero, and adjusting the balance of the Central Electricity Generating Company other shown in the financial statements within accounts payable and other credit balances at zero to become JD 529,751.
- c. Recording the General Manager's bonus of JD 4,000 and increasing accrued expenses by the same amount.

Based on the above, provision for income tax and fees, reserves, and earnings per share have been recomputed according to paragraphs (a - c) above.

Saba & Co.

### **BALANCE SHEET**

	Decemb	per 31,
	2003	2002
ASSETS	JD	JD
Current Assets:		
Cash on hand and at banks	839,436	18,130,982
Accounts receivable - Net (Note 4)	46,888,981	34,228,014
Spare parts, materials and supplies (Note 5)	10,006,516	9,544,533
Deposits and expenses on documentary credits	283,320	1,010,197
Prepaid expenses and other debit balances (Note 16)	6,563,416	221,498
Prepayments on loan installments and interest payable (Note 6)	510,663	459,760
Studies and projects under construction	3,945	443,916
<b>Total Current Assets:</b>	65,096,277	64,038,900
Available-for-sale financial assets (Note 7)	896,154	570,280
Investments in subsidiary and affiliated companies' shares (Note 8)	12,082,790	12,082,790
Long-term loan receivable (Note 9)	801,060	601,060
Fixed Assets:		
Fixed assets (Note 10)	354,422,592	338,787,092
Less: Accumulated depreciation	66,619,767	55,211,723
Net Book Value of Fixed Assets	287,802,825	283,575,369
Assets contributed by consumers (Note 10)	31,560,492	27,688,787
Less: Accumulated depreciation	6,364,496	5,143,041
Net Book Value of Assets Contributed by Consumers	25,195,996	22,545,746
Total Net Book Value of Fixed Assets	312,998,821	306,121,115
Projects under construction and payments to contractors (Note 11)	36,290,735	26,041,699
TOTAL ASSETS	428,165,837	409,455,844

	Decemb	er 31,
_	2003	2002
LIABILITIES	JD	JD
Current Liabilities:		
Accounts payable and other credit balances (Note 12)	37,063,728	21,631,253
Accrued expenses (Note 13)	23,582	7,955
Provision for income tax	255,143	691,831
Provision for additional fees for Jordanian universities	569,367	527,298
Provision for scientific research and vocational training	375,009	372,995
Vocational and technical training fund	13,268	84
Provision for litigations filed against the company (Note 14)	2,902	5,002,902
Interest payable on loans (Note 15)	1,569,868	1,633,794
Current portion of long-term loans and bond payable (Note 16)	12,247,268	11,909,729
Contractors' retentions payable	4,028,845	2,102,706
Advances received on studies and projects under construction for others	852,540	634,864
Indemnity provision (Note 17)	1,338,764	370,558
Provision for tariff subsidy (Note 18)	2,918,000	1,708,240
Total Current Liabilities	61,258,284	46,594,209
Advances received on uncompleted projects (Note 19)	7,434,284	10,984,366
Long - Term Liabilities:		
Loans and bond payable	117,388,517	116,341,107
Less: Current portion of loans and bond payable	12,247,268	11,909,729
Long-term loans and bond payable (Note 16)	105,141,249	104,431,378
SHAREHOLDERS' EQUITY		
Capital	230,000,000	230,000,000
Statutory reserve	2,116,154	1,695,462
Voluntary reserve	4,232,309	3,390,925
Special reserve	4,232,309	3,390,925
(Decline) in shareholders' equity as a result of restructuring (Note 20)	(3,477,523)	(3,496,714)
Government equity (Note 21)	6,555,184	5,318,736
Grants and donations (Note 22)	367,522	365,612
Exempted interest on amounts past due from energy sales (Note 23)	(17,673,931)	(17,673,931)
Cumulative change in fair value	601,557	275,683
Retained earnings (Note 24)	2,182,443	1,633,447
Net Shareholders' Equity	229,136,024	224,900,145
Consumers' contributions-Net of amortization (Note 25)	25,195,996	22,545,746
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	428,165,837	409,455,844

## STATEMENT OF INCOME

For the Year Ended December 31,

		2003			2002
	Aqaba	Amman	Total	Aqaba	Amman
Revenue:	٥٢	a r	٩	٩	٥٢
Sales of electric power (Note 26 and 34/c)	7,787,503	255,427,612	263,215,115	6,934,922	231,895,707
Gas sales	14,822,798		14,822,798		1
Other revenue	3,965	128,208	132,173	2,964	99,232
Total Revenue	22,614,266	255,555,820	278,170,086	6,937,886	231,994,939
Operating Expenses:  Flectric nower nurchases (Note 27 and 34/c)	6 949 500	224 700 506	231 650 006	5 831 469	195 253 669
Gas purchases (Note 28)	14.822.798	1	14.822.798		100,001,001
Operating costs (Note 29)	21,467	694,132	715,599	19,068	638,450
Depreciation of fixed assets after amortization of consumers'					
assets contributions (Note 11)	342,505	11,074,331	11,416,836	304,290	10,188,479
Maintenance expenses (Note 30)	73,051	2,361,975	2,435,026	54,241	1,816,153
General and administrative expenses (Note 31)	148,339	4,796,279	4,944,618	136,037	4,554,888
Total Operating Expenses	22,357,660	243,627,223	265,984,883	6,345,105	212,451,639
Operating Income	256,606	11,928,597	12,185,203	592,781	19,543,300
Interest on loans and bank charges	1	(5,717,160)	(5,717,160)	1	(5,886,260)
(Loss) on currency exchange - Net (Note 32)	•	(3,324,778)	(3,324,778)	1	(2,509,118)
Interest income	•	239,589	239,589	1	824,404
Indemnity provision (Note 17)	•	(1,000,000)	(1,000,000)	1	(52,450)
Other revenues - Net (Note 33)	•	476,832	476,832	1	210,025
Prior years' revenue (expenses) - Net	1	(580,769)	(580,769)	1	(109,663)
Net Operating Income	256,606	2,022,311	2,278,917	592,781	12,020,238
Provision returned to the statement of income (Note 14)	1	5,000,000	5,000,000	1	1
Litigations paid	•	1	1	Ī	(3,967,872)
Provision for litigations filed against the Company (Note 14)	•	1	1	•	(3,500,000)
Provision for tariff subsidy (Note 18)	•	(2,918,000)	(2,918,000)	Ī	(1,708,240)
Tailli subsidy paid Company's contribution to the construction of Ministry of	•	1	•	Ī	(204,383)
Energy and Mineral Resources building (Note 34)	1	(150.000)	(150.000)	ı	(200:000)
General manager's bonus	1	(4,000)	(4,000)	Ī	(4,000)
Net Income for the Year before Tax and Fees	256,606	3,950,311	4,206,917	592,781	2,435,743
Provision for income tax	12,830	433,909	446,739	29,639	842,028
Net Income	243,776	3,516,402	3,760,178	563,142	1,593,715
Board of Directors' remuneration			10,400		
Provision for additional fees for Jordanian universities			42,069		
Provision for scientific research and vocational training			42,069		
Vocational and technical training tund			3 652 456		
INCLINIONE AND LAY AND LOSS		1	0.4,400,0		

