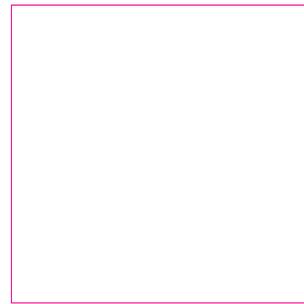
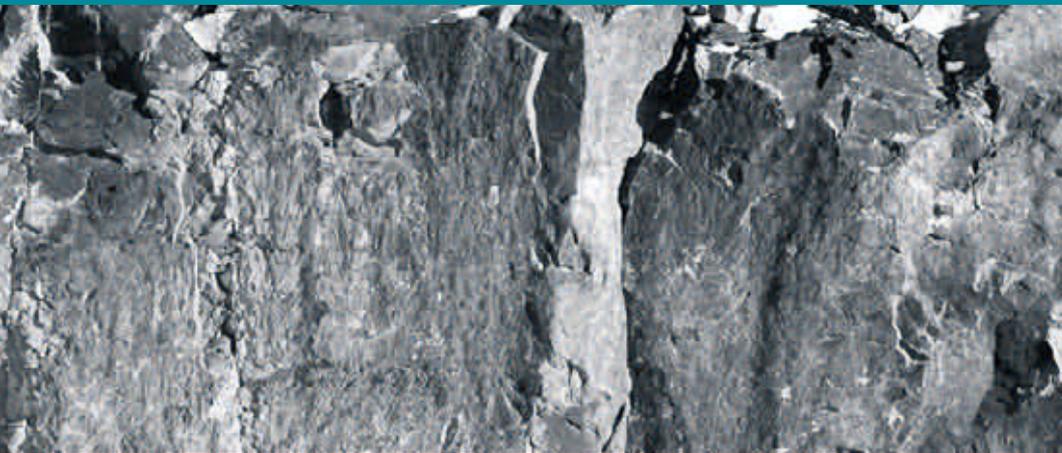


POSIVA



Annual Report  
2002



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# Managing Director's Review

In recent years, the Finnish nuclear waste management programme has mainly focused on preparations for final disposal of spent nuclear fuel. Posiva's activities are now proceeding towards the implementation of the final disposal facility pursuant to the decisions finalised by the Government and the Parliament in the years 2000 – 2002.

In accordance with these decisions, the spent nuclear fuel from Finnish nuclear power plants – both the existing ones and the new plant to be built in this decade – will be disposed of in Finnish bedrock, on the island of Olkiluoto in Eurajoki. During the financial year preparations for final disposal were continued in collaboration with several consulting and research organisations along the same lines as previously.

## ONKALO MARKS THE BEGINNING OF A NEW PHASE

The actual construction project of the final disposal repository is scheduled for the next decade. Before that, an underground rock characterisation facility called ONKALO will be constructed in the bedrock of Olkiluoto. This facility will serve to confirm the information so far acquired from drilling operations performed from above ground. The design and construction of the characterisati-

on facility and the research to be carried out there will comprise a focal part of Posiva's operations in this decade.

A decision was made in 2002 to build an access tunnel several kilometres in length to reach a depth of 500 m inside the bedrock. According to plans, the excavation of the tunnel will start in 2004. Consequently, Posiva's operations will be characterised in the next few years by the construction of the underground facility and towards the end of the decade by the research activities that will start there.

## POLICY DECISION ON THE SPENT NUCLEAR FUEL OF THE NEW NUCLEAR POWER PLANT

With the implementation of the final disposal facility drawing closer, the project has reached the phase where the plans for the encapsulation plant to be built above ground and for the underground tunnels are being adapted to the Olkiluoto environment. The policy decision taken by the Parliament in the spring of 2002 to approve the new nuclear power plant dictates that the spent nuclear fuel from the new plant shall be disposed of in compliance with Posiva's application in the same final disposal facility as the spent nuclear fuel from the existing plants.

The fuel from the new nuclear power plant influences the final disposal programme in two different ways. On one hand, the network of disposal tunnels will have to be extended, and on the other hand, the project schedule now runs until almost the year 2100. These changes will be taken into consideration in the plans for the final disposal facility's construction and operation.

#### OPERATIONS CONCENTRATED IN EURAJOKI

In recent years, Posiva has operated in two localities, Eurajoki and Helsinki. With the preparations for the final disposal project now concentrated in Olkiluoto, the operations of the Company were in the summer of 2002 transferred in full to Olkiluoto. New employees have been recruited to ensure the expertise and knowledge required for the construction project of the underground characterisation facility. The Company has continued close cooperation with the Municipality of Eurajoki .

