



POHJOLAN VOIMA ANNUAL REPORT 2000



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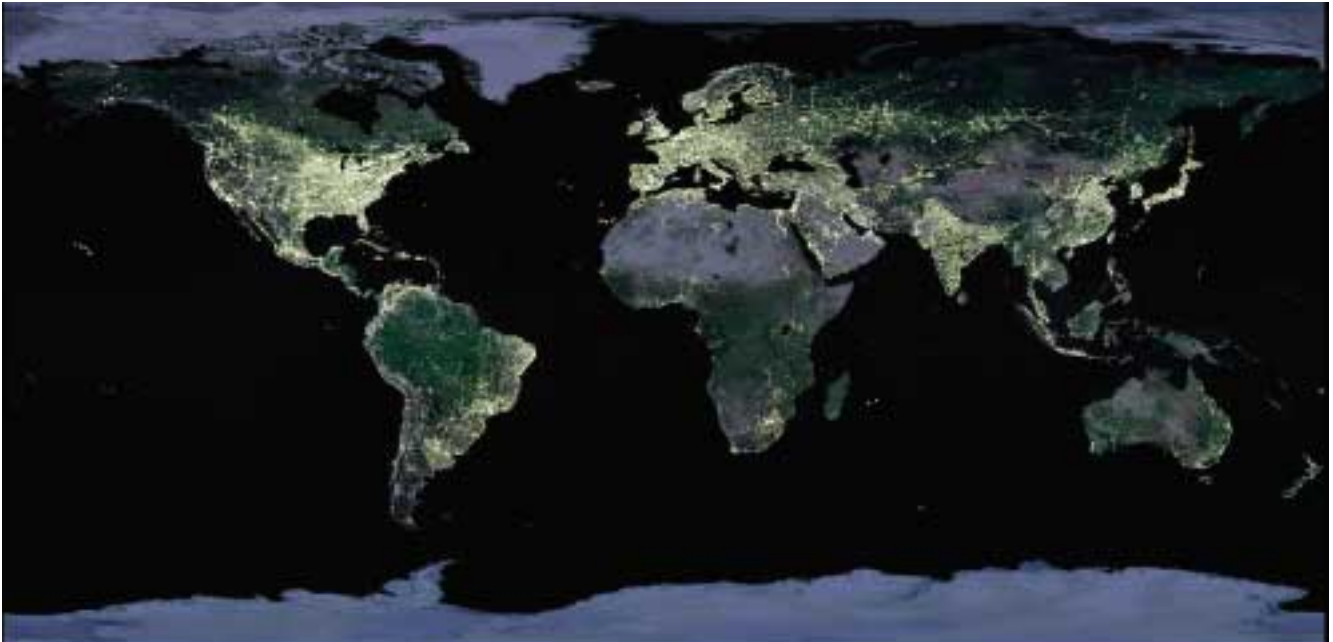

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### The Annual General Meeting

The Annual General Meeting of Pohjolan Voima Oy was held on Friday, 20 April 2001 at 13.00 pm in Töölönkatu 4, 00100 Helsinki

## BUSINESS IDEA

*Pohjolan Voima is a privately owned group of companies in the energy sector, which produces and supplies electricity and heat for its shareholders. The Company also offers services in its sector to European customers, primarily in Finland and neighbouring areas.*



*The globe photographed by time zone from a satellite at night-time, showing an overview of the increasing trend for global lighting demand.*

# GUIDELINES FOR ENERGY PRODUCTION IN THE 21ST CENTURY

Modernization of society and the increase in electricity consumption go hand in hand. Despite a downward turn in the growth of exports, the electricity requirement of industry is expected to increase by 2% in 2001. We are operating in line with these forecasts.

In 2000, we were the largest investor in power plants in the Nordic countries. The investment programme concentrates on increasing the use of domestic biofuels, developing renewable energy sources, utilizing recycled fuels and building additional nuclear power. We are investing a total of FIM 2.5 billion in the construction of five power plants. On completion, these power plants will generate both electricity and heat, and their primary fuel will be wood.

Pohjolan Voima launched three industrial process power projects during the year. The completed power plants and those that are being built are in line with the principle

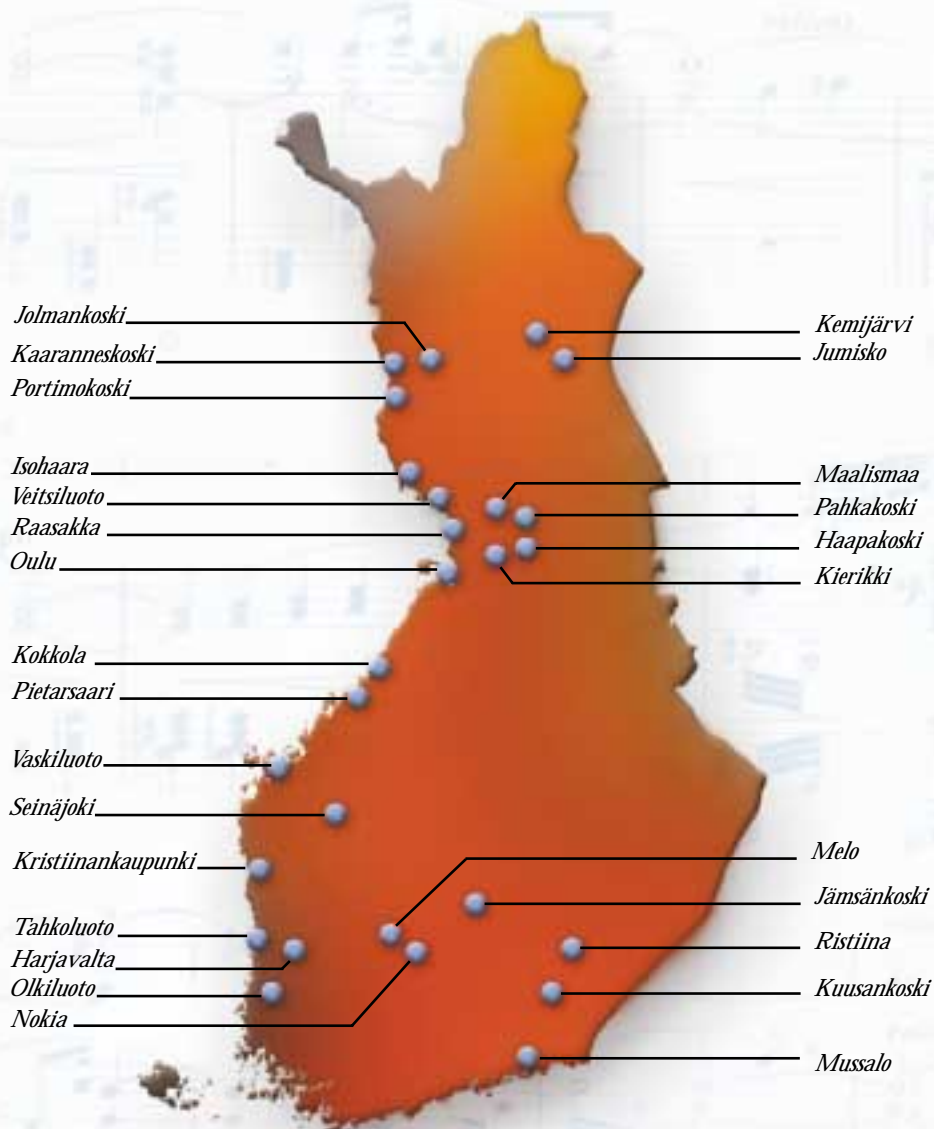
of sustainable development and the efforts to combat climate change.

In addition to active construction, 2000 was also a period of intense development of services. In spring, the name of our Service Group's parent company, PVO-Palvelut Oy, was changed to Empower Oy and the Group was renamed the Empower Group. We purchased a majority shareholding in the Estonian network construction and contracting company, Eesti Elektrivõrkude Ehituse AS. We formed a joint venture with Kymmivoima Oy, which provides risk management services for electricity trading.

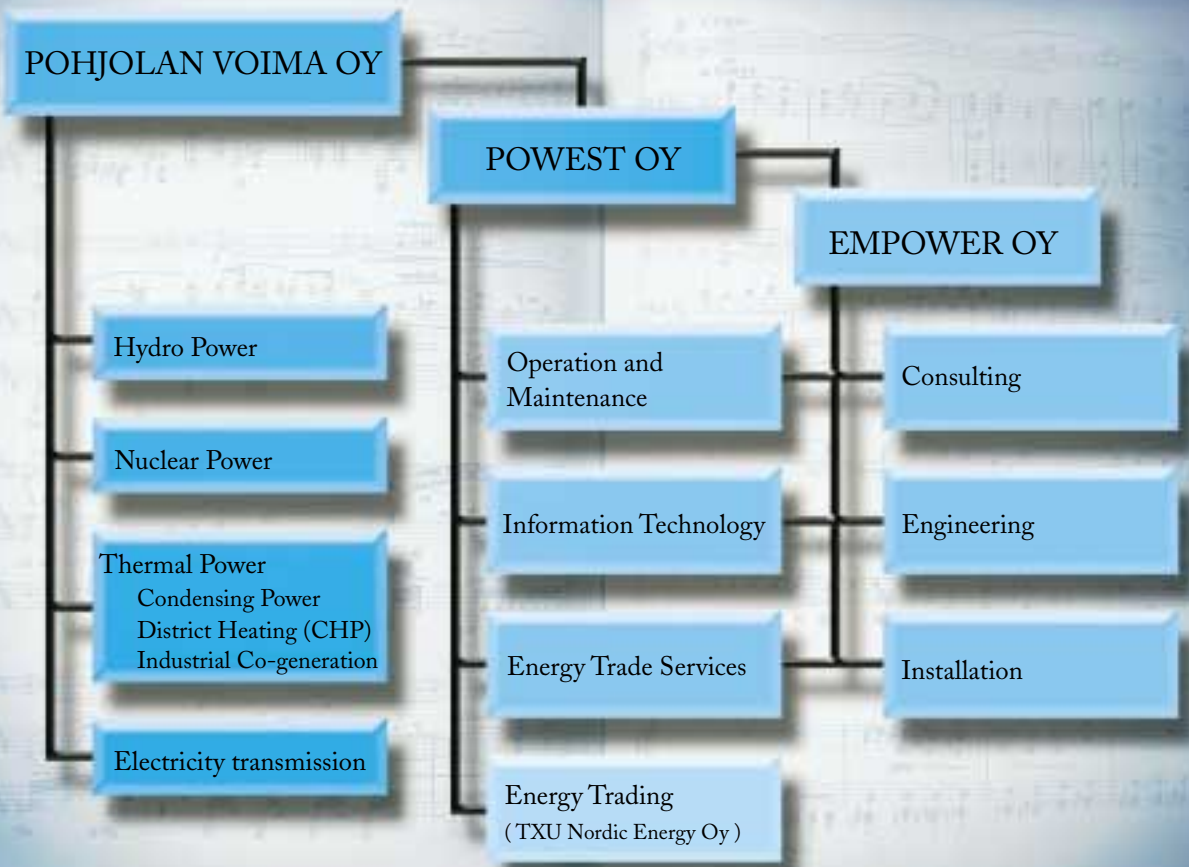
2000 was a successful year, but Pohjolan Voima and its owners are already building and planning operations with the year 2040 in mind.

## KEY FIGURES FOR THE GROUP 2000

	<b>2000</b>	<b>1999</b>	<b>1998</b>	<b>1997</b>	<b>1996</b>
<i>Turnover M€</i>	508	519	568	583	679
<i>Operating profit M€</i>	26	66	90	77	113
<i>Net interest bearing liabilities M€</i>	705	758	874	943	1,006
<i>As percentage of turnover %</i>	139	146	154	162	148
<i>Equity to assets ratio %</i>	51	49	46	42	40
<i>Total assets M€</i>	2,160	2,220	2,301	2,346	2,422
<i>Investments M€</i>	55	37	75	234	124
<i>Personnel</i>	1,855	1,454	1,421	1,419	1,397



# GROUP STRUCTURE 1 APRIL 2001



# PRODUCTION AND SERVICES

## HYDROPOWER

Hydropower production capacity is used to balance other production capacity and daily fluctuations in electricity demand. Hydropower has the task of adjusting production to consumption. This adjusting function is increasingly important in the deregulated electricity markets.

## NUCLEAR POWER

Nuclear power is used to meet a continuous and steady demand for electricity. The load factors of the Finnish nuclear power plants are among the highest in the world.



## THERMAL POWER

The generation of thermal power makes efficient use of the fuels in combined heat and power production (CHP). While generating steam for industrial processes or district heat for communities, power plants also generate electricity. Condensing power plants with a high efficiency generate electricity when there is demand in the electricity market.

## ELECTRICITY TRANSMISSION

The objective of Pohjolan Voima's regional grid operations is to manage the transmission lines of the Group's own power plants and to transmit electricity of the customers connected to the regional grid.

## ENERGY TRADE SERVICES

As the market price of electricity determines the order of use of the production units, the importance of services linked with power plant control, the optimization of electricity acquisition costs and grid supervision, and of energy management and operation control continues to increase. Risk management services help power producers and sellers operate effectively after the termination of fixed-price supply and delivery contracts.

## CONSULTING

Consulting, design and training services linked with improving the efficiency of commercial operations, the development of business processes and information management, and with operation and maintenance, reliability, risk management and requirements management are the critical elements of know-how in upgrading energy-intensive industry.

## ENGINEERING

The task of the Engineering operations is to provide all the design and implementation services and technical consultation required by the power plant projects and the Grid Technology business area. Expertise in biofuel, gasification and wind technology will be an increasingly important element of the future operations.



## INFORMATION TECHNOLOGY

The information technology services cover energy management systems, SCADA systems, metering services, operation and maintenance systems, financial systems, workstation services and communications.

## OPERATION AND MAINTENANCE

Operation and maintenance services are provided on market terms with the objective to increase the efficiency of energy production. The Operation and Maintenance Services business area is in charge of operating and maintaining Pohjolan Voima's thermal power plants.

## INSTALLATION

The Installation business area concentrates on the construction and maintenance of transmission, distribution and data transmission lines and substations. Extensive know-how of the grid technology and company reorganizations in the Baltic countries create better opportunities to offer custom-built solutions and deliveries with a high overall efficiency also outside the traditional Finnish area of operation.

## REVIEW BY THE PRESIDENT



### RESPONSIBLE GENERATION OF ELECTRICITY ON THE INCREASE

Meeting the growing need for electricity is a challenge to the power industry. It must integrate competitive power production with a reduction in greenhouse gas emissions. Pohjolan Voima is currently building biofuel-fired power plants, which will use wood and peat as fuels, in five locations. These power plants will convert local fuels into electricity and heat to meet the local needs. Wood resources for power production are limited, however. In addition to regional power plants, larger power plants are required for base-load power production to meet the national demand for electricity.

The additional construction of nuclear power will ensure the sufficiency of reasonably priced electricity and substantially contribute to fulfilling the commitments under the Kyoto Protocol. In the energy sector, several companies that supply electricity to consumers are interested in the additional construction of nuclear power. In industry, the requirement for additional capacity is at present relatively smaller than that of the rest of society. In November 2000, Pohjolan Voima's subsidiary, Teollisuuden Voima Oy, submitted an application for a decision in principle to the Ministry of Trade and Industry for the construction of a new nuclear

power plant. In the event of a favourable decision by the Council of State, the decision in principle must still be submitted to Parliament for ratification.

In 2000, Pohjolan Voima was the largest investor in power plants in the Nordic countries. The investment programme focuses on increasing the use of domestic biofuels, developing renewable energy sources, utilizing recycled fuels and building additional nuclear power.