10,492,769 1,870,394 4,690,925 218,796,744 20,136,081 (5,886,260) (2,509,118) 824,404 (52,450) 210,09,663) 12,613,019

102,196 238,932,825

201,085,138 657,518

238,830,629

Total ٥ (3,967,872) (3,500,000) (1,708,240) (204,383)

(200,000) (4,000) 3,028,524 871,667 2,156,857 10,500 30,285 30,285

0.009

0.016 230,000,000

Earnings per share Weighted average number of shares

2,085,703

# STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

1,633,447 224,900,145	1,633,447	275,683	(17,673,931)	365,612	5,318,736	(3,496,714)	3,390,925	3,390,925	1,695,462	230,000,000	Ending Balance
- 85,395		85,395	1	1		1					Cumulative change in fair value
- 1,043		1	ı	1		1,043					Distribution Company
											Debit balance transferred to Electricity
- (4,610)		1	ı	1		(4,610)			1	1	ating Company
											Vehicle transferred to Electricity Gener-
- 3,544,081		ı	ı	1	1	3,544,081	ı	1		ı	Land acquisition (Note 11)
- 3,088		į	1	3,088		í			1	į	Grants and donations
- 1,265,315		1	1	ı	1,265,315	,Ī	1	1	1	į	Loan installments and interest on loans
_	(1,514,262)	1	1	1	1	į	605,705	605,705	302,852	1	Appropriations to reserves
3 2,085,703	2,085,703	1	ı	1		ı	ı		ı	ı	Net income after tax and fees
(1,200,000) $(1,200,000)$	(1,200,000)	1	1	1	1	j	1	1	1	1	Dividends to Ministry of Finance
2,262,006 219,120,130	2,262,006	190,288	(17,673,931)	362,524	4,053,421	2,785,220 (7,037,228)	2,785,220	2,785,220	1,392,610	230,000,000	Beginning balance
											Year 2002
2,182,443 229,136,024	2,182,443	601,557	(17,673,931)	367,522	6,555,184	(3,477,523)	4,232,309	4,232,309	2,116,154	230,000,000	Ending Balance
- 325,874		325,874	1	1	1	1	1	1	1	1	Cumulative change in fair value
- 19,191		1	1	ı		19,191	1				Land acquisition (Note 10)
- 1,910		į	1	1,910		í			1	į	Grants and donations
- 1,236,448		1	ı	ı	1,236,448	i	1	1	1	1	Loan installments and interest on loans
_	(2,103,460)	ı	ı	1		i	841,384	841,384	420,692	ı	Appropriations to reserves
5 3,652,456	3,652,456	1	ı	1		ı					Net income after tax
(1,000,000) $(1,000,000)$	(1,000,000)	ı	ı	1		i	ı	1		ı	Dividends to Ministry of Finance
1,633,447 224,900,145	1,633,445	275,683	(17,673,931)	365,612	5,318,736	3,390,925 (3,496,714)	3,390,925	3,390,925	1,695,462	230,000,000	Beginning balance
JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	Year 2003
Total	Retained Earnings	Cumulative Change in Fair Value	Exempted Interest on Amounts past Cumulative due from Energy Sales Change in Fair Value		Government Grants and Equity Donations	(Decline) in Shareholders' Equity after Restructuring	Special Reserve	Voluntary Reserve	Statutory Reserve	Capital	