#### DECISION ON FINAL DISPOSAL SITE MADE IN UNITED STATES

On the international scene, the most significant event during the financial year was the decision made by the US Congress in July 2002 to approve Yucca Mountain in Nevada as the site for the final disposal facility of spent nuclear fuel. The Swedish nuclear waste management company SKB started bedrock investigations for a final disposal facility in two localities and aims at being able to select the site in about five years' time.

I wish to express my gratitude to the personnel, the shareholders and all our collaboration partners for effective operations and excellent cooperation in the year 2002.

VEIJO RYHÄNEN



"IN THIS DECADE, POSIVA'S  
OPERATION WILL CONCENTRATE ON  
THE CONSTRUCTION OF ONKALO"  
– VEIJO RYHÄNEN



AS FAR AS THE FINAL DISPOSAL PROJECT IS CONCERNED, THE MOST SIGNIFICANT CHANGE DURING 2002 WAS THE CONCENTRATION OF POSIVA'S OPERATIONS IN OLKILUOTO.

# Operations of the Company

## SITE INVESTIGATIONS IN OLKILUOTO

Detailed geological, geophysical and geohydrological studies have been carried out in the Olkiluoto investigation area for the determination of the location of the access tunnel and the related vertical shaft. Research holes have been drilled closer to each other to obtain more accurate information about the bedrock and a more precise perception based on this information.

The location of the entrance and the access tunnel will be determined on the basis of thorough investigations and the characteristics of the bedrock along the route. The focus in the planning process is to minimise the disturbance caused by ONKALO to the bedrock. Careful planning and preparations will ensure that ONKALO meets the research requirements specified for it and can later be joined with the actual final repository.

The evaluation of information and measurement results obtained earlier, partly in remodelled form, has continued alongside with the new investigation approaches. The development of measurement and modelling techniques has made it possible to revise earlier interpretations.

The third research excavation and the ground penetrating radar performed in it have produced new survey information that can be used to make a more precise evaluation of the kinds of rocks and the structure of the bedrock in the area. The results of the geological survey and the deep penetrating geophysical measurements can thereby be linked together.

Complementary measurements and studies have been carried out in the soil layer and the surface parts of the rock to depict the current hydrological and hydrogeochemical state of Olkiluoto. Understanding the behaviour of water infiltrated in the soil and the bedrock is the starting point for the assessment of future conditions. This applies to the assessment of not only the changes taking place during the construction project and the service life, but also of long-term slow development. Deep groundwater studies in the bedrock have focused on salinity and the presence of dissolved gases, as well as on establishing the origin of the water and geochemical interaction by means of e.g. isotope studies.

A significant amount of research material and plans will be collected prior to the construction of ONKALO. The plans include compiling a report of the baseline of Olkiluoto, publishing an underground research programme, making an assessment of the disturbance caused by the characterisation facility and presenting a plan for the monitoring of bedrock conditions. The contents of these reports and plans have in the most part been drafted during the financial



THE EXCAVATION OF ONKALO ALONE WILL GENERATE OVER 600 000 CUBIC METERS OF CRUSHED ROCK. THE TOTAL LENGTH OF THE ACCESS ROUTE, THE RESEARCH TUNNELS AND THE VENTILATION SHAFT IS OVER 8 KM.

year and the work will be completed during the first half of 2003. The material will also be submitted to STUK Radiation and Nuclear Safety Authority Finland for assessment. The development of a rock classification system is an important part of the preparations for the construction project. This system will facilitate the evaluation of the various properties of the bedrock with respect to e.g. construction and long-term safety.

#### DESIGN OF ONKALO

The plans for the underground characterisation facility ONKALO were finalised in 2002. For access into the facility, an access tunnel was selected as it provides better opportunities for research already during the construction project than a shaft, which was the other alternative. In addition, an access tunnel is a more flexible solution from point of view of the implementation of final disposal. Other advantages of an access tunnel include easiness of transport of e.g. vehicles, equipment and blasted rock as well as the availability of state-of-the-art tunnel construction technology and experienced contractors in the Nordic countries.

In September 2002, a separate project was started for the planning and construction of ONKALO.