### THE NEED FOR ELECTRICITY WILL NOT BE REDUCED

History proves that the modernization of society and an increase in electricity consumption go hand in hand. Energy conservation and optimization of the use of raw materials increase the consumption of electricity. The new information society is based on the uninterrupted supply of electricity. Information providers and those who need information use their equipment continuously. Information must be available all the time. Wireless communication consumes more electricity than cable communication.

People's increased leisure time and living space also increase the consumption of electricity. When people's wealth grows, they will not sacrifice comfort even in their leisure.





### **CLIMATE CHANGE CONSIDERED IN DECISION-MAKING**

The greenhouse effect has become a major topic in political decision-making. The countries that had signed the United Nations Framework Convention on Climate Change held a Conference of the Parties (COP6) in The Hague, which ended in deadlock. The conference could not even be officially closed. Despite the setback in The Hague, climate change continues to play an important role in political decision-making in Finland.

The prevention of climate change focuses on the year 2010, which is rather near. From the point of view of energy producers, the consideration should be extended over a longer time span. The current investment decisions on power plants will be completed in 5 to 10 years. After 2010, the remaining lifetime of these power plants will be at least 30 to 40 years. A political stand should now be taken on what will happen after 2010 in order that it is possible to make investment decisions at all.

### **IMPORTED ENERGY IS NOT BASE-LOAD POWER IN FINLAND**

Rainfall levels were again high in 2000. The Nordic countries produced 40 TWh more hydropower than in a year of average precipitation. In its electricity supply, Pohjolan

Voima utilized the low-priced electricity available in the exchanges.

In years of normal precipitation, both Sweden and Norway are net importers of electricity. In the Nordic countries, there may also be years with extremely low rainfall levels. In such years, the annual hydropower production may be 80 TWh less than in 2000. When little hydropower is available, the electricity market will be put to the test. A situation may arise where there are plenty of buyers but no sellers.

New cable connections to central Europe are foundering one after another. Even if cable connections existed, it would not be reasonable, however, to transmit electricity from, say, Germany to Finland.

### **NATURAL GAS WAS NOT COMPETITIVE**

The price of natural gas continues to be uncompetitive. The price is rising sharply, as is that of other fossil fuels, whose prices are linked to the price of oil. Centralization of the ownership of fuel suppliers further increases price risks. The present price of natural gas should be halved in order to make its use at power plants competitive for electricity generation.

Pohjolan Voima is conducting studies on the construction of a natural gas pipeline from

Norway to the west coast of Finland. The gas would not increase electricity generation, but could lengthen the lifetime of coal-fired power plants and cut carbon dioxide emissions.

Extensions to the gas pipeline systems between Russia and Europe are investments in alternative transport routes. They reduce the risk involved in land transportation in Russia, but the fuel continues to come from one country. A gas pipeline through the Finnish sea area would cost as much as two nuclear power plants, and it is only a question of a transport channel. It remains to be seen whether any parties operating in the deregulated electricity market will need electricity that would carry a considerably higher price than at present.

Our sector learns new procedures, opens out and spares no effort. Pohjolan Voima is also involved in this development. I would like to thank the personnel, shareholders and co-operation partners for making the change possible.

*Timo Rajala  
President & CEO*

**Power balance of a peak hour in winter 2000/2001 (MWh/h)  
Nordels Balansgrupp Rapport 15.1.2001**



# ELECTRICITY PRICE

Norway, Sweden, Finland and Denmark have a joint electricity transmission network. In this area the consumption and production of electricity are connected with each other. The area forms an electricity market area in which electricity is purchased and sold daily.

Most of the hydropower plants in the area are located in Norway, Sweden and northern Finland. The thermal power plants are situated mainly in Denmark, southern Sweden and Finland.

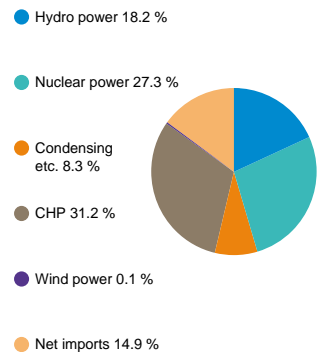
In 2000, the rainfall levels were high in the Nordic countries. Plenty of hydropower was available in the market area, and the price of electricity on the exchange was low. The generation of electricity was economical at the power plants on the Kölen mountain range, but it could not be obtained economically for Finland, since there are no high-voltage connections, which are necessary for the transmission. Electricity purchases were reduced by price increases of the network companies.

Hydropower can be adjusted more easily than thermal power. Hydropower output can be raised from zero to full power in a couple of minutes, whereas the start-up of a thermal power plant to full power may take more than 24 hours.

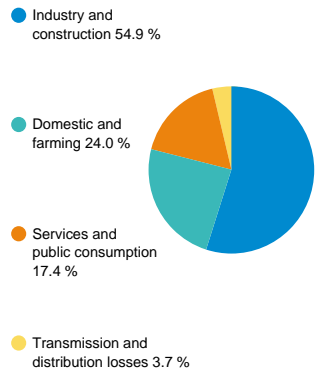
In addition to the season, the price of electricity also varies within 24 hours. At night-time, electricity is cheaper than in the daytime. At night, many hydropower plants are shut down, but for technical reasons thermal power plants must be kept in operation at least at partial load. When the consumption — and often the price — of electricity rise in the morning, hydropower plants restart generating electricity and the output of thermal power plants is also raised.

When the weather gets colder in the Nordic countries, the consumption of electricity gradually increases, and owing to the great demand the price is also higher. This means that more and more electricity is generated at thermal power plants, which mainly use coal as fuel. When the consumption and price of electricity rise sufficiently high, the generation of electricity is started at gas and oil-fired power plants.

**ELECTRICITY SUPPLY IN FINLAND  
2000 – 79 070 GWh**



**ELECTRICITY CONSUMPTION  
IN FINLAND 2000 – 79 070 GWh**



# PRODUCTION STRUCTURE OVER SEVEN DECADES

Pohjolan Voima has been involved in bringing competition to electricity production, as a result of which a versatile production machinery has been built in Finland. Different energy sources and various production techniques have been put into a situation of mutual competition. Besides the efficiency and reliability of supply, this has provided a sound economic basis, since it has been possible to spread the risks involved in the price development of different energy sources.

## INVESTMENTS OF THE FIRST DECADES

Investments in energy production always have long-term effects. An investment once made in harmony with the values of society inevitably faces changes in these values. When Pohjolan Voima began operations under the conditions following the Second World War, hydropower was the most natural energy source to meet the need for energy. The investments were implemented in a climate of positive attitudes. However, attitudes have changed over the years. Finally a decision

was taken to protect the unharnessed rapids by a special statute.

## EXTENSION TO FOSSIL FUELS

The beginning of the 1970s was the period of oil-fired thermal power plants, until the oil crisis changed the economic basis and attitudes. In accordance with a global trend, oil-fired power plants were converted to coal firing.

Coal meant “a bridge to the future”. In the 1990s, however, growing concern about climate change began to gnaw away at the capacity and the length of the bridge. This marked the beginning of a process that led to the signing of the Kyoto Protocol, which aims to reduce greenhouse gases. Besides fossil fuels, its effects also concerned the position of peat.

## NUCLEAR POWER

The oil crisis brought about a worldwide interest in the construction of nuclear power. This also happened in Finland, at Pohjolan Voima as well.

The Olkiluoto nuclear power plant is one of the first-rate plants in international terms. The accident in 1986 at the Chernobyl plant, which did not belong to these first-class plants, strengthened negative attitudes towards nuclear power.

## NATURAL GAS INTRODUCED

Natural gas was introduced into Pohjolan Voima's range of fuels in the 1990s. Dependence on a single source of supply and the abundant supply of import electricity have resulted in smaller use of natural gas than anticipated.

## WHAT IN THE 21ST CENTURY?

Energy policy and the values of society have put all players at loggerheads with the situation. The changing of attitudes from positive to negative towards more and more forms of production limits the opportunities to meet the ever-growing need for energy in harmony with the values of society.

Pohjolan Voima is currently implementing the most extensive programme in the

**1943** Pohjolan Voima was established

**1945** Construction of the Isohaara hydropower plant began

**1948** First machinery of the Isohaara plant was completed

**1954** Jumisko hydropower plant was completed

**1968** Vaskiluodon Voima Oy was established

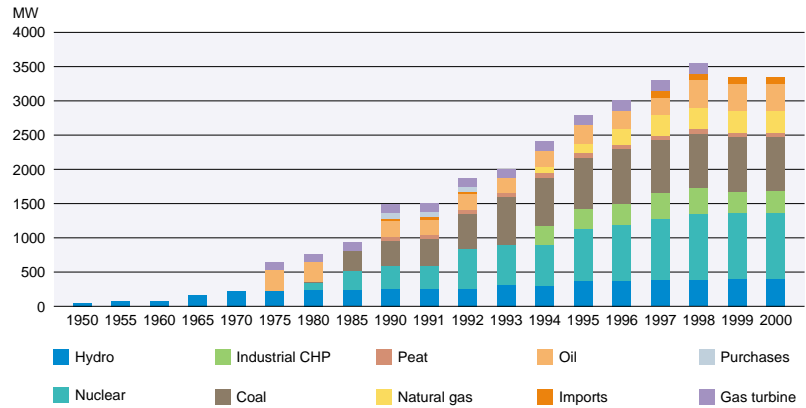
**1971** Raasakka, the last hydropower plant on the Iijoki River, was completed



Nordic countries concerning the use of biomass. The carbon dioxide emissions from the five new power plants will be smaller than those from similar natural gas-fired power plants. From the viewpoint of Finnish energy policy, however, it must be seen that by increasing the use of wood fuels it is possible to considerably increase the generation of heat, but the potential for increased electricity generation is rather limited. The use of an additional nine million cubic metres of wood enables the production of electricity to be increased by 3.7 TWh. Even large investments in wind power would give only a small proportion of the above.

The additional needs for energy can be met economically and in the best manner in respect of the mitigation of climate change by constructing additional nuclear power. The weight of these factors will grow, and the options are limited. The construction of additional nuclear power could therefore be implemented in harmony with the values of society.

POHJOLAN VOIMA GROUP GENERATING CAPACITY ( MW )



**1974** Kristiina oil-fired condensing power plant was completed

**1979** Teollisuuden Voima Oy's Olkiluoto 1 unit was completed

**1983** Kristiina coal-fired boiler plant was completed

**1990** Seinäjoki peat-fired power plant was completed

**1994** Mussalo gas turbine plant in Kotka was completed

**1994** Nokia Company's energy business was purchased



# SOCIETY AND THE ENVIRONMENT 2000

Society is widely interested in the production of energy. Pohjolan Voima considers it important that the various interest groups are aware of the environmental and social aspects linked with energy production. The Company has published an Environmental Report annually for six years now. The report is intended for Pohjolan Voima's principal interest groups: owners, personnel, national, regional and local authorities, and social decision-makers.

The Company's economic importance, co-operation with the interest groups and environmental aspects together form a whole, on the basis of which the Company's social significance and future can be assessed.

## THE DEREGULATED ELECTRICITY MARKET

The market price of electricity varies enormously in accordance with supply and demand. Pohjolan Voima seeks to safeguard an advantageous and steady energy price for its shareholders by investing in new production capacity and by increasing the efficiency of its operations. Pohjolan Voima promotes its industrial shareholders' opportunities to pursue competitive operations in Finland and enhances preconditions for the operations of its shareholders that trade electricity in the deregulated market.

Most of the electricity is generated by nuclear power. Pohjolan Voima also owns hydropower and thermal power, which utilizes several energy sources. All forms of production, together with electricity imports, play a significant role in the Nordic electricity market.

All power plants operated without interruption in 2000. Owing to the heavy rainfalls in the Nordic countries, Pohjolan Voima replaced - for the third year in succession - some of the condensing power production by electricity acquired from the market.

## THE COMPANY OPERATES ALL OVER FINLAND

Pohjolan Voima pursues business operations in 27 locations. The Company's employees live in a total of 90 municipalities. In addition to the direct earned income and tax revenue, power production has indirect economic effects. With regard to the Finnish economy, the domestic energy sources — wood, peat and hydropower — are important.

In 2000, agreements relating to real estate signed on the environmental effects of the use of hydropower numbered 159. Restoration projects of the aquatic environment continued in co-operation with regional Environment Centres and municipalities. The Company also supported other projects in its areas of operation. These projects included an environmental management programme for the Iijoki River, the Kierikki project, which makes use of the finds from the Stone Age in the municipality of Yli-Ii, and the fishing centre project at the mouth of the Kemijoki River.

In recent years, Pohjolan Voima has implemented six EIA (environmental impact assessment) procedures. A multi-level participation system has been built to ensure interaction, and favourable experience has been gained of its efficiency. Most of the EIA procedures have been established in the locations where the Company operates at present. They are therefore important also from the viewpoint of interest group activities linked with the power plants built earlier.



## ELEMENTS OF THE COMPANY'S SOCIAL RESPONSIBILITY

### ***Economic responsibility***

*Profitability, competitiveness, efficiency*

*Responding to the owners' expected yield*

*Providing economic welfare for society*

*Financial preconditions for social and environmental responsibility*

### ***Environmental responsibility***

*Protection of water, air and soil*

*Prevention of climate change*

*Safeguarding the biodiversity of nature*

*Efficient and economical use of natural resources*

### ***Social responsibility***

*Well-being and know-how of the personnel*

*Product safety and consumer protection*

*Good procedures and co-operation in the network of companies*

*Relations with local communities and supporting non-profit activities*

# THE ENVIRONMENTAL YEAR 2000



*Pohjolan Voima publishes a separate environmental report. [www.pohjolanvoima.fi](http://www.pohjolanvoima.fi)*

In addition to the wholly-owned power plants, Pohjolan Voima's environmental reporting takes account of due proportions of the emissions from and production of its subsidiaries and associated companies. Environmental parameters of the generated electricity are defined by form of production.

In 2000, Pohjolan Voima's use of fuels was as follows:

- Coal 1.2 million tonnes
- Wood fuels 0.9 million tonnes
- Peat 2.5 million m<sup>3</sup>
- Natural gas 89 million m<sup>3</sup>
- Oil 0.01 million tonnes

The use of fuels increased by about 10% on the previous year, but continued to be at a lower level than the average of the past

five years. The use of coal increased some 30%. Most of the coal purchased in 2000 came from the Kuznetski mines in western Siberia. The coal suppliers are expected to supply information on the environmental effects of their operations. The aim is to encourage the coal suppliers to practise good environmental management.

Wood fuels were mainly used at power plants of the forest industry, and so the fuel was available at the same mill site. Wood fuel was brought to the Seinäjoki power plant from the region. Most of the peat was acquired from major suppliers.

The Company's power plants consumed a total of some 680 million cubic metres of cooling-water. The taking of cooling-water





has a very small effect on the environment. With regard to other natural resources, the most significant one is limestone, 10 600 tonnes of which was used for desulfurization. The limestone was mainly acquired from Estonia.

By-products produced at power plants are sold for reuse; ash is used for construction and gypsum in the building materials industry.

In addition to Pohjolan Voima's own production, the Company's electricity supply included imports of electricity from Russia and purchases from the market. It is not possible to accurately determine the origin and environmental quality parameters of these acquisitions.

The functioning of the power plants' environmental protection equipment and emissions from the plants are monitored in accordance with the monitoring programmes approved by the authorities. Emissions into the air are continuously measured automatically and they are reported to the authorities.

In 2000, sulfur dioxide emissions totalled 4 300 tonnes. This is about 10% less than in the previous year. The emissions were about half the permissible emissions defined in the environmental permits and about 5% of the total Finnish emissions.