### STATEMENT OF CASH FLOWS

	For the Ye Decem	
	2003	2002
CASH FLOWS FROM OPERATING ACTIVITIES:	JD	JD
Net income for the year after tax and fees	4,206,917	3,028,524
Adjustments for:	11 11 000	10 100 700
Depreciation of fixed assets after amortization of consumers' assets contributions	11,416,836	10,492,769
Provision for litigations filed against the Company	-	3,500,000
Provision returned to the income statement	(5,000,000)	-
Interest on loans and bank charges	5,717,160	5,886,260
Interest income	(239,589)	(824,404)
Indemnity provision	1,000,000	52,450
Provision for tariff subsidy	2,918,000	1,708,240
(Gains) loss on sale of fixed assets	(7,303)	330,403
Cash Flows from Operating Activities before Changes in Working Capital	20,012,021	24,174,242
Decrease in accounts receivable	(12,660,967)	10,034,696
(Increase) in spare parts, materials and supplies	(461,983)	(368,255)
(Increase) decrease in deposits and expenses on documentary credits	726,877	(882,022)
(Increase) in prepaid expenses and other debit balances	(6,341,918)	(54,367)
(Increase) decrease in studies and projects under construction	439,971	(268,430)
(Decrease) increase in accounts payable and other credit balances	15,422,075	(10,626,488)
(Decrease) increase in accrued expenses	15,627	(456,782)
Increase in contractors' retentions payable	1,926,139	763,513
Increase (decrease) in advances received on uncompleted projects	(3,550,082)	2,528,753
Increase in advances received on studies and projects under construction for others	217,676	310,716
(Decrease) in provision for tariff subsidy and difference	(1,708,240)	(3,812,242)
Net Cash Flows from Operations	14,037,196	21,343,334
Provision for scientific research and vocational training paid	(40,055)	(19,921)
Provision for income tax paid	(883,428)	(1,125,693)
Indemnity provision paid	(31,794)	(32,477)
Interest and bank charges paid	(5,781,086)	(6,014,135)
Net Cash Flows from Operating Activities	7,300,833	14,151,108
CASH FLOWS FROM INVESTING ACTIVITIES:	7,500,655	
Additions to fixed assets	(15,636,988)	(7,120,578)
Projects under construction and payments to contractors	(10,249,036)	(11,843,553)
Interest received	239,589	824,404
(Increase) in long-term loan	(200,000)	(200,000)
Net Cash Flows (used in) Investing Activities	(25,846,435)	(18,339,727)
CASH FLOWS FROM FINANCING ACTIVITIES:	(23,040,433)	(10,557,727)
(Increase) in prepayments on loan installments payable	(50,903)	(40,277)
(Decrease) increase in loans payable	1,047,410	(7,349,287)
	19,191	
Decrease in decline in shareholders' equity after restructuring Grants and donations	1,910	3,540,514 3,088
Increase in Government equity	1,236,448	
± •		1,265,315
Dividends to Ministry of Finance	(1,000,000)	(1,200,000)
Net Cash Flows from (used in) Financing Activities	1,254,056	(3,780,647)
Net (Decrease) in Cash	(17,291,546)	(7,969,266)
Cash on hand and at banks - beginning of the year	18,130,982	26,100,248
Cash on Hand and at Banks - End of the Year	839,436	18,130,982

### NOTES TO FINANCIAL STATEMENTS

### 1. General

- a. National Electric Power Company, wholly owned by the Government of Jordan, was registered as a public shareholding limited company at the Ministry of Industry and Trade on August 29, 1996, in accordance with the Council of Ministers' resolution to convert Jordan Electricity Authority into a public shareholding company. The Company is considered to be the natural and legal successor to Jordan Electricity Authority, which was established in accordance with Special Decree No. (21) of 1967. Jordan Electricity Authority had a juristic personality and was independent financially as well as administratively. In order to enable the new company to perform its activities, 1996 Decree No. (10), subsequently amended by Decree No. (13) of 1999, was issued to regulate the electricity sector in Jordan, especially with respect to power generation, transmission and distribution.
- b. National Electric Power Company was restructured into three separate companies effective from January 1, 1999 based on the resolution taken by the Council of Ministers on October 4, 1997. Accordingly, the activities of transmission, power control, power sale and purchase, as well as electrical power exchange with neighboring countries are to be retained by the National Electric Power Company, which is to remain wholly owned by the Government of Jordan.
- c. The accompanying financial statements represent the assets, liabilities, and results of operations of the transmission and control of the National Electric Power Company after the restructuring of the Company into three separate companies as mentioned above.
- d. The Company had an average of 943 employees during 2003, (861 during 2002).
- e. The financial statements were approved by the Board of Directors in their meeting dated March 16, 2004.

### 2. Significant Accounting Policies

### a. Basis of Presentation

The accompanying financial statements have been prepared according to International Financial Reporting Standards and related interpretations and on the historical cost basis. However, financial assets and financial liabilities are stated at fair value.

The accompanying financial statements are stated in Jordanian Dinar.

### b. Change in Accounting Policies

Effective from January 1, 2003, the resolution of the Electricity Sector Regulatory Commission has been applied in compliance with International Financial Reporting Standards. As a result, changes in accounting policies occurred as follows:

- 1. Legal compensations are shown separately as a capital expenditure within fixed assets. They represent payments by the Company to owners of real estates through whose lots of land electric networks pass. The amount is depreciated over a period of ten years. In the prior year, compensations paid and related provisions were charged to the statement of income.
- 2. The adoption by the Company of the resolution of the Electricity Sector Regulatory Commission to capitalize and depreciate paid legal compensations over a period of ten years led to an increase in the net income before tax and fees for the year by approximately JD 5,887,000 in addition to JD 5,000,000 as a provision for compensations returned to profits. That is, the results of operations for the year 2003 would have been a loss of approximately JD 6,680,000 had the Company continued to use the prior year's method.

### c. Spare Parts

Spare parts are stated at cost, determined according to the moving average method.

d. Investments

Investments in the shares of subsidiary and affiliated companies are stated at cost. Dividends are recognized when received.

### e. Fixed Assets

- Fixed assets are stated according to revaluation or cost, whereas additions to fixed assets made during the year are stated at acquisition cost.
- Projects under construction are charged with the cost of the completed works as well as interest incurred for financing the projects and general and administrative expenses of the departments that supervise these projects.
- Fixed assets, except for land, are depreciated according to the straight-line method at annual rates ranging from 2% to 20%.
- If the net realizable value of a fixed asset is lower than its net book value, then the value of that asset is reduced to the net realizable value and the impairment recorded in the income statement.

### f. Assets Contributed by Consumers

- Assets contributed by consumers are depreciated according to the straight-line method at a rate of 4% annually.
- Consumers' contribution is amortized at a rate of 4% annually, based on the contribution balance as at the end of the year. Such credit amortization is deducted from the annual fixed assets depreciation expense.
- g. Sales are recognized upon issuance of invoices, at the sales tariff determined by the Government.
- h. Assets and Liabilities Denominated in Foreign Currencies
  - Assets and liabilities denominated in foreign currencies, including loans receivable and re-lent loans, are translated to Jordanian Dinar according to the Central Bank of Jordan exchange rates prevailing at year-end, with the exception of loans from Arab funds, which are stated according to the exchange rates prevailing either at the date of withdrawal of such loans, or the rates prevailing on the date of settlement, in accordance with the relevant agreements. Exchange differences resulting therefrom are taken to the statement of income.
- i. Interest on Amounts Past Due from Energy Sales
  - Interest on amounts past due from energy sales is taken to revenue when received.
  - Interest on amounts past due from energy sales is computed at the rate of 1% monthly, from the date the invoice is due to the date of partial or full settlement, except for the energy sales to Irbid District Electricity Company, where interest is computed at the rate of 0.75% monthly from the date the invoice is due to the date of partial or full settlement, in accordance with the Council of Ministers' resolution in their meeting dated September 26, 2000. On June 16, 2002, the price of energy sales was changed and a new interest rate of 1% monthly up to a maximum of 9% annually was set for all consumers.
- j. Available-for-Sale Financial Assets

Investments available for sale are initially recognized at cost and remeasured to their fair value. Gains or losses resulting therefrom are taken to shareholders' equity, until the investments are sold, disposed of, or determined to be impaired, at which time the cumulative gain or loss previously recognized in equity is included in the income statement.