The intention is to file the building permit application for ONKALO with the Municipality of Eurajoki in 2003. The first work stages, which will be carried out from above the ground, are scheduled to start in the autumn of 2003. Prior to this Posiva will submit the technical description of the underground characterisation facility, the research programmes and the building permit material to STUK Radiation and Nuclear Safety Authority Finland.

UNDERGROUND CONSTRUCTION WORK IN THE ONKALO PROJECT WILL START IN 2004. RESEARCH ACTIVITIES ON THE MAIN LEVEL AT A DEPTH OF 400 M CAN BE STARTED IN 2008.



According to the present plans, the construction of the underground parts of ONKALO will start in 2004 and the estimated construction period is five to six years. The main level at a depth of 400 m will be completed within four years after the excavation starts to the extent that research activities can be started. The entire construction project of ONKALO is estimated to be completed by the year 2010. The actual research phase can then begin in earnest.

**Information and experience from the depths**  
ONKALO is constructed for research purposes. During the construction period and the research carried out from the facility, Posiva will acquire information about the bedrock within the area of influence of the final repository, and gain experi-

ence in the planning, construction, investigation and use of deep bedrock facilities that can be utilised in the final repository. Experience gained from bedrock laboratories has supported the opinion that underground research is necessary before the decision on the construction of the final repository is made.

In the planning of ONKALO, the essential objective is to avoid significant water-bearing structures. The challenges that need to be overcome in the project include management of seep water and mastering of bedrock sealing technology.

The complete underground characterisation facility ONKALO consists of buildings and systems above the ground, an access tunnel that runs to a depth of ca. 500 m (total length ca. 5 km), a ventilation shaft as well as a total of ca. 2.5 km of research tunnels and auxiliary facilities.

#### **An unusually long construction project**

ONKALO represents an exceptional bedrock construction project in our conditions due to its purpose of use and the length of the project. Special factors that need to be considered in the project include long-term safety of final disposal, quality assurance and occupational safety. Every activity needs to be carefully documented so that the reasons and grounds of all the solutions can be stated later, if required.

Posiva's plans cover the entire project schedule of ONKALO with respect to underground research, transports, ventilation and escape routes as well as visitors. The plans will be revised as research proceeds and more accurate information is obtained about the underground conditions.

The compatibility of the technical plans for the underground characterisation facility and the final repository is verified in all stages of ONKALO's planning and implementation as ONKALO will in the end be used as part of the final repository.

### FINAL DISPOSAL TECHNOLOGY

In order to define the starting points for the planning of the final disposal facility, a material model applicable to the bedrock of Olkiluoto as well as a cleavage analysis method for the performance of rock mechanical calculations were developed during the financial year. The development of injection studies and technology related to groundwater control was continued.

Posiva and SKB (Svensk Kärnbränslehantering AB) are together engaged in the planning of a so-called horizontal disposal alternative. During



2002, a feasibility study was carried out for this alternative. It focused on packing the canister and the buffer bentonite into a cask, which is then embedded in a horizontal drift. The study proved that the method is possible and could offer some advantages over disposal in vertical holes.

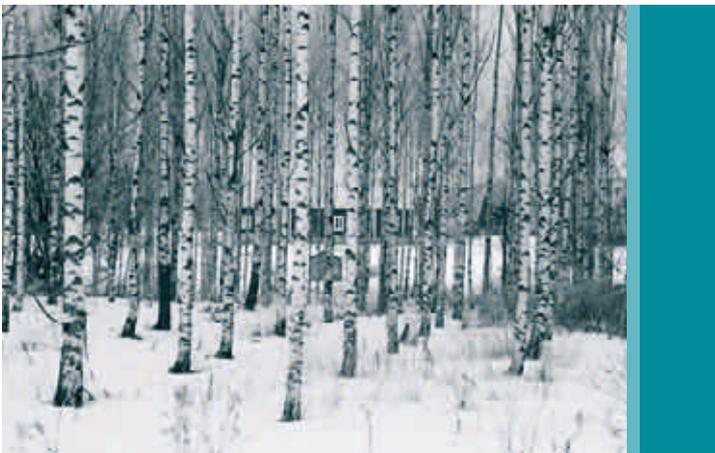
Preparations for the next planning stage (basic design) of the horizontal disposal concept were made during the financial year by e.g. defining system requirements. From now on, work will concentrate on three sections: technical development of the concept, safety analysis work and preliminary measures for tests to be carried out in Äspö Hard Rock Laboratory in Sweden. Posiva is responsible for the safety analysis section.