The emissions of nitrogen oxides were 6 700 tonnes. The emissions increased by a fifth on the previous year and were about

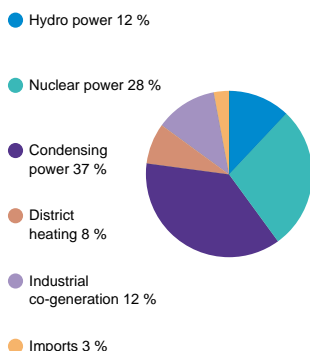
85% of the permissible emissions defined in the environmental permits. This was about 2.5% of the total emissions in Finland.

In 2000, particle emissions totalled 372 tonnes. The amount grew by some 20% on the previous year, since the thermal power plants produced more electricity. The emissions were less than a fifth of the permissible emissions defined in the environmental permits.



# ENERGY SUPPLY IN 2000

## POHJOLAN VOIMA GENERATING CAPACITY 2000 – 3 361 MW



Pohjolan Voima's electricity supply capacity totalled 3 361 MW, of which hydropower accounted for 12%, nuclear power for 28%, condensing power for 37%, and the co-generation of electricity and heat for 20%, of which the electricity capacity share of the CHP plants producing district heat was 8% and the electricity capacity share of CHP plants producing process steam was 12%. Imports represented 3% of the electricity supply capacity. The power plants that will be completed in the coming years and larger imports will increase Pohjolan Voima's capacity.

Pohjolan Voima generated 15 115 GWh of electricity, which accounted for 23% of the electricity produced in Finland. The total supply increased by 11% on the previous year, and was 17 522 GWh, of which electricity imports and purchases of market electricity covered 14%.

### HYDROPOWER PRODUCTION WAS HIGHER THAN USUAL

Owing to heavy rainfalls, the average flow of the Iijoki and Kokemäenjoki Rivers was considerably higher than the long-time average. Electricity production totalled 1 996 GWh, which is 21% higher than in the previous year and accounts for 11% of Pohjolan Voima's electricity supply.

### PLENTY OF ELECTRICITY IS GENERATED BY NUCLEAR POWER

Production of the two nuclear power plant units at Olkiluoto, which are owned by Pohjolan Voima's subsidiary Teollisuuden Voima Oy, represented 46% of Pohjolan Voima's electricity supply in 2000. The output capacity of the Olkiluoto units was 1 680 MW and their combined production 14 072 GWh.

Teollisuuden Voima Oy's subsidiary, Posiva Oy, manages the final disposal of spent nuclear fuel. On 21 December 2000, the Council of State took a favourable decision in principle on the construction of a final disposal facility for spent nuclear fuel at

Olkiluoto in Eurajoki. The favourable decision in principle by the Council of State must still be submitted to Parliament for ratification. Readings in Parliament began in February 2001.

### A WIDE RANGE OF THERMAL POWER

In 2000, the thermal power plants generated a total of 5 115 GWh of electricity. This accounted for 29% of Pohjolan Voima's electricity supply. The primary fuels of the thermal power plants include coal, natural gas, wood, peat and oil.

District heating and process power plants generated a total of 2 867 GWh of electricity, which made up 16% of Pohjolan Voima's electricity supply. In addition to electricity, the power plants in Kotka, Nokia, Seinäjoki and Vaasa delivered district heat for these towns. The Kemi, Kemijärvi, Oulu and Nokia power plants generated process steam required by industry.

Pohjolan Voima has condensing power plants that generate only electricity in Kristinankaupunki, Pori and Kotka. Furthermore, the Company has a production share in the Meri-Pori condensing power plant owned by Fortum Power and Heat Oy. The production of condensing power accounted for 13% of Pohjolan Voima's electricity supply.

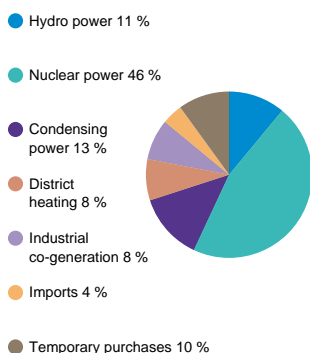
### ELECTRICITY TRADING AND IMPORTS

Daily purchases of electricity represented 10% of Pohjolan Voima's electricity supply in 2000. A total of 690 GWh of electricity was imported from Russia at a capacity of 100 MW. From the beginning of 2001 the import capacity of electricity was quadrupled to 400 MW.

### PREVENTIVE MAINTENANCE - A BASIS FOR PRODUCTION

At Pohjolan Voima's power plants, the target of maintenance operations is to prevent failures. The availability of all power plants remained good. With regard to hydropower plants, the machinery of the Pakkakoski and

## POHJOLAN VOIMA ELECTRICITY SUPPLY 2000 – 17 522 GWh





Raasakka plants on the Iijoki River was renovated. In addition, the replacement and repair programme of the main transformers continued.

The load factors of the Olkiluoto nuclear power plants, 95.7% and 95.5%, were again among the best in the world in 2000. Inspections carried out during the annual outages showed that the plant units were in good condition. The discovered defects and deviations were small. The Company's maintenance policy is to keep the plant units as good as new ones.

Maintaining the competitiveness of thermal power production requires flexibility and good condition of the plants in order to be able to rapidly react to changing market situ-

ations by bringing production capacity into operation even for a short time. Renovation work was done on the generator of the Vaskiluoto power plant. At the Seinäjoki peat-fired power plant, the high-pressure and intermediate-pressure turbines were overhauled and repaired thoroughly, and some of the boiler pipes were replaced.

#### **ELECTRICITY TRANSMISSION**

With a 25.1% holding, Pohjolan Voima is a significant owner of the Finnish grid company, Fingrid Oyj. Fingrid continued to keep its tariffs at the level of 2000 in the beginning of 2001. Fingrid refunded its customers EUR 8 million in proportion to the invoicing in 2000, since it earned additional

income owing to management of the Nordic transmission operations.

In 2000, the volume of electricity transmitted in Pohjolan Voima's grid was 1.5 TWh. The turnover of regional grid operations was EUR 3.1 million. At the end of the year the size of the grid was 250 kilometres.

The 110 kV transmission line, stretching about 160 kilometres in length from Jumisko to Taivalkoski, will be replaced by a new line to Pirttikoski. Its length will be 40 kilometres, some 30 kilometres of which will be constructed along the old transmission line route and 10 kilometres beside the existing transmission line. The total value of the investment is EUR 4 million. The line connection will be completed in spring 2001.

# POHJOLAN VOIMA'S TECHNOLOGY PROGRAMMES

In the Pohjolan Voima Group, we maintain sufficient technological know-how to be able to recognize new potential technology, to quickly seize the related opportunities and employ the technology at the right time.

## UTILIZATION OF RECYCLED FUELS BY GASIFICATION

Pohjolan Voima is developing technology with a view to using refuse-derived fuels at power plants as fuel. Refuse-derived fuels mainly include used packaging materials, paper and board-based substances, plastics, wood and, to some extent, also various organic composting products.

The key element of the technology under development is the conversion of refuse-derived fuels into gaseous form. In power production gas will replace fossil fuels.

The project is being carried out jointly with Vapo Oy. The technological co-operation partner is VTT Energy, which is performing, for instance, the necessary tests and analyses. The parties aim to have a plant suitable for production to be completed during 2003.

## A GAS PIPELINE FROM NORWAY TO FINLAND

Pohjolan Voima is involved in studies into the opportunities of building a natural gas pipeline from Haltenbanken in Norway, through central Sweden, to western Finland. The project is aimed at assessing the potential for the natural gas market, anticipating gas users and sellers, and investigating the opportunities of developing the natural gas network and new business.

This project is a co-operation project of Pohjolan Voima and the Norwegian company, Stangass. Studies are being conducted to assess the investments required for the construction of the gas network in Finland and to find out which permits related to the environment and land use would be required for construction of the natural gas pipeline. In addition, the studies are examining the possible conversion of the present oil and coal-fired capacity to natural gas firing.

## ESTLINK PROJECT

Pohjolan Voima Oy, Helsinki Energy, Eesti Energia Ltd and Graningeverkens AB (publ) are planning an electricity transmission connection between Finland and Estonia via the Gulf of Finland. The Estlink project, which aims at building a transmission connection, was launched in the spring of 1998 by feasibility studies. The results formed the basis for a more detailed feasibility study, which began towards the end of 1998. The design of the cable route and direct-current substations began after completion of the detailed feasibility study. The necessary studies of the land and sea routes have also been performed.

In the first phase, the objective of the project is to build a 225 MW high-voltage, direct-current connection (HVDC link) via the Gulf of Finland. The purpose is to employ state-of-the-art direct-current technology for both link substations and cables.



## **OFFSHORE WIND POWER AS AN INDUSTRIAL FORM OF PRODUCTION**

Pohjolan Voima is conducting studies into the construction of offshore wind power with a view to providing insight into its administrative, environmental, technical and economic preconditions and creating scope for the extensive use of wind power. An essential element of the work is interaction with the local people, authorities and numerous interest groups. The objective is to map the matters on which the use of wind power may have an effect and to identify ways of integrating the production of wind power with other uses of the area concerned, and with natural values and social conditions. The survey is being carried out as a case study in the coastal region of the town of Kokkola.

The survey concerns the legal issues of wind power construction. It is based on the new Land Use and Building Act and Decree and the new environmental protection legislation.

## **DEVELOPMENT OF WIND POWER PLANT TECHNOLOGY**

The task of the wind power technology project is to devise a new mechanical system that uses a low-speed gear combined with a permanent magnet synchronous generator. The work is based on the use of existing technology, which combines German wind power know-how and Finnish expertise in gear and generator technology, particularly concerning the effects of northern conditions.

The new mechanism will require less maintenance. The wide range of revolution available will increase the efficiency particularly when there is little wind. A two-way AC inverter will make the plant suitable for the grid. New, more efficient structural systems are also being investigated for the tower and foundations.

# POHJOLAN VOIMA'S BIOFUEL PROGRAMME

## BIOFUEL PROGRAMME

Pohjolan Voima has chosen the production of bio-energy as one of its priorities. The Group is building new biofuel-fired power plants in Pietarsaari, Kokkola, Jämsänkoski, Kuusankoski and Ristiina. The value of the power plants is nearly FIM 2.5 billion. Their combined electricity generation capacity will be 390 MW and thermal output 585 MW. The power plants will generate 2.3 TWh of electricity a year, which accounts for about 3% of the electricity consumed in Finland. The power plants will be completed in 2001-2002.

The annual fuel requirement of the power plants under construction will be 7.5 TWh, of which wood represents half. In the initial phase, the power plants will use 500 000 cubic metres of logging residue, which is equal to about one terawatt-hour. The amount of logging residue will increase as acquisition costs are reduced. The power plants that are under construction will nearly double the use of logging residue in Finland from the present amount of 700 000 cubic metres.

## RESEARCH AND DEVELOPMENT PROJECTS OF BIOFUELS

Pohjolan Voima is conducting studies linked with bio-energy, which deal, for instance, with the availability of logging residue, acquisition techniques, and storage and environmental effects. In addition, biofuel reception and handling systems are being developed and the use of biofuel ash as a fertilizer is being investigated. The automation systems and combustion technology of boilers that use many fuels require substantial research before an ideal combination of fuels is achieved. Logging residue does not burn well, and it needs a support fuel, such as peat.

## OPPORTUNITIES FOR ELECTRICITY PRODUCTION FROM WOOD

The amount of wood-based fuels available for electricity production is limited. The energy use of wood can be increased in two ways: by raising the capacity of the forest industry and thus the amount of by-products to be burnt, and by increasing the use of logging residue. Most wood-based energy is produced in the forest industry, from the combustion of cooking liquor in the pulp industry, or black liquor, and the combustion of bark and sawdust. These industrial by-products are currently utilized in full in Finland.

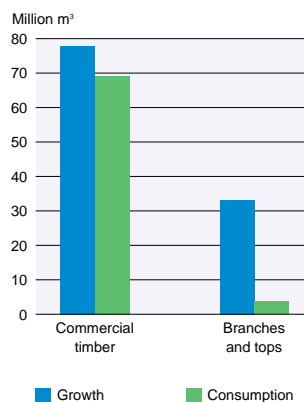
In Finland, the growth of forests has nearly been exploited, and so the additional use of wood by the forest industry is partly based on imports. Some 40% of the wood consumption by the forest industry becomes energy. Of the growth of forests, one third includes biomass, branches and needles; efforts are being made to increase their use for energy.



### AN AMBITIOUS TARGET

The Ministry of Trade and Industry and the Ministry of Agriculture and Forestry have set a target to increase the use of logging residue to five million cubic metres in 2010. The target is ambitious. The most significant sources of supply of logging residue are branches and crowns from final felling, of which two thirds are recovered. At least a third of the felling residue is left in the forests.

### WOOD AVAILABILITY



## REVIEW BY THE PRESIDENT, EMPOWER OY



For the Empower companies, 2000 was a busy year. On the one hand, it consisted of enhancing the operations and company reorganizations according to plan and, on the other hand, implementing new network and power plant projects. The most significant projects included a 330 kV transmission line in Estonia, a 400 kV substation in Forssa in Finland, and the design and project management assignments of Alholmens Kraft's, Kokkolan Voima's and Kymin Voima's biofuel-fired power plants.

We started up three companies in different business areas: Power-Deriva in the Energy Trading Services business, Power-IT in the Information Technology business, and Power-OM in the Operation and Maintenance business. The Empower companies currently number 12, and they employ 1 200 people. Our operations have gained a firm foothold in Finland and the Baltic countries. Empower is a well-known trademark in the sector, and it is also the new name of our Service Group.

### INTERNATIONALIZATION

Our first step towards internationalization was the purchase of the majority of shares

in the Estonian network construction company Eesti Elektrivõrkude Ehituse. Its operations have been profitable, and the co-operation has created added value for the entire Empower Group. We believe that it will be possible to launch important business operations in the Baltic region jointly with local players.

### PARTNERSHIP

In accordance with our objectives, we have upgraded our business operations through the partnership network very actively. This was done in the Consulting, the Engineering and the Energy Trading Services business areas. In March 2001, we signed a partnership agreement with Vattenfall Oy. Vattenfall will transfer its service operations to Empower. We will continue co-operation of this type in the future as well. Indeed, we need not do everything ourselves; integrating our expertise with that of a partner will promote the business and deepen the know-how. A procedure of this kind has already been an asset for a long time in the production sector of our Group.





## ENVIRONMENT UNDERGOING CHANGE

The service business in the energy sector is undergoing a great change in Finland and neighbouring areas. The strategies of several important players in the sector have been revised or even completely modified. This trend has partly resulted from changes in the operations of global companies, the new procedures and opportunities created by information technology, and the new rules and strategies brought by the electricity market.

The Empower companies need continuous upgrading and initiative to cope with the changes. They must have the courage to enter new areas and take even bold decisions. In the middle of the changing conditions, however, the companies must not neglect their core competences but see to their profitability, growth potential and expertise of the personnel.

We must increasingly and actively support the personnel's continuous learning in aiming to become an ever more flexible service and expert company. Customer relations management presents the main challenge to us who provide services – it is one of our key factors of success.

I believe that in the future our customers will buy larger product packages than at present, either in the form of project deliveries or services. This is also the direction in which the services of the Empower companies are being developed jointly with selected co-operation partners. We call this 'empowering' – we enable the customer to change their functions.

In the course of the change process we have learnt many things in the Empower companies. Nevertheless, plenty of things still remain to be improved at many levels, from the Group level to the individual level. Purposefulness and the willingness to learn have been clearly visible, however. This creates scope for development and growth.

I would like to thank all people working at Empower and our co-operation partners for the work done in 2000. We have together built and strengthened the basis for new services and procedures, and carried out significant projects and performed notable services. Our direction is right, and it is good to continue on this basis.