### k. Fair Value

The fair value of a listed financial asset is based on its quoted closing price in the financial markets.

### 3. Risk Management

The Company adopts certain financial policies in managing its different risk exposures, in line with a specified strategy.

The Company monitors and controls risk exposures and conducts the ultimate strategic allocation for all assets and liabilities in the balance sheet. These risks include the following:

- a. Interest rate risk that may occur due to the value of a financial instrument fluctuating as a result of changes in market interest rates.
- b. Market risk that may occur due to the value of a financial instrument fluctuating as a result of changes in market prices.
- c. Credit risk which is the risk that one party to a financial instrument will fail to discharge an obligation and cause the other party to incur a financial loss.

### 4. Accounts Receivable - Net

The details of this item are as follows:

	Decemb	per 31,
	2003	2002
Electricity Sales Debtors:	JD	JD
Jordan Electric Power Company	19,653,606	14,192,821
Irbid District Electricity Company - Subsidiary	9,733,761	7,421,310
Electricity Distribution Company	3,850,131	3,472,732
Electricity Distribution Company-accounts receivable prior to 1998	6,160,276	6,160,276
Wholesale consumers	3,370,750	3,909,885
<b>Total Electricity Sales Debtors</b>	42,768,524	35,157,024
Central Electricity Generating Company	4,298,153	-
Contractors	11,263	98,001
Due from employees	2,906	3,895
Income Tax Department-payment on account	1,404,552	1,400,000
Other debtors	518,489	373,109
Electricity Distribution Company	1,377,090	1,343,416
Jordan Universities Networks Company	352,540	-
Industrial Cities Corporation	217,898	-
Central Electricity Generating Company		62,356
	50,951,415	38,437,801
Less: Provision for doubtful debts	4,062,434	4,209,787
	46,888,981	34,228,014

- a. Amounts due from Jordan Electric Power Company, Irbid District Electricity Company and Electricity Distribution Company include interest on amounts past due from energy sales totalling JD 3,691,109 as of December 31, 2003 computed until December 31, 1999 (JD 3,838,402 as of December 31, 2002). Moreover, interest on amounts past due for the years from 2000 until the end of the year 2003 amounting to JD 6,947,534 are recorded when received.
- b. During the year 2003, Jordan Electric Power Company was exempted from interest on amounts past due from energy sales totaling JD 147,293, which was written off from the above-mentioned accounts receivable up to December 31, 1998, and from the provision for doubtful debts in accor-

- dance with the Board of Directors' resolution in its meeting of April 10, 2000.
- c. The receivable from Electricity Distribution Company prior to the year 1998 is now being considered by the government-appointed consulting firm to determine how it is to be dealt with.
- d. According to the Council of Ministers' resolution dated August 17, 2003 the company was authorized to sign Gas purchase agreement with East Gas Company until completion of the project, where as National Electric Power Company sign Gas sale agreement with the project company after incorporation of the company and sign license agreement with it. Central Electricity Generating Company balance was JD 4,298,153 for Gas sales as of December 31, 2003.

### 5. Spare Parts, Materials and Supplies

The details of this item are as follows:

	Decem	ber 31,
_	2003	2002
	JD	JD
Spare parts and transformer stations, transmission lines and materials *	8,822,180	8,588,856
Stationery	17,826	18,821
Warehouse materials for training	120,669	125,971
Street lighting materials	223,676	219,044
Control and monitoring center materials	822,165	591,841
	10,006,516	9,544,533

<sup>\*</sup> This item contains slow-moving spare parts totaling JD 1,743,543 being idle since the beginning of the year 1999.

### 6. Prepayments on Loan Installments and Interest Payable

This item represents the prepaid installment of the Islamic Bank loan, Jedda, due on January 1, 2004 in order to benefit from an early settlement discount of 15%, applicable in the fiscal year 2003.

### 7. Available-for-Sale Financial Assets

The details of this item are as follow:

	Dece	mber 3	1,2003	Decen	nber 31	,2002
_	No. of		Fair	No. of		Fair
_	Shares	Cost	Value	Shares	Cost	Value
	Share	JD	JD	Share	JD	JD
Jordan Electric Power Company	290959	157,567	896,154	290959	157,567	570,280

The investment in Jordan Electric Power Company of 157,567 shares represents the balance of the shares acquired through a special subscription.

### 8. Investments in Subsidiary and Affiliated Companies' Shares

The details of this item are as follows:

	Percentage	December 31,	
	Ownership	2003	2002
Subsidiary Companies:	%	JD	JD
Irbid District Electricity Company (Listed on	-		
the Amman Financial Market)	55.45	2,032,790	2,032,790
Belly Controls Company	50	50,000	50,000
		2,082,790	2,082,790
Affiliated Companies:			
Central Electricity Generating Company	25	7,500,000	7,500,000
Electricity Distribution Company	25	2,500,000	2,500,000
· · · · · · · · · · · · · · · · · · ·		10,000,000	10,000,000
		12,082,790	12,082,790

- On July 19, 1997, National Electric Power Company signed an agreement with Jordan Investment Corporation (a Government entity) whereby the Company's shares in both Irbid District Electricity Company and Jordan Electric Power Company were transferred to the Corporation according to their book values, which were JD 2,032,790 and JD 1,813,460, respectively. The shares in the latter company were sold and the proceeds of the sale were received during 1999.
- On September 16, 2003, the Board of Directors decided to transfer the investment of the National Electric Power Company in the Central Electricity Generating Company of JD 7,500,000, represented by 7,500,000 shares, to the Government according to the Council of Ministers' resolution dated August 26, 2003. Transfer was conducted on January 15, 2004 and recorded in the accounting records of the year 2004.
- These investments have been temporarily recorded in the Company's registers pending a final decision by the Government.