During the financial year, a common development programme for the planning of the backfilling technology was drawn up with SKB. Posiva has taken an active role in research on clay materials used in final disposal. In the year 2002, an agreement was made on the characterisation of smectite-containing clay found in Czech and a project was started to study the behaviour of clay materials in saline solutions.

The grounds for further planning of the final repository were defined and an investigation was made about the logistic processes and material flows involved in final disposal.

THE TRADITIONS OF EXCAVATION WORK AND STONE CONSTRUCTION DATE BACK SEVERAL HUNDREDS OF YEARS IN EURAJOKI. THE CONSTRUCTION OF ONKALO WILL PRODUCE NEW IN-DEPTH INFORMATION ABOUT THE PROPERTIES OF THE BEDROCK.

THE BASELINE OF THE NATURE IN OLKILUOTO WILL BE ANALYSED PRIOR TO THE CONSTRUCTION OF ONKALO.



### ENCAPSULATION TECHNOLOGY

Two copper canister and lid manufacturing trials were carried out in 2002 together with SKB. The development of inspection methods used in connection with encapsulation was continued and efforts were focused on making the planning process analogous with SKB's canister planning.

During the financial year plans were drawn up for alternative encapsulation plant solutions; an independent plant and a plant operating in conjunction with the spent fuel interim storage (KPA) of Teollisuuden Voima Oy. The pros and cons of the two alternatives were studied, as well as their costs. The overall encapsulation process research focused on the planning of canister handling equipment and the safeguard aspects of encapsulation.

### COMMUNICATION

The central topics of Posiva's communication during the financial year included issues connected with the final disposal of spent fuel from the fifth nuclear power plant unit and the selection of a tunnel as the access way for the underground research facility ONKALO. The progress of the final disposal project in Sweden was also covered in a press conference organised in Olkiluoto together with SKB.

The Finnish final disposal project continues to attract wide international interest. During the financial year, 64 visitor groups familiarised themselves with final disposal in Olkiluoto, with international visitors accounting for over 70%.

An initial status analysis aiming at the development of Posiva's communication was started in 2002. Development was considered necessary due to the significant changes that have

"NEARLY 50 INTERNATIONAL GROUPS OF VISITORS FAMILIARISED THEMSELVES WITH FINAL DISPOSAL IN OLKILUOTO DURING THE YEAR. INTEREST IS WIDESPREAD"  
- VELI-MATTI ÄMMÄLÄ





THE VUOJOKI FOUNDATION RUN BY POSIVA AND THE MUNICIPALITY OF EURAJOKI WAS SET UP IN THE AUTUMN OF 2002 FOR THE DEVELOPMENT OF THE USE OF THE VUOJOKI MANOR FOR VARIOUS PURPOSES.

taken place in the Company's operating environment, such as the approval of the policy decisions on final disposal and the concentration of the Company's activities in Olkiluoto. The initial status analysis focused on studying the opinions of the central stakeholder groups of the final disposal project, the residents of the Eurajoki area and the personnel of the Company about communication and how it should be developed. This initial status analysis supports Posiva's long-term planning of communication and the results of the analysis can in the future be utilised when defining the objectives of communication.

#### COOPERATION WITH MUNICIPALITIES

The cooperation group formed by Posiva and the Municipality of Eurajoki met eight times during the year to e.g. exchange current information and to discuss the progress of Posiva's final disposal project and Vuojoki project.

Vuojoki project proceeded during the year as planned. The renovation plans for the main building and the annexes of the Manor were completed earlier in the year and the rest of the

plans by the end of the year. The Charter of Vuojoki Foundation, set up to promote the public use of the Manor area, was signed on 31 October 2002 by 15 parties that represent municipalities and business life in the region. Measures connected with the founding of the Foundation as well as planning of activities and marketing were continued.

Posiva's representatives have also participated in various forms of municipal cooperation organised by Teollisuuden Voima Oy.

ACCORDING TO THE RENOVATION AND REFURBISHMENT PLANS, VUOJOKI MANOR WILL PROVIDE A VENUE NOT ONLY FOR POSIVA'S ACTIVITIES BUT ALSO FOR EVENTS AND TRAINING COURSES RELATED E.G. TO THE CULTURAL HISTORY OF THE REGION, AND TOURISM.