*Aappo Kontu*  
*President*



## CONSULTING



Empower's consulting business and enhancement of the related know-how has been centred in RAMSE Consulting Oy. The aim of its business operations is to offer consulting services, whatever the sector. These services cover improvement of the efficiency of commercial operations, development of business processes and information management, operation and maintenance, reliability, risk management and requirements management.

### **A NEW OWNER AFFORDS AN OPPORTUNITY TO ENTER INTERNATIONAL MARKETS**

Empower Oy owns 55% of RAMSE Consulting. On completion of the restructuring of ownership in June 2000, ABB Service Oy became the other principal owner with a 45% holding.

After the restructuring of ownership, the Company launched the planning of a new organization model, as a result of which three business areas were formed: RS - Enterprise Risk Management & Systems Engineering, IM - Information Management and PP - Productivity & Profitability Improvement. This organizational structure helps increase the efficiency of the customer interface and build capacity for achievement of the growth targets.

### **FIELDS OF EXPERTISE OF THE THREE BUSINESS AREAS**

In the RS business area, major assignments were linked with consultation on risk management, systematic requirements management and operational reliability.

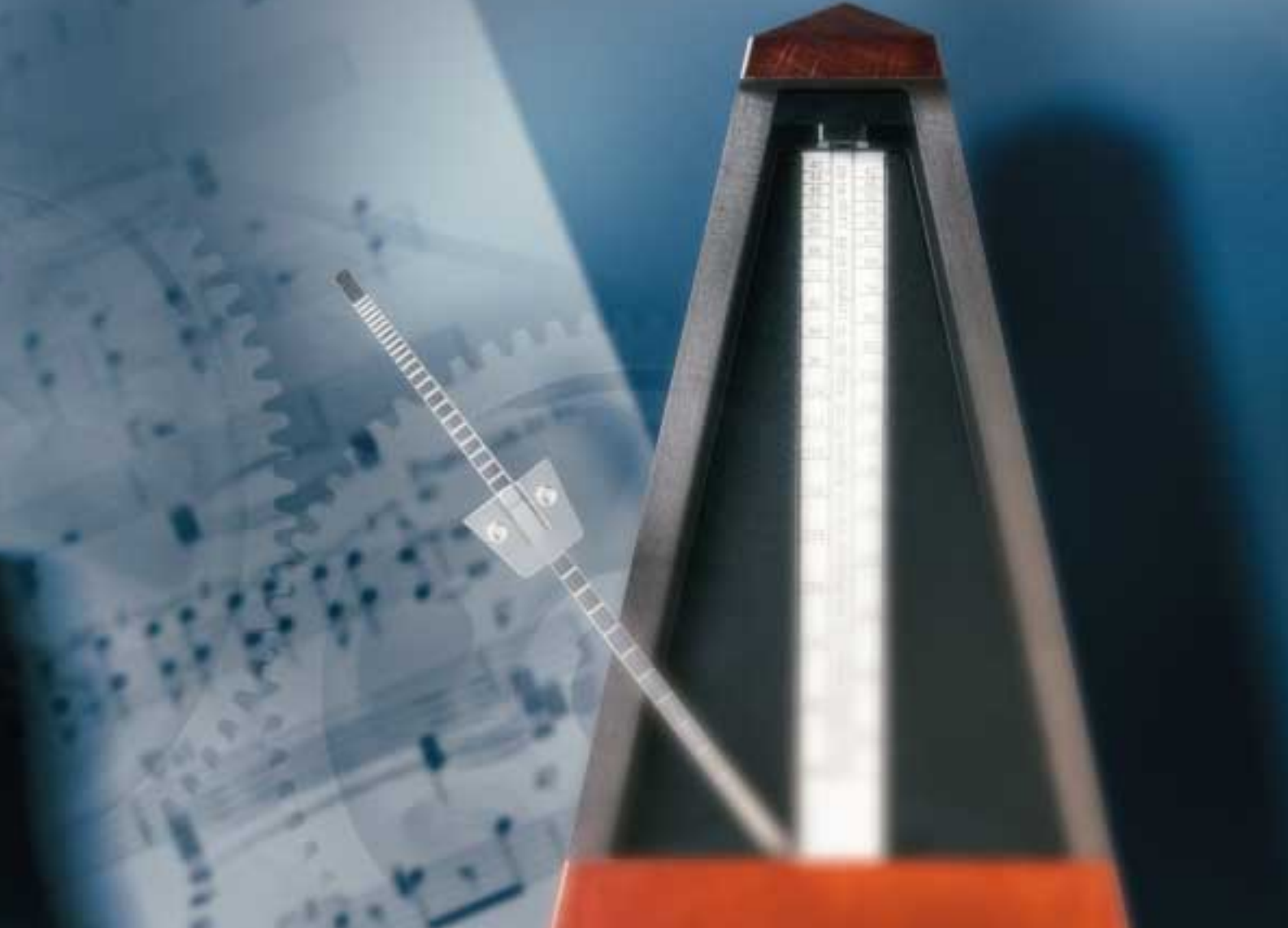
In the IM business area, efforts focused on studies into information systems archi-

ture, and on projects relating to the introduction and change management of information systems.

The PP business area began co-operation with ABB Service Oy's global Pulp & Paper Maintenance Methodology Center. The work aims at the generation of new operation and maintenance models.

Development programmes of the Change Management and eBusiness consulting concepts were launched to upgrade all the business areas.

The turnover was EUR 3.8 million, and the average number of employees was 36.



## ENGINEERING



In the Empower Group, PVO-Engineering Oy is responsible for the expertise in grid and power plant technology. Its position as a supplier of engineering services was further strengthened when the business operations of Powertechnics Consulting Engineers Oy, which specializes in thermal power processes and power plant technology, were merged with PVO-Engineering in the beginning of 2001.

Networking and the formation of co-operation partnerships continued according to plan. PVO-Engineering established a subsidiary in Estonia to promote local design expertise in network and power plant technology. Operations also strengthened in the rest of the Baltic area when PVO-Engineering formed, jointly with Vantaa Energy Ltd and Siemens SIA, a marketing and development company in the energy sector, CoPower SIA, in Latvia. The turnover of PVO-Engineering amounted to some EUR 17 million, and the number of employees was about 70.

### LARGE PROJECTS CONTINUED

PVO-Engineering has accumulated significant know-how of different power plant systems thanks to its long experience in power plant construction. Professional skills have been honed particularly in combined heat and power production projects.

PVO-Engineering plays an important role in the design of the biofuel power plant projects of Kymin Voima Oy, Oy Alholmens Kraft Ab, and Kokkolan Voima Oy, which are currently underway.

The Company is actively involved in the design and development of projects linked with the use of renewable fuels. In addition to biofuels, the Environment and Renewable Energy business area concentrates on the know-how related to the use of wind power and small-scale hydropower, and on the gasification of recycled fuels. PVO-Engineering is participating in the offshore wind power plant study launched by Pohjolan Voima, and is in charge of co-ordination of the project and technical studies. The Com-

pany owns 25% of Winwind Oy, which has developed its own wind power plant suitable for both offshore and inland use.

By commission of Pohjolan Voima, PVO-Engineering is conducting a study into the opportunities of building a natural gas network from Norway to Finland. The study, partly subsidized by the EU, was launched in autumn.

The joint project of PVO-Engineering and Eesti Elektrivõrkude Ehituse AS, a 330 kV transmission line between Eesti and Püssi, was completed towards the end of the year. The line cost nearly EUR 7 million, and it was constructed and delivered to Eesti Energia on a turnkey basis. During 2000, the Company carried out a number of substation projects. The most important project was the Forssa substation contract with Fingrid Oyj worth EUR 5 million; the projected was completed at the end of the year. Numerous design contracts for transmission lines also gave work to the Grid Technology business area.



## INFORMATION TECHNOLOGY



In the beginning of 2000, Empower's information system services were centred in the information technology company Power-IT Oy. The Company purchased its business from PVO-Engineering Oy, Länsi-Suomen Yhteiskäyttö Oy and Pohjolan Voima Oy.

Power-IT provides its customers with turnkey services through the information systems, telecommunication network and energy measurement systems that are in its possession. Major customers included companies of the Pohjolan Voima Group and the Empower companies; Power-IT is responsible for the systems that perform the services for these companies. At the end of the year, the number of contractual customers amounted to a good 100.

The turnover of the information system services was some EUR 8 million. The per-

sonnel numbered 70. The Group-external turnover increased particularly in telecommunications services.

### **EXTENSIVE INFORMATION SYSTEM SERVICES FOR THE ENERGY SECTOR**

The service operations of Power-IT were divided into seven product areas. The services cover energy management systems, SCADA systems, metering services, communication, operation and maintenance systems, financial systems and workstation services. The services are characterized by the fact that they can be provided regardless of the distance. Customers also come from outside the Finnish borders.

The largest investments were made in telecommunication networks, financial management systems and projects that raised the quality of customer service. In the begin-

ning of 2001, document management and intranet and extranet products were separated into a separate product group of Digital Media Systems.

### **DEVELOPMENT OF SERVICE CONCEPTS PLAYS AN IMPORTANT ROLE**

Significant resources were allocated to the building of information system service concepts. Expertise was stepped up by engaging new employees and by upgrading control of the Company's operations.

Power-IT set up an office at Tampere University of Technology with a view to boosting joint technology projects.



## ENERGY TRADE SERVICES



Services linked with power plant control, optimization of electricity acquisition costs and grid supervision are the greatest asset of Länsi-Suomen Yhteiskäyttö Oy, which provides energy trading services. The Company has three operation control centres, whose division of labour is based on service areas and customer groups. The Company has about 100 customers, which include large Finnish industrial enterprises and half of the Finnish energy companies.

The turnover of Länsi-Suomen Yhteiskäyttö was EUR 32 million, and the Company employed 57 people. The Company engaged in electricity trade on behalf of Pohjolan Voima and its shareholders. This trade accounted for EUR 20 million of the turnover. Electricity trade conducted on the daily markets of the Nordic electricity exchange, Nord Pool, decreased, whereas bilateral electricity trade between the electricity market participants increased substantially.

### BUSINESS RESTRUCTURING

In the beginning of 2000, Länsi-Suomen Yhteiskäyttö sold its measurement technology business to Power-IT Oy. At the same time, the operation control and energy management systems were transferred to Power-IT in such a way that the equipment is at the Company's disposal on the full-service principle. Research and development work conducted at Länsi-Suomen Yhteiskäyttö continued in co-operation with Power-IT. The objective is to further develop energy management products and operation control system products and offer these services to the electricity market participants.

The customers' willingness to outsource the services related to their electricity trading creates new opportunities for the energy trading services of Länsi-Suomen Yhteiskäyttö. These services include, for instance, reporting linked with electricity trading and balance studies of the transmission network.

### RISKS OF ENERGY TRADING MANAGED

Studies show that there has been a need for an independent provider of risk management services for electricity trading. After the termination of long-term, fixed-price supply and delivery contracts, the electricity producers and sellers must decide how to act cost-effectively in the deregulated electricity market.

In autumn, Empower's range of available energy trading services expanded, when Empower and Kymppivoima Oy, which is owned by four large provincial energy companies, formed a joint venture, Power-Deriva Oy to provide risk management and consulting services in the electricity trading sector. The Company is the first Finnish energy trading service company to act as a broker for derivatives without being a market participant itself.



## INSTALLATION



Suomen Voimatekniikka Oy, an associated company of Empower, conducts installation, contracting and maintenance operations in four business areas: Transmission Lines, Substations, Distribution Lines and Data Transmission Lines.

For Suomen Voimatekniikka, the beginning of 2000 was slack. In late winter, business picked up and in summer all the business areas had full employment. In 2000, the largest projects were a contract with Fingrid Oyj for construction of the 400 kV substation in Forssa and construction of the Tihisenniemi 110 kV transmission line. Other large projects included the 110 kV Pirttikoski – Jumisko transmission line and installation of Oy Alholmens Kraft Ab's 110 kV cables.

Suomen Voimatekniikka widened its range of available services in 2000. The Company acquired several GPS measuring in-

struments suitable for positioning of the distribution network. This service aroused keen interest, and the mapping of some 40 000 transmission line towers was in fact carried out during the year. The turnover amounted to EUR 17.5 million. The personnel numbered 235.

The purchase of the majority of shares in Estonia's largest company specializing in transmission line and telecommunications network construction was an important step towards the internationalization of Empower's Contracting and Installation business. Operations of Eesti Elektrivõrkude Ehituse AS made smooth progress in 2000. In the transmission line sector, construction of the 330 kV transmission line between the Eesti power plant and the Püssi substation ordered by Eesti Energia provided full employment throughout the year. The contract was completed towards the end of the year.

Eesti Elektrivõrkude Ehituse has made numerous mast deliveries with PVO-Engineering and Suomen Voimatekniikka. In 2000, Eesti Elektrivõrkude Ehituse won its first mast contract in Lithuania. Towards the end of the year, it supplied six masts with heights of 24 to 60 metres for the Tele 2 telephone operator in Lithuania. The masts were designed by PVO-Engineering Oy. The turnover of Eesti Elektrivõrkude Ehituse was some EUR 17.2 million, which was substantially higher than in the previous year. The personnel numbered 333.



## OPERATION AND MAINTENANCE



Guidelines were sought for operations of Power-OM Oy, a company specializing in operation and maintenance services. The Company's priorities were analyzed in the POMO development project, which was completed at the end of the year. Its working groups also investigated matters that affected working conditions of the staff and upgrading of the marketing operations. 440 experts in operation and maintenance from PVO-Lämpövoima Oy's power plants joined the staff of Power-OM.

The primary task of Power-OM is to increase the efficiency of the customers' energy production. In the first place, the Company is in charge of the operation and maintenance of Pohjolan Voima's thermal power plants, but when the operations were launched in the beginning of 2001 the Company also obtained several orders from Group-external customers.

Transformation into a player operating on market terms requires a transition period. During this period, the procedures are being adjusted, the Company's operations enhanced and the Company made known in the domestic market.

There are about 350 power plants in Finland. Their operation and maintenance markets are fairly stabilized, but there is room for newcomers in some carefully chosen sectors. Power-OM's staff consist of specialists whose expertise has accumulated in Pohjolan Voima's challenging and up-to-date energy production environment. The objective is to be increasingly able to offer this expertise to Group-external customers as well.