### 9. Long-term Loan

This item represents the Company's employees housing fund.

During the year 2003, the Company's employees housing fund was granted an additional loan of JD 200,000 in accordance with the Board of Directors' resolution dated January 28, 2003. As such, the balance of the loan granted to the Company's employees housing fund became JD 801,060 as of December 31, 2003 (JD 601,060 for the year 2002).

### 10. Fixed Assets

The details of fixed assets are as follows:

For the Year Ended December 31

	Ř	Revaluation	0	Cost	Accum	Accumulated	Depreciation	iation	As of Decmber 31	_ nber 31,	•
•	Beginning				Beginning				2003	2002	Annual Denreciation
	of Year Ad	Additions	Disposals F	Iditions Disposals End of Year	of Year	of Year Additions Disposals End of Year	isposals E	nd of Year	Net Book Value		Rate
	٥٢	JD	JD	JD	JD	JD	٥٢	JD	JD	JD	(%)
Land	15,610,314	4 *140,958	1	15,751,272	1	1	1	1	15,751,272	15,610,314	1
Buildings	19,112,595	5 1,634,769	ı	20,747,364	3,681,171	719,146	Ū	4,400,317	16,347,047	15,431,424	2 - 3.33
Transmission lines - sea cable	25,231,064	4	į	25,231,064	2,607,624	630,776	i	3,238,400	21,992,664	22,623,440	2.5
Transmission lines	145,953,77	1,487,764	•	147,441,535	14,970,316	2,694,991	ı	17,665,307	129,776,228	130,983,455	1.5 - 7.2
Earth lines	1,574,303	3	ı	1,574,303	535,860	86,349	1	622,209	952,094	1,038,443	1.66 - 5.8
Transformer stations	146,400,452	2 7,637,916	•	154,038,368	31,739,874	6,221,337	ı	37,961,211	116,077,157	114,660,578	2.22 - 7.2
Insulators test stations	177,221	1	ı	177,221	28,837	15,900	1	44,737	132,484	148,384	7.14
Consumers' meters		1	1	1	ı	1	•	ı	-	_	
Communication equipment in fibre optics	1,574,752	2 27,428	ı	1,602,180	303,346	153,425	1	456,771	1,145,409	1,271,406	10
Automatic switchboards and communication equipment	2,059,112	2 10,405	•	2,069,517	1,095,677	123,279	ı	1,218,956	850,561	963,435	4 - 20
Computers	876,335	5 90,920	ı	967,255	569,724	109,406	1	679,130	288,125	306,611	20
Vehicles	1,648,216	6 1,439,254	11,992	3,075,478	942,817	359,215	8,792	1,293,240	1,782,238	705,399	20
Warehouse equipment	7,652	2 961	1	8,613	4,882	345	1	5,227	3,386	2,770	10
Laboratory equipment	279,662		1	279,662	121,135	25,462	1	146,597	133,065	158,527	10
Operating equipment	578,522	2 19,650	1	598,172	267,087	107,427	1	374,514	223,658	311,435	10
Control equipment	3,669,244	4 45,978	į	3,715,222	2,607,772	538,229	ı	3,146,001	569,221	1,061,472	12.5
Tools and equipment	360,672	2 49,077	1	409,749	180,371	50,286	1	230,657	179,092	180,301	10
Other equipment	639,623	3 86,694	į	726,317	307,526	60,305	ı	367,831	358,486	332,097	10
Office equipment and furniture	722,368	8 179,742	1	902,110	390,745	84,098	1	474,843	427,267	331,623	10
Training equipment		- 126,795	į	126,795	Ì	4,227	Ü	4,227	122,568	ů.	3.33
Legal compensations assets		- 6,540,886	Ī	6,540,886	Ì	654,088	Ü	654,088	5,886,798	i	10
•	366,475,879	9 19,519,197	11,992	385,983,084	60,354,764	12,638,291	8,792	72,984,263	312,998,821	306,121,115	
Less: Assets contributed by consumers	27,688,787	7 3,871,705	1	31,560,492	5,143,041	1,221,455	1	6,364,496	25,195,996	22,545,746	4
"	338,787,092	2 15,647,492	11,992	354,422,592	55,211,723	11,416,836	8,792	66,619,767	287,802,825	283,575,369	

<sup>\*</sup> This figure includes an amount of JD 19,191 representing the value of plots of land acquired during the year 2003 (page 5) (Note 20).

<sup>\*\*\*</sup> According to the resolution of the Electricity Sector Regulatory Commission in its meeting held on October 18, 2003, compensations paid by the Electricity Companies to the real estate owners through whose lands the electric networks pass have been considered capital expenditures shown in the balance sheet within legal compensation assets to be depreciated over ten years provided that compensations paid during the year are capitalized at year-end effective from January 1, 2003.

<sup>-</sup> The cost of fixed assets include assets owned by the Islamic Development Bank-Jeddah. The cost of these assets are estimated at JD 11,040,500 against long-term loans. Ownership title of these assets shall be transferred to the Company after the last installment of the loans has been paid during the year 2008 (Note 11).