"THE SUITABILITY OF BEDROCK  
IN OLKILUOTO TO FINAL DISPOSAL  
IS THE OBJECT OF ONGOING INTER-  
NATIONAL ASSESSMENT."

– LIISA WIKSTRÖM



## INTERNATIONAL COOPERATION

Posiva's cooperation with SKB became closer than ever before. The most significant projects connected with final disposal and encapsulation technology are implemented in collaboration with SKB.

A notable part of research work carried out to investigate the safety of final disposal is at present realised in collaboration with EU member countries. Extensive, real-scale trials and tests that simulate the functioning of the final disposal system in real conditions play a particularly important role. All in all, Posiva participated in eleven research and development projects realised as part of the European Commission's 5th and

6th framework programmes and provided part of the funding for also some other joint ventures. Posiva takes also part in the Network of Excellence of European nuclear waste management companies that works on research projects funded by the 6th framework programme and implemented by inter-organisational cooperation.

Posiva's experts participated in nuclear waste management related operation of OECD's Nuclear Energy Agency (NEA), the European Commission and the International Atomic Energy Agency (IAEA). Posiva was also represented in the Radioactive Waste Management Committee (RWMC) that coordinates the work of NEA's working committees, as well as in the Integration Group for Safety Case (IGSC), which concentrates on long-term safety, and the Forum on Stakeholder Confidence (FSC) that aims at developing interaction with interest groups.

Posiva Oy is a member of the Association for Environmentally Safe Disposal of Radioactive Materials (EDRAM), founded in 1998 by nuclear waste management organisations from 11 different countries.

In 2002, Posiva concluded a cooperation agreement with ANDRA (Agence Nationale pour la Gestion des Déchets Radioactifs), which is responsible for nuclear waste management in France. The agreement concerns the use of methods and techniques designed for the selection and assessment of granitic final disposal sites. Cooperation will focus especially on geophysical studies of groundwater, drilling holes and surface soil, as well as on the interpretation of the results of these studies.

# Board of Directors' Report

## FINANCIAL YEAR 2002

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In 2002, Posiva's operations continued in compliance with the specified objectives. Posiva Oy's main line of business is the management of spent nuclear fuel generated by the Olkiluoto and Loviisa nuclear power plants, after interim storage taking place within the power plant areas, as well as research and development work in the field of spent fuel management. Financing for the Company's activities in its main line of business is received from the shareholders. In addition, the Company also provides other expert services related to nuclear waste management on assignment to its shareholders and other customers.

Posiva's key project is the final disposal of spent fuel generated in the Finnish nuclear power plants. During the financial year covered by this report, the operation of the company focused on the planning of the underground characterisation facility to be constructed on the island of Olkiluoto in Eurajoki, as well as on other preliminary activities that are necessary for this construction project.

Similar to previous years, Posiva's operation included also research and development activities, such as development of technical solutions for encapsulation and final disposal, bedrock investigations in Olkiluoto, which has been selected as the final disposal site and safety assessments. Authorities have supervised the progress of the final disposal programme that will take Posiva to the actual construction of the final disposal facility in the 2010s, with the operation of the facility starting in 2020.

During the financial year covered by this report, a total of ca. EUR 10.8 million was spent on research and development, accounting for 72% of the turnover.

## SHAREHOLDERS

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The Company's shareholders and their shares of ownership are:

Teollisuuden Voima Oy (Parent Company)	60%
Fortum Power and Heat Oy	40%

## ADMINISTRATIVE BODIES

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### BOARD OF DIRECTORS

Teollisuuden Voima Oy	Mauno Paavola Ami Rastas
Fortum Power and Heat Oy	Heikki Raumolin Heikki Väyrynen
Chairman	Mauno Paavola
Secretary	Veijo Ryhänen

*The Board convened 8 times in 2002.*

### WORKING COMMITTEES APPOINTED BY THE BOARD OF DIRECTORS

#### Technical Committee

Teollisuuden Voima Oy	Eero Patrakka Jukka Kangas
Fortum Power and Heat Oy	Ilpo Kallonen Jyrki Kohopää
Posiva Oy	Veijo Ryhänen Timo Äikäs Jussi Palmu
Chairman	Ilpo Kallonen
Secretary	Jussi Palmu

*The Committee convened 9 times in 2002.*

### Financial Committee

Teollisuuden Voima Oy	Lasse Bergström
	Eero Patrakka
Fortum Power and Heat Oy	Heikki Raumolin
	Irja Vekkilä
Posiva Oy	Markku Kettunen
	Jussi Palmu
Chairman	Lasse Bergström
Secretary	Jussi Palmu