## BOARD OF DIRECTORS



*Back, from left: Arto Piela (Secretary of the Board of Directors), Timo Rajala (President), Erkki Varis, Richard Mair, Tapani Sointu. Front, from left: Juhani Pohjolainen, Rauno Hakkila, Heikki Sara, Sven Sohlström.*

### MEMBERS

**Heikki Sara**

*Chairman*

Senior Vice President  
UPM-Kymmene Oyj

**Juhani Pohjolainen**

*Deputy Chairman*

M. Sc. (Eng.)  
Stora Enso Oyj

**Rauno Hakkila**

CEO  
Etelä-Pohjanmaan Voima Oy

**Esa Tirkkonen**

Executive Vice President and CFO  
Kemira Oyj

**Erkki Varis**

CEO  
Oy Metsä-Botnia Ab

**Tapani Sointu**

Vice President, Corporate Structure  
UPM-Kymmene Oyj

**Sven Sohlström**

CEO  
Perhonjoki Oy

**Martin Stanley**

President  
TXU Europe Energy Trading

### DEPUTY MEMBERS

**Juha Niemelä**

President and CEO  
UPM-Kymmene Oyj

**Timo Koivuniemi**

Senior Vice President, Energy  
Stora Enso Oyj

**Veikko Leivonniemi**

CEO  
Vaasan Sähkö Oy

**Tauno Pihlava**

CEO  
Kemira Oyj

**Aarre Metsävirta**

Executive Vice President  
Metsä-Serla Oyj

**Pertti Simola**

Vice President  
UPM-Kymmene Oyj

**Juhani Paananen**

Director  
Kokkolan Energia

**Richard Mair**

Deputy Managing Director  
TXU Nordic Energy Oy

### AUDITORS

**SVH Pricewaterhouse Coopers Oy**

Authorized Public Accountants



## EXECUTIVE OFFICERS



*Back, from left: Jussi Kivimäki (Secretary of the Executive Team), Mauno Paavola, Aappo Kontu, Matti Kaisjoki. Front, from left: Jukka Kiviluoto, Timo Rajala, Minna Korkeaaja, Arto Piela.*

## MEMBERS

### **Timo Rajala**

President and CEO  
Pohjolan Voima Oy

### **Minna Korkeaaja**

Executive Vice President  
Group Controller

### **Jukka Kiviluoto**

President  
PVO-Vesivoima Oy

### **Mauno Paavola**

President and CEO  
Teollisuuden Voima Oy

### **Matti Kaisjoki**

Executive Vice President,  
Power Procurement, Thermal Power Production

### **Arto Piela**

Executive Vice President  
Corporate Strategy, Legal and Environmental  
Affairs, Communications, Procurement

### **Aappo Kontu**

President  
Empower Oy

## DEPUTY MEMBERS

### **Risto Mäkinen**

Senior Vice President  
Russia and the Baltic Region

### **Risto Vesala**

Senior Vice President  
Transmission, IT Systems,  
Technology

### **Kauko Relander**

Senior Vice President  
Fuels and Procurement, Corporate Relations

### **Timo Väisänen**

Senior Vice President  
Group Treasurer

## Operating environment and short-term outlook

In 2000, electricity consumption in Finland totalled 79.1 TWh, an increase of 1.7% on the previous year. Industry and construction accounted for 43.4 TWh, or 54.9% of the total electricity consumption. Industrial electricity consumption increased by nearly 3%.

During the year under review, the electricity acquisition of the Pohjolan Voima Group amounted to 24.0 TWh, or over 30% of the total Finnish electricity consumption. Pohjolan Voima Oy supplied 17.5 TWh of electricity to its shareholders, and Teollisuuden Voima Oy supplied 6.5 TWh to its shareholders, excluding Pohjolan Voima. In 1999, The Group's electricity acquisition totalled 22.2 TWh, and a total of 15.7 TWh was supplied to shareholders. The predicted slowdown in economic growth is also reflected in a downturn in the growth of exports. Despite this, the electricity requirement of industry is expected to increase by 2% in 2001, while the needs of the forest industry are forecast to rise by more than 2%.

## CHANGES IN BUSINESS OPERATIONS AND GROUP STRUCTURE

In spring, the name of the Service Group's parent company, PVO-Palvelut Oy, which began operations in 1999, was changed to Empower Oy and the Group was renamed Empower Group. At the end of March, Empower purchased a majority shareholding in the Estonian network construction and contracting company Eesti Elektrivõrkude Ehituse AS. In September, Empower with Kympivoima Oy formed a joint venture, Power-Deriva Oy, which provides risk management services for electricity trading.

Towards the end of the year, PVO-Engineering Oy established a company specializing in network planning, PVO-Engineering Eesti OÜ, in Tallinn, Estonia. Commercial operations will be launched during 2001.

In April, Pohjolan Voima formed the industrial co-generation company Kymin Voima Oy, whose minority shareholder is Kouvolan Seudun Sähkö Oy. Another co-generation company, Järvi-Suomen Voima Oy, also began operations during the year under review, the minority shareholder being Suur-Savon Sähkö Oy.

In November, Pohjolan Voima established PVO-Innopower Oy. Its business concept is to plan and build power plants based on renewable energy technology, mainly wind power to begin with.

## GROUP R&D PROJECTS

In addition to the construction of biofuel-fired power plants, a number of research projects linked with biofuels are underway in the Pohjolan Voima Group. These projects pertain to logistics, combustion technology and the use of ash as a fertilizer. The European Union, the Ministry of Trade and Industry and the National Technology Agency of Finland (Tekes) have provided financing for the projects.

Pohjolan Voima continued research into the feasibility of offshore wind power on an industrial scale. The next step is to establish an environmental impact assessment procedure. At this stage, it can already be said that a licensing procedure in accordance with the valid legislation is not suitable for industrial-scale wind farms.

Jointly with Vapo Oy Biotech and VTT Energy, Pohjolan Voima has developed new gasification technology with a view to producing clean gas from recycled fuels. Plastics unsuitable for recycling, paper, paperboard and other combustible municipal and industrial waste could be used as fuels. The gas would be burnt in fossil fuel-fired boilers in use today.

Teollisuuden Voima's R&D operations concentrated on nuclear waste management. Posiva continued studies into the final disposal of spent nuclear fuel. With regard to the management of operating waste, studies focused on the gas generation of waste, the long-term durability of concrete, and the behaviour of metals. Teollisuuden Voima was involved in numerous Finnish and international joint projects that dealt with the safety of nuclear power.

During the year under review, the Pohjolan Voima Group spent EUR 9.5 million on R&D operations.

## LEGAL ACTIONS PENDING

Consideration of the action for damages filed by PVO-Vesivoima Oy against the Finnish Government continued at the Helsinki District Court. The action claims compensation for the lost electricity sales revenue owing to the prevention of further construction at the Iijoki site. A schedule was drawn up with the Court for rendering a decision during 2001.

The Supreme Administrative Court of Finland rejected the appeals filed by PVO-Vesivoima Oy and PVO-Lämpövoima Oy against the Natura decision of the Council of State. The decision has no effect on the Company's power production within the present scope on the Iijoki River and in the town of Kristiinankaupunki.

## FUTURE DEVELOPMENT PROJECTS

In recent years, Pohjolan Voima has been a large investor in electricity production. The completed power plants and those that are being built are in line with the principle of sustainable development and the efforts to combat climate change.

Construction of the power plant at the Pietarsaari site of UPM-Kymmene Corporation continued. The power plant will use wood, bark, logging residue and peat as primary fuels. The project is being implemented by Oy Alholmens Kraft Ab. The power plant is due for completion in October 2001.

At the end of March, Kokkolan Voima Oy took a decision to build a power plant that will generate district heat and electricity. On completion of the power plant in autumn 2001, it will generate 50 MW of heat and 20 MW of electricity for the town of Kokkola. The power plant will use wood and peat as fuels.

In May, Jämsänkosken Voima Oy took a decision to build a new power plant at the Jämsänkoski mills of UPM-Kymmene Corporation. The new power plant will use bark, wood chips, logging residue, fuel peat and biosludge as fuels. The power plant's electrical output will be 46 MW and thermal output 130 MW. The investment is due for completion in the spring of 2002.

In June, Kymin Voima Oy took a decision on the construction of a power plant at the Kuusanniemi mills of UPM-Kymmene Corporation. The new co-generation power plant will produce 76 MW of electricity, 125 MW of process steam and 55 MW of district heat. The primary fuels will be bark, sludge, sawdust from the mills, and logging residue. The power plant is scheduled for completion in autumn 2002.

In November, Järvi-Suomen Voima Oy took a decision to build a power plant at the Pellos mills of Schauman Wood Oy, which belongs to the UPM-Kymmene Group. The co-generation power plant will produce 8 MW of electricity and 65 MW of process steam. The primary fuels will be by-products from the mills, i.e. bark, crushed plywood, sawdust and sanding dust. The power plant is due for completion in 2002. Järvi-Suomen Voima is also planning to build a power plant in the town of Savonlinna, which would be completed towards the end of 2004.

The Estlink project aimed to combine the Estonian and Finnish grids through a direct-current connection continued. Studies of the land and sea cable routes were completed during the year under review. Technical readiness for implementation of the investment exists. However, a decision on the implementation has been delayed owing to the energy policy situation in Estonia and the low price level in the Nordic electricity market. A decision is anticipated in the course of 2001. In addition to Pohjolan Voima, the project involves Eesti Energia, Helsinki Energy and Gränseverken AB (publ). The project has been accepted into the TEN (Trans-European Networks) financial aid programme of the European Commission.

Teollisuuden Voima submitted an application for the construction of a new nuclear power plant unit at either Loviisa or Olkiluoto to the Council of State in November. The electrical output of the light-water reactor plant would be 1 000 to 1 600 MW. A decision in principle is expected to progress to the deliberations of the Council of State in the spring session of 2001.

In December, Teollisuuden Voima's subsidiary, Posiva Oy, obtained a favourable decision in principle from the Council of State concerning the construction of a final disposal facility for spent nuclear fuel at Olkiluoto in Eurajoki. Readings in Parliament began in February 2001, and a decision is expected to be taken during the spring session.

## Production

In 2000, electricity generation in Finland remained at the previous year's level. In contrast, net imports of electricity increased by nearly 7%, accounting for more than 14% of the total consumption.

Heavy rainfalls and higher temperatures than normal raised the production of hydropower by more than 20% compared with the previous year. Production in 2000 was only 3% below the record figure for hydropower production in 1998. The new power plant of Vaskiluodon Voima Oy completed its first full operating year, thus raising the co-generation of electricity and heat by more than a third. The generation of condensing power also increased, as it was even needed in summer to ensure fulfilment of the power capacity

in Finland owing to the restrictions placed by the Finnish and Swedish transmission network.

Production of the Olkiluoto nuclear power plant was nearly the same as in 1999, although the annual outages were more extensive, lasting eight days longer than in the previous year. The total length of the annual outages was 28 days and the amount of work totalled 253 000 person-hours. During the year under review, preparations were made to change over to a new system of annual outages in which a short refuelling outage takes place at one plant and a major overhaul is made at the other plant in alternate years.

In coal procurement, the aim was to ensure adequate stocks over the winter of 2001. The acquisitions totalled 1.3 million tonnes, compared with 0.5 million tonnes in 1999. The purchases were made at an exceptionally early stage, since the prices were forecast to begin rising from the unusually low level. Indeed, this happened in early summer. Purchases were made mainly from Russia and also from Poland and the island of Spitsbergen, Norway. Coal stocks were on target at the end of the year.

Since operation of the Group's thermal power plants increased, the emissions of carbon dioxide, nitrogen oxides and particles also increased. The emissions of sulfur dioxide were lower than in the previous year in spite of the increased production.

All power plants in the Pohjolan Voima Group have valid environmental permits. Regulatory compliance is dealt with as part of the certified environmental management systems. In 2000, no environmental accidents occurred and there were no serious deviations from regulatory compliance.

Pohjolan Voima publishes a separate report on its social responsibility and the environment. Teollisuuden Voima draws up environmental report concerning nuclear power generation.

Pohjolan Voima and its subsidiaries and associated companies are not aware of any environmental liabilities that have not been covered.

## Investments

### GROUP COMPANIES

Investments of the Pohjolan Voima Group totalled EUR 55.5 million. Investments in the industrial process power plants that are under construction totalled EUR 24.5 million. Teollisuuden Voima invested EUR 20.5 million in plant modifications and improvements as part of the annual outages. The rest were mainly investments in repairs and renovations.

### ASSOCIATED COMPANIES

Vaskiluodon Voima Oy agreed with the supplier on the measures and repairs resulting from the defects discovered in the warranty tests of the new turbine plant in Vaasa and on the conditions for handover of the generator. The supplier made the agreed modifications to the generator during the shutdown in the summer. The acceptance tests carried out in autumn showed that the modified generator fulfilled the conditions set by the purchaser. The delivery was finally accepted in October.

## ECONOMY AND FINANCE

Group turnover totalled EUR 508.1 million, which was EUR 10.4 million lower compared with 1999. The turnover from sales of electricity and heat dropped by more than 6%, but the amount of energy supplied to the shareholders went up by 8%. As the Group generates energy at cost, the combination of lower turnover and higher output means a drop in the unit price of the product.

Group liquidity remained good. Net interest-bearing liabilities went down by EUR 68.5 million and totalled EUR 705.4 million at the end of the year. There were no liabilities in foreign currencies. Due to a general rise in interest rates, interest expenses fell by only EUR 1.8 million, compared with the previous year.

Japan Credit Rating Agency (JCR) gave Pohjolan Voima's long-term foreign currency loans a Double A rating, the second highest on a scale of ten.

For liquidity management, the Group was able to rely on domestic CP programmes of EUR 234 million and an ECP programme of USD 100 million. At the end of the year, the revolving credit facility amounted to EUR 365 million, of which EUR 279 million was available.

At the end of the year, the Group had an equity-to-assets ratio of 50.7%. The deferred tax liability is not included in the figure, as it is not expected to be realized.

## Shareholders' equity and share issues

The following issues were subscribed during the year under review:

- An increase of 60 000 in the G2 series capital stock on August 15, 2000. The issue, directed at UPM-Kymmene Oyj, had a subscription price of FIM 18.24 million (EUR 3.07 million). It raised UPM-Kymmene Oyj's ownership of Pohjolan Voima's share capital to 38.3% and of G2 shares to 100%. Before the issue, the figures had been 38.2 and 0%, respectively.
- An increase of 59 880 in the G series capital stock on November 22, 2000. The issue, directed at UPM-Kymmene Oyj, Perhonjoki Oy, City of Kokkola and Päijät-Hämeen Voima Oy, had a subscription price of FIM 20.06 million (EUR 3.37 million).

The issue increased UPM-Kymmene Oyj's ownership of Pohjolan Voima from 38.3 to 38.4%. UPM-Kymmene's ownership of G-series shares remained at 55.9%.

The issue increased Perhonjoki Oy's ownership of Pohjolan Voima from 1.7 to 1.8%. Perhonjoki Oy's ownership of G series shares remained at 36.6%.

The issue increased the City of Kokkola's ownership of Pohjolan Voima from 2.0 to 2.1%. The City of Kokkola's ownership of G series shares remained at 3.8%.

Päijät-Hämeen Voima Oy's ownership of Pohjolan Voima remained at 1.3% and of G series shares at 1.3%.

• An increase of 18 720 in the G3 series capital stock on November 22, 2000. The issue, directed at UPM-Kymmene Oyj, had a subscription price of FIM 6.24 million (EUR 1.05 million). UPM-Kymmene Oyj's ownership of Pohjolan Voima remained at 38.4% but its ownership of G3 shares increased from 0 to 100%.

• An increase of 30 000 in the K1 series capital stock on November 22, 2000. The issue, directed at the City of Kokkola, had a subscription price of FIM 10.0 million (EUR 1.68 million). The City of Kokkola's ownership of Pohjolan Voima remained at 2.1% and of K1 shares at 100%.

The extraordinary meeting of shareholders held in November authorized the Board of Directors to launch a new issue of I series shares aimed at increasing the share capital. All Pohjolan Voima's shareholders can subscribe these shares in proportion to their overall ownership. The minimum number of shares offered for subscription is 4 000, and the maximum 10 000. The subscription price is FIM 330 per share. The authorization is valid for one year from the decision of the meeting of shareholders.

## Personnel

Group reorganizations continued in 2000. With regard to the personnel, the greatest change took place at the beginning of 2001, when over 400 people transferred from PVO-Lämpövoima Oy to Power-OM Oy, which belongs to the Empower Group. This arrangement will improve the efficiency of operation and maintenance of the thermal power plants. The reorganization was prepared in co-operation with the personnel from May onwards. The people transferred to the new employer as old employees.

Projects with a view to improving the personnel's fitness for work and helping them to cope with changes continued. The short-term target is to manage the workload. Fewer people than in industry on average retire from the Group on a disability pension, and the age of retirement is higher although the average age of the personnel, 47 years, is rather high. The Group wants to maintain its employees' competence, expertise and fitness for work up to the age of retirement fixed by law.