### 11. Projects Under Construction and Payments to Contractors

The details of this item are as follows:

	Decemb	er 31,
	2003	2002
	JD	JD
Transmission lines projects	7,772,854	6,773,520
Transformer stations expansion project	25,152,938	16,515,139
Monitoring and control center project	327,650	2,540
Other projects	1,331,023	341,138
Consultancy and research	218,103	212,493
Payments to contractors	1,488,167	2,196,869
	36,290,735	26,041,699

### 12. Accounts Payable and Other Credit Balances

The details of this item are as follows:

	December 31,		
_	2003	2002	
	JD	JD	
Central Electricity Generating Company-power purchases	29,107,322	18,422,545	
Egyptian Company for Electricity Transmission-Power purchases	1,667,382	1,317,655	
Orient Gas Company - purchases	3,581,795	-	
Ministry of Finance - purchases of gas	716,358	-	
Central Electricity Generating Company - other	529,751	-	
Other suppliers	248,423	469,535	
Government and other deposits	645,087	1,077,850	
Due to employees	12,746	5,631	
Other payables	544,464	327,537	
Board of Directors' remuneration	10,400	10,500	
	37,063,728	21,631,253	

### 13. Accrued Expenses

The details of this item are as follows:

	Deceml	per 31,
-	2003	2002
	JD	JD
Professional fees	5,650	3,955
General manager's remuneration	4,000	4,000
Registration fees-Electricity Sector Regulatory Commission	2,000	-
License fees-Electricity Sector Regulatory Commission	11,932	-
	23,582	7,955

### 14. Provision for Litigations Filed Against the Company

This item represents the provision recorded in the Company's records against lawsuits and litigations raised against it as of December 31, 2003. They relate to claims for damages resulting from towers and transmission lines constructed on or through private properties. During the year 2003, movement on the provision was stopped as per the resolution of the Electricity Sector Regulatory Commission as these litigations are considered as capital expenditures shown within fixed assets. The amount of JD 5,000,000 was returned to the income statement.

### 15. Interest Payable on Loans

This item represents accrued interest on loans payable.

### 16. Long-Term Loans and Bond Payable

The details of this item are as follows:

	Direct Loans Foreign Currencies	Local Loans	Total
	JD	JD	JD
December 31, 2003			
Current Portion	10,388,687	1,858,581	12,247,268
Long-term Portion	101,740,309	3,400,940	105,141,249
Total	112,128,996	5,259,521	117,388,517
December 31, 2002			
Current Portion	10,051,148	1,858,581	11,909,729
Long-term Portion	99,171,858	5,259,520	104,431,378
Total	109,223,006	7,118,101	116,341,107

- The above loans have maturities extending to the year 2018. The annual interest charge varies from 0.75% to 9.75%.
- The Morabaha percentage related to the loans financed by the Islamic banks varies from 50% to 54%.
- The guarantees provided by the Company to obtain the above loans are those of the Government of Jordan. Repayment of the loans and related interest are to be made by the Company in the manner it deems appropriate.
- The agreement with the Islamic Bank for Development, Jedda provides that assets acquired through the Bank's loan are to remain the property of the Bank, and are to be leased to the Company until final settlement on July 1, 2008. The loan balance as of year end 2003 was JD 4,844,534 (JD 5,316,276 for the year 2002).
- Prepaid expenses and other debit balances within fixed assets and loans payable within liabilities include JD 6,394,812 representing payments to be withdrawn from loans later on and upon the approval of the lenders on these withdrawals. This led to increasing the assets and liabilities by the same amount.

### 17. Indemnity Provision

This item represents an additional provision for employees end-of-service indemnities as of December 31, 2003, estimated according to the Board of Directors' resolution dated June 22, 2000. A provision of JD 1,000,000 was taken during the year 2003 for the employees entitled to compensations and appointed after December 1, 1983 based on Management's estimates.

### 18. Provision for Tariff Subsidy

The details of this item are as follows:

	Decem	ber 31,
-	2003	2002
	JD JD	
Provision for the tariff difference in the subsidy of Irbid District Electricity Company	2,918,000	1,708,240
	2,918,000	1,708,240

<sup>-</sup> This provision is subject to the approval of the Council of Ministers.

### 19. Advances Received on Uncompleted Projects

The details of this item are as follows:

	December 31,		
	2003	2002	
	JD	JD	
Dead Sea eastern coast development	150,238	150,238	
Industrial City-Karak energy supply	611,522	393,624	
Transmission line Project Subehi-Waqas and transformer station- Waqas	4,867,875	4,867,875	
Transformer station project-Subehi	721,600	1,332,660	
Al-Hassan Industrial City energy supply	517,642	1,575,938	
Water Authority-Expansion Project-Hasa transformer station	201,509	167,923	
Industrial City-Aqaba energy supply	-	2,132,210	
Al-Hussein ben Talal University energy supply	223,898	223,898	
Al-Omary energy supply	140,000	140,000	
	7,434,284	10,984,366	

### 20. (Decline) in Shareholders' Equity as a Result of Restructuring

The details of this item are as follows:

	December 31,	
	2003	2002
	JD	JD
Adjustment of National Electric Power Company's share in equity		
upon separation (after deduction of capital)	(7,532,718)	(7,532,718)
Warehouse materials received according to the Supervisory and Coor-		
dination Committee resolution	90,877	90,877
Zarqa warehouse materials transferred from Central Electricity Generating		
Company according to the Company's Board of Directors' resolution	(51,571)	(51,571)
Lands appropriated from the Hashemite Kingdom of Jordan to the Company	493,923	493,923
Glass insulators received from Central Electricity Generating Company	9,419	9,419
Dual reading and timing meters transferred to Electricity Distribution Company	(47,158)	(47,158)
Net book value of Hyundai car transferred to Central Electricity Generating Company	(4,610)	(4,610)
Land acquisition (Note 11)	3,563,272	3,544,081
Transferring account receivable balance from Elictricity Distribution Company	1,043	1,043
_	(3,477,523)	(3,496,714)

### 21. Government Equity

This item represents the balance of some of the credit loan installments and interest recorded in favour of the Treasury under shareholders' equity in accordance with the loan agreements, which do not consider these balances as liabilities of the Company.