*The Committee convened 5 times in 2002.*

### Communication Committee

Teollisuuden Voima Oy	Tellervo Taipale
Fortum Power and Heat Oy	Christian Leisio
Posiva Oy	Veijo Ryhänen
	Timo Seppälä
Chairman	Tellervo Taipale
Secretary	Timo Seppälä

*The Committee convened 7 times in 2002.*

### MANAGING DIRECTOR

Veijo Ryhänen

### MANAGEMENT GROUP

Chairman	Veijo Ryhänen
Members	Markku Kettunen, <i>Administration Manager</i>
	Jussi Palmu, <i>Manager,</i> <i>Business Planning</i>
	Timo Seppälä, <i>Communications Manager</i>
	Mauri Toivanen, <i>Construction Manager</i>
	Juhani Vira, <i>Research Director</i>
	Timo Äikäs, <i>Director, Engineering</i>
Secretary	Markku Kettunen

*The Management Group convened 17 times in 2002.*

### AUDITORS

Pekka Nikula, CPA,  
appointed by PricewaterhouseCoopers Oy

Risto Järvinen, CPA

## PERSONNEL

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### Personnel and business locations

In 2002, the Company employed an average of 34 people on a permanent contract and 2 people on a fixed-term contract.

The Company's operations previously located in Helsinki were transferred as of 1 July 2002 to Olkiluoto, where Posiva Oy operates in premises rented from Teollisuuden Voima Oy.

The personnel plan was maintained. New employees were recruited as planned and as made necessary because of the relocation of operations.

## RESULT AND FINANCING

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The Company's turnover was EUR 14.6 million, with the main line of business accounting for EUR 14.1 million. The total depreciation charged was EUR 20,000, corresponding to maximum depreciation on fixed assets under the Business Tax Act. Fixed assets connected with nuclear waste management were recorded in annual expenses in compliance with the Business Tax Act § 45a.

The Income Statement shows neither a profit nor a loss.

The Company's financing situation has been good throughout the year. The Company took out a long-term loan of EUR 252,000 from Teollisuuden Voima Oy for the purposes of the Vuojoki Manor Agreement and transferred the loan over to the Municipality of Eurajoki. Interest income totalled EUR 69,000.

## FINANCIAL YEAR 2003

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In the financial year 2003, Posiva's operation is expected in the main to continue similar to the year 2002. The turnover of the Company is expected to grow to some extent over the previous year.

# Financial Statements

## INCOME STATEMENT

	1.1.-31.12.2002		1.1.-31.12.2001	
<b>Turnover</b>		14 622 139.20		12 722 824.29
Other operating income		591 380.40		349 887.96
Personnel expenses				
Salaries and fees	1 689 413.64		1 545 460.16	
Indirect employee costs				
Pension costs	292 962.99		276 011.96	
Other indirect employee costs	87 107.17	-2 069 483.80	85 210.92	-1 906 683.04
Planned depreciation		-20 291.31		-36 579.42
Other expenses		-13 191 946.37		-11 210 759.04
<b>Operating profit (-loss)</b>		<u>-68 201.88</u>		<u>-81 309.25</u>
Financial income and expenses				
Other financial and interest income				
From other	207 312.20		157 594.80	
Interest and other financial expenses	-138 031.71	69 280.49	-74 002.69	83 592.11
<b>Operating profit (loss) before appropriations and taxes</b>		1 078.61		2 282.86
Income taxes		-1 078.61		-2 282.86
<b>Profit for the Financial Year</b>		<u><u>0.00</u></u>		<u><u>0.00</u></u>