Training in environmental issues, occupational health and safety, fire protection and civil protection continued. To systematize the occupational health and safety operations, the building of a health and safety system began; this system will be incorporated into the environmental management systems.

Plenty of language training was provided owing to the Group's internationalization. In the parent company, 25 hours of language training was given weekly in groups of three people on average.

The average number of employees working for the Group was 1 855 (1 454), of which 1 240 (1 215) people work in the production companies and 615 (239) people in the Empower Group, of whom 333 are in Estonia.

# CONSOLIDATED PROFIT AND LOSS ACCOUNT

		Jan 1 - Dec 31, 2000 1,000 €	Jan 1 - Dec 31, 1999 1,000 €
<b>TURNOVER</b>	( 1 )	<b>508,079</b>	518,502
Change in inventories of finished and unfinished goods		-1,828	-1,406
Production for own use		387	-66
Other operating income	( 2 )	23,334	21,103
Raw materials and services	( 3 )	-227,305	-212,228
Personnel expenses	( 4 )	-73,257	-65,680
Depreciation and value adjustments	( 5 )	-93,277	-101,491
Other costs and expenses	( 6 )	-110,029	-92,794
<b>OPERATING PROFIT</b>		<b>26,104</b>	65,940
Financial income and expenses	( 7 )	-33,947	-37,798
<b>PROFIT (LOSS) BEFORE APPROPRIATIONS AND TAXES</b>		<b>-7,843</b>	28,142
Income taxes	( 8 )	1,407	-10,513
Minority interest		-4,340	-2,393
<b>PROFIT (LOSS) FOR THE FINANCIAL YEAR</b>		<b>-10,776</b>	15,236

# CONSOLIDATED BALANCE SHEET

<b>ASSETS</b>		<b>Dec 31, 2000</b>	Dec 31, 1999
		1,000 €	1,000 €
<b>FIXED ASSETS</b>			
Intangible assets	( 9 )	53,855	59,721
Tangible assets	( 10 )	1 455,494	1,517,707
Investments	( 11 )	299,995	280,659
		<b>1,809,344</b>	<b>1,858,087</b>
<b>CURRENT ASSETS</b>			
Inventories	( 12 )	210,858	207,367
Non-current receivables	( 13 )	38,860	37,968
Current receivables	( 14 )	91,953	93,264
Cash in hand and at bank	( 15 )	8,980	23,334
		<b>350,651</b>	<b>361,933</b>
		<b>2,159,995</b>	<b>2,220,020</b>
<b>EQUITY AND LIABILITIES</b>			
<b>SHAREHOLDERS' EQUITY</b>			
	( 16 )		
Share capital		57,580	57,379
Share issue		9,469	6,721
Share premium reserve		312,343	306,120
Revaluation reserve		218,644	218,644
Retained earnings		176,145	160,909
Profit (loss) for the financial year		-10,776	15,236
		<b>763,405</b>	<b>765,009</b>
		<b>170,337</b>	<b>164,088</b>
<b>LIABILITIES</b>			
Deferred tax liability	( 17 )	160,045	162,132
Non-current liabilities	( 18 )	849,418	887,365
Current liabilities	( 19 )	216,790	241,426
		<b>1,226,253</b>	<b>1,290,923</b>
		<b>2,159,995</b>	<b>2,220,020</b>

# CONSOLIDATED CASH FLOW STATEMENT

	2000	1999
	1,000 €	1,000 €
<b>CASH FLOW FROM OPERATING ACTIVITIES</b>		
Operating profit	26,104	65,940
Adjustments to operating profit <sup>1</sup>	84,447	58,122
Change in net working capital <sup>2</sup>	-2,265	2,380
Interest	-35,167	-38,009
Dividends received	1,163	273
Other financial income and expenses	57	-62
Direct taxes paid	-680	-16
Net cash from operating activities	<b>73,659</b>	88,628
<b>CASH FLOW FROM INVESTING ACTIVITIES</b>		
Investment in shares	-3 781	-6,876
Purchases of tangible and intangible assets	-51 681	-29,967
Proceeds from sale of shares	102	2,882
Proceeds from sales of tangible and intangible assets		34 62428,595
Acquisition of Group companies	-850	7,698
Increase in non-current receivables	-12 211	-7,225
Net cash spent on investing activities	<b>-33 797</b>	-4,893
<b>CASH FLOW FROM FINANCING ACTIVITIES</b>		
Increase in long-term liabilities	34,387	7,159
Decrease in long-term liabilities	-97,642	-135,281
Increase (-) or decrease (+) in interest-bearing receivables	-891	1,767
Increase (+) or decrease (-) in current interest-bearing liabilities	757	18,120
Share issue	9,173	9,559
Net cash spent on financing activities	<b>-54,216</b>	-98,676
Net increase(+)or decrease (-) in cash and cash equivalents	-14,354	-14,941
Cash and cash equivalents, Jan 1	23,334	38,275
Cash and cash equivalents, Dec 31	<b>8,980</b>	23,334
<sup>1</sup> Adjustments to operating profit		
Depreciation and value adjustments	93,274	101,491
Gains (-) or losses (+) on sale of fixed assets	-3,134	-18,500
Share of associated companies' results	-5,693	-24,869
	<b>84,447</b>	58,122
<sup>2</sup> Change in working capital		
Increase (-) or decrease (+) in inventories	-3,491	23,781
Increase (-) or decrease (+) in non-interest-bearing receivables	1,310	-11,496
Increase (+) or decrease (-) in short-term non-interest-bearing liabilities	-84	-9,905
	<b>-2,265</b>	2,380

# PROFIT AND LOSS ACCOUNT OF PARENT COMPANY

		Jan 1 – Dec 31, 2000 1,000 €	Jan 1 – Dec 31, 1999 1,000 €
<b>TURNOVER</b>	( 1 )	<b>328,542</b>	358,806
Other operating income	( 2 )	1,685	5,587
Raw materials and services	( 3 )	-144,585	-139,093
Personnel expenses	( 4 )	-4,225	-4,182
Depreciations and value adjustments	( 5 )	-1,445	-1,737
Other costs and expenses	( 6 )	-180,777	-221,844
<b>OPERATING LOSS</b>		<b>-805</b>	-2,463
Financial income and expenses	( 7 )	2,669	2,960
<b>PROFIT BEFORE APPROPRIATIONS AND TAXES</b>		<b>1,864</b>	497
Appropriations			
Decrease in accumulated depreciation difference		542	815
Income taxes	( 8 )	-825	-549
<b>PROFIT FOR THE FINANCIAL YEAR</b>		<b>1,581</b>	763



# PARENT COMPANY BALANCE SHEET

<b>ASSETS</b>		<b>Dec 31, 2000</b>	Dec 31, 1999
		1,000 €	1,000 €
<b>NON-CURRENT ASSETS</b>			
Intangible assets	( 9 )	1,396	1,105
Tangible assets	( 10 )	8,030	7,858
Investments	( 11 )		
Holdings in Group companies		654,301	647,232
Other investments		264,592	287,030
		<b>928,319</b>	<b>943,225</b>
<b>CURRENT ASSETS</b>			
Non-current receivables	( 13 )	36,807	35,479
Current receivables	( 14 )	38,057	47,581
Cash in hand and at banks		6,070	17,362
		<b>80,934</b>	<b>100,422</b>
		<b>1,009,253</b>	<b>1,043,647</b>
<b>EQUITY AND LIABILITIES</b>			
<b>SHAREHOLDERS' EQUITY</b>			
	( 16 )		
Share capital		57,580	57,379
Share issue		9,469	6,721
Share premium reserve		307,714	301,491
Revaluation reserve		218,644	218,644
Retained earnings		36,502	35,739
Profit for the financial year		1,581	763
		<b>631,490</b>	<b>620,737</b>
<b>APPROPRIATIONS</b>			
Accumulated depreciation difference		4,357	4,899
<b>LIABILITIES</b>			
Non-current liabilities	( 17 )	299,343	294,570
Current liabilities	( 18 )	74,063	123,441
		<b>373,406</b>	<b>418,011</b>
		<b>1,009,253</b>	<b>1,043,647</b>

# PARENT COMPANY CASH FLOW STATEMENT

	<b>2000</b>	1999
	1,000 €	1,000 €
<b>CASH FLOW FROM OPERATING ACTIVITIES</b>		
Operating profit	-805	-2,463
Adjustments to operating profit <sup>1</sup>	1,401	-2,603
Change in net working capital <sup>2</sup>	-2,475	618
Interest	-518	1,143
Dividends received	2,529	2,531
Other financial income and expenses	658	-714
Direct taxes paid	-825	-549
Net cash from operating activities	<b>-36</b>	-2,039
<b>CASH FLOW FROM INVESTING ACTIVITIES</b>		
Investment in shares	-10,880	-18,364
Purchases of tangible and intangible assets	-1,500	-957
Proceeds from sale of shares	2	5,651
Proceeds from sales of tangible and intangible assets		834,573
Loans granted	-11,500	-3,740
Repayments of loan receivables	37,300	53,811
Net cash spent on investing activities	<b>13,505</b>	40,974
<b>CASH FLOW FROM FINANCING ACTIVITIES</b>		
Increase in long-term liabilities	17,676	12,175
Decrease in long-term liabilities	-51,464	-81,179
Increase (-) or decrease (+) in interest-bearing receivables	-1,327	3,964
Increase (+) or decrease (-) in current interest-bearing liabilities	1,180	-162
Share issue	9,173	8,399
Net cash spent on financing activities	<b>-24,762</b>	-56,803
Net increase (+) or decrease (-) in cash and cash equivalents	-11,293	-17,868
Cash and cash equivalents, Jan 1	17,362	35,230
Cash and cash equivalents, Dec 31	<b>6,069</b>	17,362
 <sup>1</sup> Adjustments to operating profit		
Depreciation and value adjustments	1,445	1,737
Gains (-) or losses (+) on sales of fixed assets	-44	-4,340
	<b>1,401</b>	-2,603
 <sup>2</sup> Change in working capital		
Increase (-) or decrease (+) in non-interest-bearing receivables	9,523	-523
Increase (-) or decrease (+) in short-term non-interest-bearing receivables	-11,998	1,141
	<b>-2,475</b>	618

## CONSOLIDATION PRINCIPLES

The consolidated financial statements include, beside the Parent Company, the companies in which the Parent Company holds more than half of the voting rights, either directly or indirectly, or companies over which it otherwise exercises a dominant influence as prescribed in Chapter 1, Section 3 of the Companies Act.

Subsidiaries acquired during the financial year are included in the financial statements from the date of acquisition while those sold are included up to the date of their sale.

## ACCOUNTING PRINCIPLES IN THE CONSOLIDATED FINANCIAL STATEMENTS

### MUTUAL SHAREHOLDINGS

The consolidated financial statements have been compiled in accordance with the purchase method. The price paid for the energy-generating subsidiaries in excess of equity has been capitalized in full. This consolidation difference is depreciated according to the depreciation plan of the fixed asset item in question. The acquisition cost of the Empower Group in excess of the equity of subsidiaries at the time of their acquisition is entered as goodwill that will as a rule be depreciated within five years.

### INTER-COMPANY TRANSACTIONS AND MARGINS

All internal transactions, unrealized margins of internal deliveries, internal receivables and liabilities, margins of internal services and internal profit distribution within the Group have been eliminated.

### MINORITY INTERESTS

Minority interests have been excluded from the consolidated shareholders' equity and voluntary reserves, and are shown as a separate balance sheet item.

### ASSOCIATED COMPANIES

Associated companies have been consolidated using the equity method. The profit and loss account includes a portion, corresponding to the shareholding of the Group, of the result and the change in the depreciation difference of the associated companies from which the tax liability has been deducted. The value of shares shown in the balance sheet is the proportion of the shareholders' equity and accumulated depreciation difference from which tax liability has been deducted.

The result of the associated companies is shown in other cost and expenses.

## ITEMS IN FOREIGN CURRENCIES

The value of debts and receivables, and contingent liabilities in foreign currencies have been adjusted to the exchange rate quoted by the Bank of Finland, or contract rate on the closing date. Exchange rate gains and losses from the conversion of debts and receivables have been entered in the profit and loss account as exchange rate differences.

## TANGIBLE AND INTANGIBLE ASSETS

Non-current assets have been entered in the balance sheet at their original acquisition cost from which depreciation according to plan has been deducted. Revaluation of hydropower construction and dams are included in the balance sheet values.

Depreciation according to plan has been calculated according to the expected useful life. Useful life has been defined as follows:

- hydropower plants	40-50 years
- nuclear power plants	10-40 years
- condensing power plants	25 years
- co-generation power plants	4-40 years
- power grids	30 years
- other fixed assets	3-20 years

The depreciation plan also takes account of the annual utilization of each plant.

## INVENTORIES

Current assets have been valued at their original acquisition cost according to the FIFO principle. If the probable acquisition cost is lower than the original acquisition cost on the closing date, the difference is not entered as an expense, due to the at-cost principle.

Unfinished network installation contracts of the Estonian subsidiary have been entered as income in accordance with the accounting legislation in Estonia and not according to Finnish legislation, as they would have little impact on profits.

## VOLUNTARY PROVISIONS

Voluntary provisions, including accumulated depreciation difference, have been divided between unrestricted shareholders' equity and deferred tax liability. The change in voluntary provisions during the financial year has been divided between the results for the year and the change in deferred tax liability.

## TURNOVER

When calculating turnover, discounts and indirect taxes are deducted from sales revenues. Sales revenues are entered as income at the time of delivery.

## PENSION ARRANGEMENTS

The pension schemes of the Group companies in Finland are run by Finnish insurance companies.

## INCOME TAX

The estimated taxes corresponding to the results of Group companies for the financial year, the taxes determined on the basis of dividend distribution, adjustments to taxes in previous financial years, and change in deferred tax liability are all entered as taxes. Deferred tax liability is calculated using the tax base for the following years set on the closing date. The tax credits based on the distribution of internal dividends have been deducted from taxes.