### 22. Grants and Donations

This item represents grants and donations obtained through agreements signed between external bodies and the Government of the Hashemite Kingdom of Jordan. The details are as follows:

	Decemb	er 31,
	2003	2002
	JD	JD
The Japanese Government grant/JICA	102,336	102,336
Grants to develop a monitoring and control center	259,308	259,308
Grants from other bodies	5,878	3,968
	367,522	365,612

### 23. Exempted Interest on Amounts Past Due from Energy Sales

According to the Council of Ministers' resolution dated November 13, 1999, the Government departments and the Water Authority were exempted from interest on amounts past due from electricity sales which were payable to Jordan electricity companies as of December 31, 1998. The National Electric Power Company is to further exempt the Jordan electricity companies from interest on amounts past due on electricity sales as of December 31, 1998. The amount to be exempted herein is to be in line with the amount of interest from which the Government departments and the Water Authority were exempted. The necessary arrangements are to be made by the parties concerned. According to the Board of Directors' resolution dated April 10, 2000, the opening balance sheet balances have been adjusted by decreasing both shareholders' equity and accounts receivable as follows:

	JD
Interest on amounts past due on energy sales from which The Jordanian Electricity Companies were exempted	11,351,647
Written-off interest on amounts past due on energy sales, due from the Government departments and Water Authority	6,322,284
	17,673,931

During the year 2000, the adjustments of the opening balance sheet balances were referred to the Council of Ministers for approval.

### 24. Retained Earnings

The details of this item are as follows:

	Deceml	December 31,		
	2003	2002		
	JD	JD		
Retained Earnings-Beginning Balance	1,633,447	2,262,006		
Dividend paid to Ministry of Finance	(1,000,000)	(1,200,000)		
Net Annual Profit after Appropriation	2,575,056	571,441		
	3,208,503	1,633,447		

### 25. Consumers' Contributions - Net of Amortization

According to the Prime Minister's resolution number 23/11/6189 dated June 4, 1985, consumers' contributions, which represent contributions for works carried out at the request of consumers, are amortized at an annual rate of 4% starting from the year 1985. The details of this item are as follows:

	D e c e m b	December 31,		
	2003	2002		
	JD	JD		
Consumers' contributions (after revaluation)	31,560,492	27,688,787		
Less: Accumulated amortization	6,364,496	5,143,041		
	25,195,996	22,545,746		

### 26. Sales of Electric Power

This item consists of the following:

	For the Year Ended December 31,					
_		2003			2002	
_	Electricity	Average	Total Electricity	Electricity	Average	Total Electricity
	Sales	Tariff	Sales	Sales	Tariff	Sales
	Megawatt hour	JD/Megawatt hour	JD	Megawatt hour	JD/Megawatt hour	JD
Electricity sales to Jordan Electric Power Company	4,477,964	33.157	148,475,682	4,140,369	32.215	133,383,523
Electricity sales to Irbid District Electricity Company	1,156,040	33.213	38,395,639	1,107,888	32.281	35,763,494
Electricity sales to Electricity Distribution Company	1,283,164	32.572	41,794,856	1,151,605	31.742	36,554,644
Electricity sales to wholesale consumers	764,945	46.254	34,548,938	729,406	45.419	33,128,968
	7,664,113	_	263,215,115	7,129,268		238,830,629

### 27. Electric Power Purchases

This item consists of the following:

	For the Year Ended December 31,					
_	2003		2002			
_	Electricity	Average	Total Electricity	Electricity	Average	Total Electricity
	Purchases	Tariff	Purchases	Purchases	Tariff	Purchases
	Megawatt hour	JD/Megawatt hour	JD	Megawatt hour	JD/Megawatt hour	JD
Electricity purchases from Central Electricity Generating Company	6,977,193	28.892	201,581,425	7,102,185	27.090	192,401,214
Electricity purchases from Eqyption Company for Electri	city					
Transmission	972,300	30.623	29,774,506	321,775	26.410	8,498,186
Electricity purchases from King Talal dam and the Indian Company	for					
Chemical Industries	17,776	16.54	294,075	12,441	14.930	185,738
	7,967,269		231,650,006	7,436,401		201,085,138

### 28. Gas Purchases

This item includes the gas purchase costs of JD 2,470,466 for the year 2003, and represent the price difference in the register of the Ministry of Finance deposits according to the gas purchase agreement.

### **29. Operating Expenses**

This item is made up of the following:

	For the Year Ended December 31,	
	2003 2	2002
	JD	JD
Energy supply cost (Operation Division Expenses)	612,187	551,867
Company contribution to street lighting costs	33,357	33,443
Other operational expenses	55,777	50,940
Transformer stations expenses	14,278	21,268
	715,599	657,518

### **30.** Maintenance Expenses

This item is made up of the following:

		For the Year Ended December 31,		
	2003	2002		
	JD	JD		
Transmission lines maintenance	851,826	496,144		
Transformer stations maintenance	1,282,526	1,047,398		
General maintenance	221,075	242,462		
Control and monitoring center maintenance	75,964	77,829		
Training center maintenance	3,635	6,561		
	2,435,026	1,870,394		

### 31. General and Administrative Expenses

This item is made up of the following:

	For the Year Ended December 31,	
_	2003	2002
	JD	JD
Salaries	1,992,782	1,970,637
Other employees' benefits	1,004,940	950,637
Insurance of fixed assets	423,842	331,988
Professional & consultancy services	163,023	82,830
Bus renting	81,798	55,700
Registration and licensing with unions & societies	23,006	14,374
Stamp fees	12,037	36,433
Customs & licensing fees	32,073	26,677
Stationery, printouts & other office supplies	58,839	53,021
Electricity & water	71,491	63,538
Per diems & travel	61,069	37,245
Car expenses	27,381	21,239
Cleaning materials & services	38,474	30,392
Telex, post & telephone	60,745	50,667
Contributions (Madaba road-Faisaliyyeh & Jordan street bridge)	-	83,369
Licensing with the Electricity Sector Regulatory Commission	574,808	534,695
Bonuses	37,600	35,013
Electricity Training Center	56,621	66,132
Subsidy to university & college trainee students	15,860	18,646
Committees bonuses & medical committee fees	40,306	27,087
Electricity sector privatization expenses	10,963	-
Bank expenses	37,795	13,333
Advertisement	16,558	20,755
Other expenses	102,607	166,517
	4,944,618	4,690,925

### 32. Net (Loss) on Currency Exchange

This item is comprised of the following:

		For the Year Ended December 31,		
_	2003	2002		
	JD	JD		
Exchange differences on loans payable	(3,230,926)	(2,396,485)		
Exchange differences on the translation of current assets and liabilities denominated in foreign currencies	(2,372)	(9,593)		
Exchange differences on installments of loans paid during the year	(91,480)	(103,040)		
	(3,324,778)	(2,509,118)		

### 33. Other Revenues - Net

This item is comprised of the following:

		For the Year Ended December 31,		
	2003	2002		
Revenue from:	JD	JD		
Profit on disposal of fixed assets	7,303	-		
Services to distribution generation companies	88,693	287,342		
Dividends received	256,718	270,807		
Consultancy fees received from other parties	951,504	124,768		
Compensations from insurance companies	34,698	76,532		
Revenue on disposal of scrap	8,583	19,253		
Personnel housing	13,809	10,841		
Training center revenue	284	3,727		
Other revenue	34,476_	16,931		
<b>Total Revenue</b>	1,396,068	810,201		
Expenses:				
Loss on disposal of fixed assets	-	330,403		
Consultancy costs and studies for other parties	693,747	113,629		
Disposal of materials and spare parts	33,191	106,560		
Personnel housing	71,719	39,612		
Donations	47,008	4,200		
Bonuses	6,072	690		
Contributions (Umm Atiyah Road - Zai)	49,126	-		
Other	18,373	5,082		
Total Expenses	919,236	600,176		
Net Other Revenue	476,832	210,025		

### 34. Company's Contribution in Constructing Ministry of Energy and Mineral Resources Building

In accordance with the Board of Directors' resolution dated March 7, 2000, and based on the Prime Minister's letter dated December 17, 1996, it was decided to give up a plot of land adjacent to the National Electric Power Company's building and contribute to the construction costs of the building of the Ministry of Energy and Mineral Resources. The total contribution until December 31, 2003 was as follows:

	For the Year Ended December 31,		
	2003	2002	
	JD	JD	
Land granted & the amounts paid until December 31, 2002	988,000	788,000	
Payments during 2003	150,000	200,000	
	1,138,000	988,000	

### 35. Contingent Liabilities

As of December 31, 2003, the Company was contingently liable for the following:

- a. Documentary credits for JD 14,834,934.
- b. Letters of guarantee of JD 63,125.
- c.According to the Council of Ministers' resolution, an international consulting firm was assigned to review the Jordan Electricity Authority fixed assets valuation. This was performed in the year 1994 and updated in the year 1996, when Jordan Electricity Authority was converted into National Electric Power Company. In addition, the consultant was assigned to study and recommend electricity tariffs among electricity companies after restructuring the National Electric Power Company into three companies as of January 1, 1999, as well as reviewing the restructuring terms. The consultant issued his report during the year 2002, but no decisions have been taken on the basis of his recommendations yet.
- d. Most of the loans payable relating to the National Electric Power Company (before restructuring) are still in the name of the National Electric Power Company. The results of the study of the international consultant, assigned to study these loans, were supposed to be issued during the year 2000. During the year 2002, the consultant issued his report, and no decision has been taken yet based on his recommendations.
- e. There were lawsuits raised against the Company claiming compensation for damages incurred by real estate owners as a result of installing high voltage transmission lines, towers, and poles on their properties. The Company's management and legal counsel estimate these compensations at JD 6 million and the Company adopts the policy of capitalizing the compensation upon its payment. Furthermore, there are claims for various compensations amounting to approximately JD 96,000.

### **36. Provision for Income tax**

The Company has filed its income tax returns within the prescribed period. However, no final settlement has been reached for the years from 1997 to 2002. The Company paid JD 1,404,552, classified in the balance sheet under accounts receivable, to the Income Tax Department on account. In the opinion of management, the amount taken as provision for income tax is adequate.

### 37. Guarantees Received From Contractors

At the balance sheet date, there were guarantees of JD 9,712,261 received from contractors.

### 38. Adjustments of the Financial Statements

- a. According to the request of the Minister of Energy and Mineral Resources, who is also the chairman of the Electricity Sector Regulatory Commission, in his letter No. 5/4/1/505 dated May 8, 2004 which includes the following:
  - 1. Reconsideration of power tariffs for unretired units. This led to an increase of JD 2,576,257 in power purchases over the purchases determined according to the tariffs issued by the Electricity Sector Regulatory Commission in its letter No. 5/4/1/974 dated August 21, 2003.
  - 2. An adjustment of the Power purchase value shown in the financial statements at JD 229,073,749 to become JD 231,650,006, and adjustment of the balance of the Central Electricity Generating Company power purchase stated in the financial statements within accounts payable and other credit balances at JD 26,531,065 to become JD 29,107,322.
  - 3. Payment by the National Electric Power Company of JD 534,749 representing the difference in the compensation of Irbid District Electricity Company for the years 2001 and 2002 and Electricity Distribution Company for the year 2001.
    - Prior years' expenses-net shown in the financial statements at JD 46,020 have been adjusted to JD 580,769, the balance of the Central Electricity Generating Company shown in the financial state-

ments within accounts receivable at JD 4,998 has been adjusted to JD zero, and the balance of the Central Electricity Generating Company - other shown in the financial statements within accounts payable and other credit balances at JD zero has been adjusted to JD 529,751.

b. According to the letter of the Minister of Energy and Mineral Resources No. 2/4/2/1828 dated May 3, 2004, including the resolution of the Council of Ministers No. 1510 dated April 20, 2004, relating to expending a bonus of a two-month salary to the managers working for the three electricity companies in light of the results of operations for the year 2003, a provision of JD 4,000 has been taken for this purpose.

The bonus for the General Manager of JD 4,000 has been recorded, and accrued expenses have been increased by the same amount.

Based on the above, the income tax provision, provision for fees, reserves, and earnings per share have been recomputed according to the adjusted results. The financial statements previously sent to the Council of Ministers have been adjusted to reflect the impact of the adjustments (a) and (b) above.

### **39.** Comparative Figures

Some of the comparative figures for the year 2002 have been reclassified to correspond with the current year presentation.