## BALANCE SHEET

	31.12.2002		31.12.2001	
<b>ASSETS</b>				
<b>Fixed assets</b>				
Intangible assets				
Intangible rights	13 615.13		16 581.55	
Other long-term expenditure	12 127.36	25 743.17	11 816.46	28 398.01
Tangible assets				
Buildings	122 451.57		127 553.72	
Machinery and equipment	20 500.53	142 952.10	68 634.33	196 188.05
Investments				
Shares in other Group companies	2 236.90		2 236.90	
Other shares and holdings	9 216.70		9 216.70	
Other loan receivables	6 643 456.73	6 654 910.33	6 391 174.84	6 402 628.44
<b>Current assets</b>				
Receivables				
Current				
Sales receivable	66 031.66		300 062.73	
Receivables from other				
Group companies	169 482.34		573 814.92	
Other receivables	0.00		302.48	
Prepaid expenses				
and accrued income	595 838.90	831 352.90	342 561.01	1 216 741.14
Cash in hand and at bank		4 269 423.68		3 181 275.05
		<u>11 924 382.18</u>		<u>11 025 230.69</u>
<b>LIABILITIES</b>				
<b>Shareholders' equity</b>				
Share capital	1 681 879.26		1 681 879.26	
Accumulated losses	0.00		0.00	
Profit for the financial year	0.00	1 681 879.26	0.00	1 681 879.26
<b>Liabilities</b>				
Long-term				
Loans from other				
Group companies	3 481 490.08		3 229 208.19	
Other long-term liabilities	2 152 805.46	5 634 295.54	2 152 805.46	5 382 013.65
Current				
Advances received	174 610.05		23 194.00	
Trade payables	2 142 495.09		2 293 184.32	
Loans from other				
Group companies	461 474.62		238 955.71	
Other current liabilities	369 486.94		329 299.77	
Accrued liabilities and				
deferred income	1 460 140.68	4 608 207.38	1 076 703.98	3 961 337.78
		<u>11 924 382.18</u>		<u>11 025 230.69</u>

FUNDS STATEMENT (1 000 EUR)

	2002	2001
<b>Business operations</b>		
Operating profit	-68	-81
Adjustments of operating profit 1)	20	36
Change in working capital 2)	1 032	396
Interest income	207	157
Interest expenses	-138	-74
Taxes paid	-1	-2
<b>Cash flow from business operations</b>	<b>1 052</b>	<b>432</b>
<b>Investments</b>		
Share acquisitions	0	1
Investments in fixed assets	-24	-36
Divestments of fixed assets	60	0
Loans granted	-252	-6 391
<b>Cash flow from investments</b>	<b>-216</b>	<b>-6 426</b>
<b>Financing</b>		
Change in long-term liabilities	252	5 382
<b>Cash flow from financing</b>	<b>252</b>	<b>5 382</b>
<b>Change in liquid assets</b>	<b>1 088</b>	<b>-612</b>
Liquid assets 1.1.	3 181	3 793
<b>Liquid assets 31.12.</b>	<b>4 269</b>	<b>3 181</b>
<b>1) Adjustments of operating profit</b>		
Depreciation and value adjustment	20	36
	20	36
<b>2) Change in working capital</b>		
Increase (-) or decrease (+) in non-interest bearing receivables	385	-1 004
Increase (-) or decrease (+) in short-term non-interest bearing liabilities	647	1 400
	1 032	396

ACCOUNTING PRINCIPLES

Valuation principles and methods, and accruals

**Valuation of fixed assets**

Intangible rights, other long-term expenditure, and machinery and equipment are capitalised at their direct acquisition cost, less planned depreciation. Planned depreciation is the maximum depreciation under Business Tax Act. Acquisition costs of fixed assets used for nuclear waste management as stipulated in the Nuclear Energy Act are booked as annual expenses.

Depreciation periods are as follows:

Intangible rights	Straight-line depreciation over 10 years
Other long-term expenditure	Straight-line depreciation over 10 years
Software	Straight-line depreciation over 5 years
Machinery and equipment	25% reducing balance rate

**Research and product development expenses**

R & D expenses are booked as expenses during the financial year in which they occur.

Consolidated financial statements

No consolidated financial statements have been prepared because Posivia Oy is a dormant company and has no impact on the Company's performance or non-restricted shareholders' equity.

Parent company

Posivia Oy is a subsidiary of the TVO Group, which is a subgroup of the PVO Group. The parent company in the PVO Group is Pohjolan Voima Oy, domicile Helsinki. The parent company in the TVO Group is Teollisuuden Voima Oy, domicile Helsinki. A copy of the consolidated financial statements of the PVO Group can be obtained from the Main Office of the Group, at Töölönkatu 4, 00100 Helsinki. A copy of the consolidated financial statements of the TVO Group can be obtained from the Office of the Group, at Töölönkatu 4, 00100 Helsinki.