	Group		Parent Company	
	2000	1999	2000	1999
	1,000 €	1,000 €	1,000 €	1,000 €
<b>(1) TURNOVER</b>				
Sales of electricity	368,743	402,508	272,213	304,306
Sales of heat	61,532	55,952	50,246	45,760
Other sales	77,804	60,042	6,083	8,740
	<b>508,079</b>	<b>518,502</b>	<b>328,542</b>	<b>358,806</b>
<b>(2) OTHER OPERATING INCOME</b>				
Gains on sales of fixed assets	3,134	18,500	46	4,396
Rental income	984	1,082	1,147	892
Other income and expenditure	19,216	1,521	492	299
	<b>23,334</b>	<b>21,103</b>	<b>1,685</b>	<b>5,587</b>
<b>(3) RAW MATERIALS AND SERVICES</b>				
Fuel	160,182	129,618	-	-
Other materials, consumables and goods	48,272	32,353	143,476	136,347
Purchased during the period	208,454	161,971	143,476	136,347
Change in inventories	-3,792	22,308	-	-
External services	22,643	27,949	1,109	2,746
	<b>227,305</b>	<b>212,228</b>	<b>144,585</b>	<b>139,093</b>
<b>(4) PERSONNEL EXPENSES</b>				
Salaries and fees				
Salaries of the Boards of Directors and				
Managing Directors	1,246	1,061	321	361
Other salaries	57,557	51,960	3,267	3,194
	58,803	53,021	3,588	3,555
Pension expenses	8,951	7,687	314	359
Other indirect employee costs	5,503	4,972	323	268
	14,454	12,659	637	627
Total personnel expenses	<b>73,257</b>	<b>65,680</b>	<b>4,225</b>	<b>4,182</b>
Personnel (average)				
Salaried employees	1,342	936	71	71
Wage-earners	513	518	7	7
Total	<b>1,855</b>	<b>1,454</b>	<b>78</b>	<b>78</b>
Managing directors of Group companies and some other staff members normally retire at the age of 60-65.				
<b>(5) DEPRECIATION</b>				
Depreciation according to plan				
Formation expenses	6,125	6,125	-	-
Other capitalized expenditure	4,558	4,305	288	427
Buildings and constructions	9,225	10,406	112	224
Machinery and equipment	70,903	78,542	598	639
Other tangible assets	2,466	2,113	-	-
Investments	-	-	447	447
	<b>93,277</b>	<b>101,491</b>	<b>1,445</b>	<b>1,737</b>

	Group		Parent Company	
	2000	1999	2000	1999
	1,000 €	1,000 €	1,000 €	1,000 €
<b>(6) OTHER COSTS AND EXPENSES</b>				
Energy purchases	21,336	24,998	172,828	214,208
Share of associated companies' profits	-5,693	-24,869	-	-
Rents and leases	12,880	11,625	1,729	1,799
Real estate taxes	5,206	5,376	31	9
Other expenses	76,300	75,664	6,189	5,828
	<b>110,029</b>	<b>92,794</b>	<b>180,777</b>	<b>221,844</b>
<b>(7) FINANCIAL INCOME AND EXPENSES</b>				
Dividend income				
From associated companies	-	-	2,528	2,529
From others	1,163	273	1	2
	<b>1,163</b>	<b>273</b>	<b>2,529</b>	<b>2,531</b>
Interest income from long-term investments				
From Group companies	-	-	11,933	14,886
From others	9,442	7,953	1,676	1,289
	<b>9,442</b>	<b>7,953</b>	<b>13,609</b>	<b>16,175</b>
Other interest and financial income				
From Group companies	-	-	591	174
From others	1,082	1,366	216	242
	<b>1,082</b>	<b>1,366</b>	<b>807</b>	<b>416</b>
Total interest income	<b>10,524</b>	<b>9,319</b>	<b>14,416</b>	<b>16,591</b>
Interest and financial expenses				
To Group companies	-	-	-11,052	-9,469
To others	-45,634	-47,390	-3,224	-6,693
	<b>-45,634</b>	<b>-47,390</b>	<b>-14,276</b>	<b>-16,162</b>
<b>Total financial income and expenses</b>	<b>-33,947</b>	<b>-37,798</b>	<b>2 669</b>	<b>2,960</b>
Interest and financial income includes net exchange rate differences	-128	-62	-134	-666
<b>(8) INCOME TAXES</b>				
Taxes for the financial year	703	51	850	584
Taxes from previous periods	-23	-35	-25	-35
Change in deferred tax liability	-2,087	10,497	-	-
	<b>-1,407</b>	<b>10,513</b>	<b>825</b>	<b>549</b>

## (9) INTANGIBLE ASSETS

1,000 €

GROUP	Formation expenses	Intangible rights	Other capitalized expenditure	Advance payments	Goodwill	Total
Acquisition cost, Jan 1	58,116	108	60,733	81	-	119,038
Increases	-	4	5,595	429	2,327	8,355
Decreases	-	-	-3,786	-81	-	-3,867
Acquisition cost, Dec 31	58,116	112	62,542	429	2,327	123,526
Accumulated depreciation, Jan 1	-33,579	-39	-26,037	-	-	-59,655
Accumulated depreciation on decreases	-	-	675	-	-	675
Depreciation for the period	-6,137	-11	-4,077	-	-466	-10,691
Accumulated depreciation, Dec 31	-39,716	-50	-29,439	-	-466	-69,671
<b>Book value, Dec 31, 2000</b>	<b>18,400</b>	<b>62</b>	<b>33,103</b>	<b>429</b>	<b>1,861</b>	<b>53,855</b>
Book value, Dec 31, 1999	24,537	69	35,034	81	-	59,721

## PARENT COMPANY

Acquisition cost, Jan 1	-	6	1,885	-	1,891	
Increases	-	-	590	-	590	
Decreases	-	-	-37	-	-37	
Acquisition cost, Dec 31	-	6	2,438	-	2,444	
Accumulated depreciation, Jan 1	-	-	-786	-	-786	
Depreciation for the period	-	-	-262	-	-262	
Accumulated depreciation, Dec 31	-	-	-1,048	-	-1,048	
<b>Book value, Dec 31, 2000</b>	<b>-</b>	<b>6</b>	<b>1,390</b>	<b>-</b>	<b>1,396</b>	
Book value, Dec 31, 1999	-	6	1,099	-	1,105	

## (10) TANGIBLE ASSETS

1,000 €

GROUP	Land and water areas	Buildings and constructions	Machinery and equipment	Other tangible assets	Advance payments	Total
Acquisition cost, Jan 1	39,673	353,697	1,750,368	254,385	1,276	2,399,399
Increases	2,153	4,526	18,394	477	33,878	59,428
Decreases	-315	-30	-54,251	-13	-5,947	-60,556
Acquisition cost, Dec 31	41,511	358,193	1,714,511	254,849	29,207	2,398,271
Accumulated depreciation, Jan 1	-	-124,859	-739,616	-15,496	-	-879,971
Accumulated depreciation on decreases	-	-4	20,149	-29	-	20,116
Depreciation for the period	-	-9,211	-71,323	-2,388	-	-82,922
Accumulated depreciation, Dec 31	-	-134,074	-790,790	-17,913	-	-942,777
<b>Book value, Dec 31, 2000</b>	<b>41,511</b>	<b>224,119</b>	<b>923,721</b>	<b>236,936</b>	<b>29,207</b>	<b>1,455,494</b>
Book value, Dec 31, 1999	39,539	228,691	1,009,370	238,839	1,268	1,517,707
Revaluations included in acquisition cost, Dec 31		66,296		198,849		
Production machinery and equipment, Dec 31				881,562		

	Land and water areas	Buildings and constructions	Machinery and equipment	Other tangible assets	Advance payments	Total
<b>PARENT COMPANY</b>						
Acquisition cost, Jan 1	171	3,351	6,353	-	113	9,988
Increases	-	-	276	-	663	939
Decreases	-	-	-26	-	-30	-56
Acquisition cost, Dec 31	171	3,351	6,603	-	746	10,871
Accumulated depreciation, Jan 1	-	-508	-1,624	-	-	-2,132
Depreciation for the period	-	-112	-598	-	-	-710
Accumulated depreciation, Dec 31	-	-620	-2,222	-	-	-2,842
<b>Book value, Dec 31, 2000</b>	<b>171</b>	<b>2,731</b>	<b>4,381</b>	-	<b>746</b>	<b>8,030</b>
Book value, Dec 31, 1999	171	2,843	4,730	-	113	7,858
Production machinery and equipment, Dec 31				3,682		

## (11) INVESTMENTS

1,000 €

	Shares in associated companies	Other shares and holdings	Other receivables	Total	
<b>GROUP</b>					
Acquisition cost, Jan 1	52,752	37,887	190,020	280,659	
Increases	7,510	50	12,212	19,772	
Decreases	-5	-431	-	-436	
Acquisition cost, Dec 31	60,257	37,506	202,232	299,995	
<b>Book value, Dec 31, 2000</b>	<b>60,257</b>	<b>37,506</b>	<b>202,232</b>	<b>299,995</b>	
Book value, Dec 31, 1999	52,752	37,887	190,020	280,659	
	Shares in Group companies	Receivables from Group companies	Shares in associated companies	Other shares and holdings	Total
<b>PARENT COMPANY</b>					
Acquisition cost, Jan 1	647,232	256,713	29,980	336	934,261
Increases	7,517	-	3,357	6	10,880
Decreases	-448	-25,799	-	-1	-26,248
Acquisition cost, Dec 31	654,301	230,914	33,337	341	918,893
<b>Book value, Dec 31, 2000</b>	<b>654,301</b>	<b>230,914</b>	<b>33,337</b>	<b>341</b>	<b>918,893</b>
Book value, Dec 31, 1999	647,232	256,713	29,981	336	934,262

	Group		Parent Company	
	2000	1999	2000	1999
	1,000 €	1,000 €	1,000 €	1,000 €
<b>(12) INVENTORIES</b>				
Materials and supplies	3,705	2,919		
Fuel	206,589	203,162		
Work in progress	564	1,286		
	<b>210,858</b>	207,367		
Fuel (coal and unrefined uranium)				
Replacement price	73,765	57,892		
Book value	-65,072	-32,441		
Difference	<b>8,693</b>	25,451		
<b>(13) NON-CURRENT RECEIVABLES</b>				
Accounts receivable	-	279	-	-
Loan receivables	5,054	4,051	3,169	1,841
Capital loan receivables	33,806	33,638	33,638	33,638
	<b>38,860</b>	37,968	<b>36,807</b>	35,479
Receivables from Group companies				
Capital loan receivables			1	1
Receivables from associated companies				
Loan receivables	2,925	1,564	2,925	1,564
Capital loan receivables	33,806	33,638	33,638	33,638
	<b>36,731</b>	35,202	<b>36,563</b>	35,202
<b>(14) CURRENT RECEIVABLES</b>				
Accounts receivable	65,362	70,987	30,419	37,498
Loan receivables	-	505	-	-
Share issue receivables	6,317	6,721	5,853	6,721
Deferred assets	16,186	12,739	1,662	3,320
Other receivables	4,088	2,312	123	42
	<b>91,953</b>	93,264	<b>38,057</b>	47,581
Receivables from Group companies				
Accounts receivable			1,874	1,431
Other receivables			45	23
			<b>1,919</b>	1,454
Receivables from associated companies				
Accounts receivable	3,686	2,136	104	117
Deferred assets	1	412	59	-
Other receivables	1,008	564	-1	20
	<b>4,695</b>	3,112	<b>162</b>	137



	Group		Parent Company	
	2000 1,000 €	1999 1,000 €	2000 1,000 €	1999 1,000 €
Main items included in current deferred assets				
Personnel expenses	378	127	53	-
Interest income	8,160	6,747	875	250
Interest expenses	-	743	-	-
Income taxes	411	513	7	132
Indirect taxes	380	161	-	-
Selling price receivable	-	1,791	-	1,791
Others	6,857	2,657	727	1,147
	<b>16,186</b>	<b>12,739</b>	<b>1,662</b>	<b>3,320</b>
Interest-bearing receivables				
Non-current assets	202,232	190,020	230,914	256,713
Current assets	47,839	61,527	42,876	52,842
	<b>250,071</b>	<b>251,547</b>	<b>273,790</b>	<b>309,555</b>

#### (15) CURRENT FINANCIAL ASSETS

Current financial assets comprise shares in mutual fund units (1999), and privatization vouchers of the Estonian subsidiary (2000) that can be used for purchasing land offered for sale as part of the country's privatization process.

Replacement price	58	114		
Book value	-17	-109		
Difference	<b>41</b>	<b>5</b>		

#### (16) SHAREHOLDERS' EQUITY

Share capital, Jan 1	57,379	57,106	57,379	57,106
Transfer from share issues	201	273	201	273
Share capital, Dec 31	<b>57,580</b>	<b>57,379</b>	<b>57,580</b>	<b>57,379</b>
Share issue, Jan 1	6,721	16,429	6,721	16,429
Transfer to share capital	-201	-273	-201	-273
Transfer to share premium reserve	-6,223	-17,835	-6,223	-17,835
Share issues during the period	9,172	8,400	9,172	8,400
Share issue, Dec 31	<b>9,469</b>	<b>6,721</b>	<b>9,469</b>	<b>6,721</b>
Share premium reserve, Jan 1	306,120	287,125	301,491	283,656
Share issue premium	6,223	18,995	6,223	17,835
Share premium reserve, Dec 31	<b>312,343</b>	<b>306,120</b>	<b>307,714</b>	<b>301,491</b>
Revaluation reserve, Jan 1	218,644	218,644	218,644	218,644
Revaluation reserve, Dec 31	<b>218,644</b>	<b>218,644</b>	<b>218,644</b>	<b>218,644</b>
Retained earnings, Jan 1	176,145	160,909	36,502	35,739
Retained earnings, Dec 31	<b>176,145</b>	<b>160,909</b>	<b>36,502</b>	<b>35,739</b>
Profit for the financial year	<b>-10,776</b>	15,236	<b>1,581</b>	763
<b>Total shareholders' equity</b>	<b>763,405</b>	<b>765,009</b>	<b>631,490</b>	<b>620,737</b>

	Group		Parent Company	
	2000	1999	2000	1999
	1,000 €	1,000 €	1,000 €	1,000 €
Distributable funds, Dec 31				
Retained earnings	176,145	160,909	36,502	35,739
Profit for the financial year	-10,776	15,236	1,581	763
- Capitalized formation expenses	-18,376	-24,517	-	-
- Cost of acquisition of own shares	-3	-3	-	-
- Portion of accumulated depreciation difference transferred to shareholders' equity	-164,858	-170,801	-	-
	-17,868	-19,176	38,083	36,502
- The share of associated companies' results from accumulated depreciation difference transferred to shareholders' equity of the above portion	-35,864	-32,335	-	-
	-53,732	-51,511		
<b>SHARE CAPITAL BY SHARE CATEGORY</b>				
	no.	á FIM	1,000 €	
Series A	13,350,077	10.00	22,453	
- entitling to electricity generated or acquired by PVO-Vesivoima Oy				
Series B	6,534,572	10.00	10,990	
- entitling to 49.6% of electricity generated or acquired by Teollisuuden Voima Oy				
Series C	8,314,455	10.00	13,984	
- entitling to electricity generated or acquired by PVO-Lämpövoima Oy				
Series D4	232,000	10.00	390	
- entitling to electricity and heat generated by Veitsiluodon Voima Oy				
Series D5	100,000	10.00	168	
- entitling to electricity and heat generated by Kemijärven Voima Oy				
Series D6	300,000	10.00	505	
- entitling to electricity and heat generated by Oulun Voima Oy				
Series E	4,654,743	10.00	7,829	
- entitling to electricity and heat generated by Mussalon Voima Oy and to 7.2% of electricity generated or acquired by Teollisuuden Voima Oy				
Series G	89,820	10.00	151	
- entitling to electricity and heat generated by Oy Alholmens Kraft Ab				
Series G2	60,000	10.00	101	
- entitling to electricity and heat generated by Kymin Voima Oy				
Series H	500,000	10.00	841	
- entitling to electricity and heat generated by PVO-Huippuvoima Oy				

Series K1	100,000	10.00	168
- entitling to electricity and heat generated by Kokkolan Voima Oy			
			57 580

The owners of each series of shares are responsible for the fixed costs of the series in question in proportion to their shareholdings irrespective of the use of the capacity or energy share they are entitled to, and for variable costs in proportion to the amount of energy received.

	Group		Parent Company	
	2000	1999	2000	1999
	1 000 €	1 000 €	1 000 €	1 000 €
<b>(17) DEFERRED TAX LIABILITY</b>				
Deferred tax liability				
From appropriations	<b>160 045</b>	162 132		
<b>(18) NON-CURRENT LIABILITIES</b>				
Bond loans	93 307	153 095	-	-
Loans from financial institutions	271 186	282 097	31 392	44 295
Pension fund loans	6 541	8 177	-	-
Other non-current liabilities	478 384	443 996	267 951	250 275
	<b>849 418</b>	887 365	<b>299 343</b>	294 570
Liabilities to Group companies				
Other non-current liabilities			<b>267 951</b>	250 275
Repayment schedules for long-term loans, from 2006 (from 2005)				
Loans from financial institutions	61 391	59 080	708	1 119
Pension fund loans	-	1 635	-	-
Other non-current liabilities	-	4 357	-	-
	<b>61 391</b>	65 072	708	1 119
Bond loans	Currency	Interest %		
1991-2001	CHF	7.250	65 651	62 301
Repayments			-65 651	
1993-2000	JPY	5.300	-	48 671
Repayments				-48 671
1993-2003	JPY	5.300	93 528	97 343
1997-2004	FIM	5.800	11 773	11 773
1990-2000	USD	9.590	-	11 945
Repayments				-11 945
			<b>105 301</b>	171 417
Adjustment of swap loans and receivables			-11 994	-18 322
			<b>93 307</b>	153 095

	Group		Parent Company	
	2000 1,000 €	1999 1,000 €	2000 1,000 €	1999 1,000 €
<b>( 19 ) CURRENT LIABILITIES</b>				
Bonds	59,787	52,372	-	-
Loans from financial institutions	30,398	62,272	12,903	51,463
Pension fund loans	1,635	1,635	-	-
Other non-current liabilities	255	1,104	-	-
Advances received	727	669	-	-
Accounts payable	41,840	38,708	37,851	50,878
Deferred liabilities	54,363	57,639	13,308	12,806
Other short-term liabilities	27,785	27,027	10,001	8,294
	<b>216,790</b>	<b>241,426</b>	<b>74,063</b>	<b>123,441</b>
To Group companies				
Accounts payable			37,175	48,362
Deferred liabilities			10,304	8,774
Other short-term liabilities			1,041	2,700
			<b>48,520</b>	<b>59,836</b>
To associated companies				
Advances received	165	-	-	-
Accounts payable	1,289	2,266	237	656
Deferred liabilities	-	463	201	-
	<b>1,454</b>	<b>2,729</b>	<b>438</b>	<b>656</b>
Main items included in current deferred liabilities				
Personnel expenses	11,136	9,774	553	509
Interest expenses	21,947	23,071	11,038	11,941
Income taxes	27	14	10	-
Indirect taxes	203	159	-	155
Others	21,050	24,621	1,707	201
	<b>54,363</b>	<b>57,639</b>	<b>13,308</b>	<b>12,806</b>
Interest-free and interest-bearing liabilities				
Non-current				
Interest-bearing	849,418	887,365	299,343	294,570
	<b>849,418</b>	<b>887,365</b>	<b>299,343</b>	<b>294,570</b>
Current				
Interest-free	110,747	119,085	51,459	64,321
Interest-bearing	106,043	122,341	22,604	59,120
	<b>216,790</b>	<b>241,426</b>	<b>74,063</b>	<b>123,441</b>

	Group		Parent Company	
	2000 1,000 €	1999 1,000 €	2000 1,000 €	1999 1,000 €
<b>(20) CONTINGENT LIABILITIES</b>				
Mortgages				
As security against own debt	54,400	62,401		
As security for own commitments	1,374	-		
	<b>55,774</b>	<b>62,401</b>		
Guarantees				
Loan guarantees				
For associated companies	112,263	80,180	112,235	80,121
For others	699	699	699	699
Other guarantees				
For own commitments	7,438	5,552	7,312	5,359
For Group companies	-	-	45,824	44,706
For associated companies	1,200	1,200	1,200	1,200
	<b>121,627</b>	<b>87,631</b>	<b>167,270</b>	<b>132,085</b>
Leasing commitments				
Payments for 2001/2000	12,543	8,193		
Payments for the following years	151,308	122,672		
	<b>163,851</b>	<b>130,865</b>		
Other commitments	<b>660</b>	<b>604</b>	<b>336</b>	<b>336</b>
Nuclear waste management liabilities				
Nuclear waste management liability	663,000	645,404	-	-
Funds in Nuclear Waste				
Management Fund (Mar 31)	656,200	623,304	-	-
Guarantee required under Section 44 of the Nuclear Energy Act	87,232	104,144	49,545	59,150
Nuclear waste management receivables pledged to the State Nuclear Waste Management Fund	199,527	190,020	-	-

## (21) DERIVATIVE CONTRACTS

Capital values of derivative contracts providing a hedge against exchange rate and interest risks were as follows:

### Interest rate derivatives

#### Option contracts

Purchased	110,000	113,638	-	-
Written	110,000	80,000	-	-
Swap agreements	131,352	285,166	85,685	119,322

### Currency derivatives

Forward contracts	662	-	-	-
Swap agreements	159,179	393,032	-	39,642

## GRID OPERATIONS

Grid business comprises Pohjolan Voima Oy's regional grid operations.

## ALLOCATION OF JOINT ITEMS

Joint cost items have been allocated in accordance with the matching principle. The capital structure of the balance sheet is derived from the equity-to-assets ratio requirements imposed by Pohjolan Voima on Group companies.

## VALUATION OF FIXED ASSETS

Fixed assets have been valued according to the valuation principles used by the Group.

## RETURN ON INVESTMENT

Return on investment was 13.5%.

ROI% =

$$100 \times \frac{\text{profit before extraordinary items} + \text{financial income and expenses}}{\text{capital invested (average for the year)}}$$

## PERSONNEL

Grid operations employed an average of one person. The necessary maintenance services and a number of administrative services were purchased from outside.

## INVESTMENTS

Investments in the grid totalled EUR 643 000.

## BALANCE SHEET

	Dec 31, 2000	Dec 31, 1999
	1,000 €	1,000 €
<b>ASSETS</b>		
<b>NON-CURRENT ASSETS</b>		
Intangible assets		
Capitalised expenditure	738	893
Tangible assets		
Grid	3,378	3,659
Advance payments and work in progress	726	83
	<u>4,842</u>	<u>4,635</u>
<b>CURRENT ASSETS</b>		
Current receivables		
Accounts receivable	477	649
Deferred assets	238	1,888
Cash in hand and at banks	6,836	4,764
	<u>7,551</u>	<u>7,301</u>
	<b>12,393</b>	<b>11,936</b>

## PROFIT AND LOSS ACCOUNT

	2000	1999
Jan 1 - Dec 31	1,000 €	1,000 €
Turnover	<b>3,117</b>	3,273
Other operating income	0	776
Raw materials and services	-1,043	-1,287
Personnel expenses	-102	-102
Depreciation and value adjustments	-435	-492
Other costs and expenses	-290	-390
Operating profit	<b>1,247</b>	1,778
Financial income and expenses	238	92
Profit before appropriations and taxes	<b>1,485</b>	1,870
Appropriations		
Decrease in accumulated depreciation difference	278	770
Income taxes	-511	-739
Profit for the financial year	<b>1,252</b>	1,901

	Dec 31, 2000	Dec 31, 1999
	1,000 €	1,000 €
<b>EQUITY AND LIABILITIES</b>		
Calculated equity	2,838	2,838
Retained earnings	3,890	1,989
Profit for the financial period	1,252	1,901
	<u>7,980</u>	<u>6,728</u>
<b>APPROPRIATIONS</b>		
Accumulated depreciation difference	3,378	3,659
<b>LIABILITIES</b>		
Current		
Accounts payable	350	608
Deferred liabilities	685	941
	<u>1,035</u>	<u>1,549</u>
	<b>12,393</b>	<b>11,936</b>

	Domicile	Ownership share, %	Share of votes, %	Book value in 1,000 €
<b>SUBSIDIARY SHARES</b>				
<b>OWNED BY THE PARENT COMPANY:</b>				
Empower Oy	Helsinki	77.0	98.5	1,699
Jämsänkosken Voima Oy	Helsinki	100.0	100.0	3,364
Järvi-Suomen Voima Oy	Helsinki	69.3	69.3	1,049
Kemijärven Voima Oy	Helsinki	100.0	100.0	1,682
Kokkolan Voima Oy	Helsinki	100.0	100.0	3,364
Kymin Voima Oy	Helsinki	76.0	76.0	3,069
Mussalon Voima Oy	Helsinki	100.0	100.0	40,972
Oulun Voima Oy	Helsinki	100.0	100.0	15,810
PVO-Huippuvoima Oy	Helsinki	100.0	100.0	3,498
PVO-Innopower Oy	Helsinki	100.0	100.0	10
PVO-Lämpövoima Oy	Helsinki	100.0	100.0	1,682
PVO-Pool Oy	Helsinki	100.0	100.0	35
PVO-Vesivoima Oy	Helsinki	100.0	100.0	266,827
PVO-Voimaverkko Oy	Helsinki	100.0	100.0	3
Raahen Voima Oy	Helsinki	100.0	100.0	8
Rouhialan Voimansiirto Oy	Helsinki	100.0	100.0	3
Teollisuuden Voima Oy	Helsinki	56.8	49.9	300,029
Veitsiluodon Voima Oy	Helsinki	100.0	100.0	10,710
Others				487
				<b>654,301</b>
<b>OWNED BY SUBSIDIARIES:</b>				
Eesti Elektrivõrkude Ehituse AS	Tallinna	59.0	59.0	3,291
Hicon Oy	Espoo	100.0	100.0	6
Länsi-Suomen Yhteiskäyttö Oy	Helsinki	100.0	100.0	329
Nokian Lämpövoima Oy	Helsinki	80.1	80.1	3,071
Perusvoima Oy	Helsinki	100.0	100.0	10
Posiva Oy	Helsinki	60.0	60.0	1,009
Posivia Oy	Helsinki	100.0	100.0	3
Olkiluodon Vesi Oy	Helsinki	100.0	100.0	219
Power Contractor Oy	Espoo	100.0	100.0	8
Power-IT Oy	Helsinki	100.0	100.0	1,000
Power-OM Oy	Helsinki	100.0	100.0	1,000
Powertechnics CE Oy	Espoo	100.0	100.0	352
PVO-Engineering Oy	Helsinki	100.0	100.0	336
PVO-Engineering Eesti OÜ	Tallinna	100.0	100.0	3
RAMSE Consulting Oy	Helsinki	55.0	55.0	357
Reloc Oy	Espoo	100.0	100.0	2
Synton Oy	Helsinki	100.0	100.0	3
TVO Nuclear Services Oy	Eurajoki	100.0	100.0	8
				<b>11,007</b>

## ASSOCIATED COMPANY SHARES

### OWNED BY THE PARENT COMPANY:

Fingrid Oyj	25.1	33.4	28,054
Oy Alholmens Kraft Ab	49.9	49.9	5,152
Others			131
			<b>33,337</b>

### OWNED BY SUBSIDIARIES:

Copower SIA, Latvia	33.3	33.3	18
Polartest Oy	22.5	22.5	196
Power-Deriva Oy	50.0	50.0	125
Radtek Oy	30.0	30.0	153
Suomen Voimatekniikka Oy	30.0	30.0	1,606
Tornionlaakson Voima Oy	50.0	50.0	84
Vaskiluodon Voima Oy	50.0	50.0	848
Voimalohi Oy	50.0	50.0	168
Winwind Oy	24.9	24.9	37
Others			113
			<b>3,348</b>

## OTHER SHARES AND HOLDINGS

Länsi-Suomen Voima Oy	19.9	19.9	33,685
Others			3,820
			<b>37,505</b>



## PROPOSAL OF THE BOARD OF DIRECTORS FOR RECORDING THE FINANCIAL RESULT

The Group has no distributable assets.

The profit and loss account of the Parent Company Pohjolan Voima shows a profit of EUR 1,580,041.62. The distributable equity totals EUR 38,082,350.52.

The Board of Directors proposes to the Annual General Meeting that the profit be transferred to the retained earnings account and that no dividends be distributed.

Helsinki, March 13, 2001

Heikki Sara  
Chairman

Juhani Pohjolainen  
Deputy Chairman

Rauno Hakkila

Sven Sohlström

Tapani Sointu

Martin Stanley

Esa Tirkkonen

Erkki Varis

Timo Rajala  
President and CEO

## AUDITORS' REPORT

To the shareholders of Pohjolan Voima Oy

We have audited the accounts, the accounting records and the administration of Pohjolan Voima Oy for the financial year January 1 – December 31, 2000. The accounts prepared by the Board of Directors and the Managing Director include, for both the Group and the Parent Company, a report on operations, an income statement, a balance sheet and notes to the accounts. We provide our opinion on the accounts and the administration based on our audit.

We have conducted our audit in accordance with generally accepted auditing standards. We have audited the accounting records, the accounts, the disclosures and the presentation of information, including the accounting policies, to an extent sufficient to give us reasonable assurance that the financial accounts are free of material misstatement. The audit of the administration has included obtaining assurance that the actions of the members of the Board of Directors and the Managing Director have been in conformity with the regulations of the Companies Act.

In our opinion the accounts have been prepared in accordance with the regulations of the Accounting Act and other legislation and regulations relevant to the preparation of the accounts, and give a true and fair view of the Group's and Parent Company's

results from operations and financial position in accordance with such legislation and regulations. The accounts, including the consolidated accounts, may be approved and the members of the Board of Directors of the Parent Company and the Managing Director be discharged from liability for the financial year. The Board proposal concerning the disposal of the distributable funds is in accordance with the Companies Act.

We have examined the separate profit and loss account and the balance sheet on grid operations, and the related additional information presented in the notes to the financial statements. In our opinion they have been drawn up in accordance with the Electricity Market Act, and legislation and regulations based on it.

Helsinki, March 26, 2001

SVH Pricewaterhouse Coopers Oy  
Authorized Public Accountants

Pekka Nikula  
Authorized Public Accountant

## SHAREHOLDERS AND DISTRIBUTION OF SHARES ON DECEMBER 31, 2001

	%
Etelä-Pohjanmaan Voima Oy	4.3
Helsingin kaupunki	1.4
Keskinäinen eläkevakuutusyhtiö Ilmarinen	4.4
Kemira Oyj + Eläkesäätiö Neliapila	4.5
Kokkolan kaupunki	2.1
Kotkan Energia Oy	1.4
Kymppivoima Oy	2.1
Kyro Oyj Abp	0.2
Oy Metsä-Botnia Ab	1.5
Metsä-Serla Oyj	2.5
Myllykoski Oyj	1.5
Oulun kaupunki	0.1
Perhonjoki Oy	1.7
Porin kaupunki	1.2
Päijät-Hämeen Voima Oy	1.3
Stora Enso Oyj	16.4
TXU Nordic Energy Oy	14.6
UPM-Kymmene Oyj	38.3
Vantaan Energia Oy	0.5
<hr/>	
Total	100.0



# MANAGEMENT

## POHJOLAN VOIMA OY

**President and CEO**  
Timo Rajala

**Power Procurement,  
Thermal Power Production**  
Matti Kaisjoki

**Group Controller**  
Minna Korkeaaja

**Corporate Strategy, Legal and  
Environmental Affairs,  
Communications, Procurement**  
Arto Piela

**Strategy**  
Risto Vaarna

**Legal Affairs**  
Jussi Kivimäki

**Environmental Affairs**  
Birger Ylisaukko-oja

**Communication**  
Osmo Kaipainen

**Fuels and Procurement**  
Kauko Relander

**Personnel**  
Juhani Mäki

**Corporate Planning**  
Paavo Onkalo

**Transmission, technology and  
IT-systems**  
Risto Vesala

**Financing**  
Timo Väisänen

## EMPOWER OY

**President and CEO**  
Aappo Kontu

**Corporate Services**  
Reijo Tikkala

**Consulting**  
RAMSE Consulting Oy  
Juha Lamberg

**Engineering**  
PVO-Engineering Oy  
Veli-Matti Jääskeläinen

**Information Technology**  
Power-IT Oy  
Antti Ruukonen

**Installation**  
Eesti Elektrivõrkude Ehituse AS  
Andres Vainola

Suomen Voimatekniikka Oy  
Jaakko Alaviitala

**Operation & Maintenance**  
Power-OM Oy  
Eero Hakala

**Energy Trade Services**  
Länsi-Suomen Yhteiskäyttö Oy  
Orvo Laurila

Power-Deriva Oy  
Jouko Isoviita

# CONTACT INFORMATION

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