NOTES TO INCOME STATEMENT

	2002	2001
<b>1. Turnover</b>		
Income, main line of business	14 077 192.52	12 231 319.38
Income, auxiliary line of business, shareholders	278 499.94	360 214.75
Income, auxiliary line of business, other companies	266 446.74	131 290.16
	<b>14 622 139.20</b>	<b>12 722 824.29</b>
<b>2. Other operating income</b>		
Rental income	73.00	367.93
Damages	0.00	472.44
Subsidies received	591 307.40	349 047.59
	<b>591 380.40</b>	<b>349 887.96</b>

<b>3. Personnel expenses</b>		
Average number of employees on permanent contract	34	29
<b>4. Depreciation</b>		
<b>Depreciation plan</b>		
Planned depreciation is the maximum depreciation under Business Tax Act.		
Acquisition costs of fixed assets used for nuclear waste management are booked as annual expenses (EVL 45a§)		
<b>Planned depreciation</b>		
On intangible rights	2 965.74	5 314.74
On other long-term expenditure	5 670.25	22 597.72
On buildings	5 102.15	2 965.80
On machinery and equipment	6 553.17	5 701.16
	<u>20 291.31</u>	<u>36 579.42</u>
<b>5. Financial income and expenses</b>		
Interest income from long-term investments		
From other	163 247.41	87 878.65
Interest income from long-term investments, total	<u>163 247.41</u>	<u>87 878.65</u>
Other interest and financial income	44 064.79	69 716.15
<b>Interest income from long-term investments and other interest income, total</b>	<u>207 312.20</u>	<u>157 594.80</u>
Interest expenses and other financial expenses		
To other Group companies	84 199.08	44 401.61
To other	53 832.63	29 601.08
<b>Other interest and financial expenses</b>	<u>138 031.71</u>	<u>74 002.69</u>
<b>Financial income and expenses, total</b>	<u>69 280.49</u>	<u>83 592.11</u>

## NOTES TO BALANCE SHEET

### 6. Fixed assets

Intangible	Intangible rights	Other long-term expenditure	Intangible total
Acquisition cost 1.1.2002	29 657.91	108 664.17	138 322.08
Increase	0.00	5 981.15	5 981.15
Acquisition cost 31.12.2002	29 657.91	114 645.32	144 303.23
Accumulated planned depreciation 1.1.	13 076.36	96 847.71	109 924.07
Planned depreciation 1.1. - 31.12.	2 965.74	5 670.25	8 635.99
<b>Book value 31.12</b>	<u>13 615.81</u>	<u>12 127.36</u>	<u>25 743.17</u>
(=undepreciated acquisition cost)			

<b>Tangible</b>	<b>Buildings</b>	<b>Machinery and equipment</b>	<b>Tangible total</b>
Acquisition cost 1.1.2002	138 183.20	280 250.07	418 433.27
Increase	0.00	17 951.47	17 951.47
Decrease	0.00	-231 932.96	-231 932.96
Acquisition cost 31.12.2002	138 183.20	66 268.58	204 451.78
Accumulated planned depreciation 1.1.	10 629.48	211 615.74	222 245.22
Accumulated depreciation on decrease	0.00	-172 400.86	-172 400.86
Planned depreciation 1.1. - 31.12.	5 102.15	6 553.17	11 655.32
<b>Book value 31.12</b>	<b>122 451.57</b>	<b>20 500.53</b>	<b>142 952.10</b>
(=undepreciated acquisition cost)			

<b>Investments</b>	<b>2002</b>	<b>2001</b>
Shares in other Group companies		
Shares in subsidiaries		
Posivia Oy, Helsinki no. of shares 120 / ownership 100% / share capital 2522.82, dormant company (no consolidated financial statements prepared)	2 236.90	2 236.90
Other shares and holdings	9 216.70	9 216.70
Other loan receivables	6 643 456.73	6 391 174.84
	<u>6 654 910.33</u>	<u>6 402 628.44</u>
<b>7. Receivables from other Group companies</b>		
Sales receivable	169 482.34	573 814.92
<b>8. Adjusting entries for assets</b>		
Accrued interest income	91 347.53	88 810.53
Other accrued income	366 671.94	144 415.00
Pre-paid expenses	137 819.43	109 335.48
	<u>595 838.90</u>	<u>342 561.01</u>
<b>9. Liabilities to other Group companies</b>		
Long-term liabilities	3 481 490.08	3 229 208.19
Current liabilities		
Advances received	261 915.08	0.00
Trade payables	151 689.05	194 554.10
Accrued liabilities and deferred income	47 870.49	44 401.61
	<u>461 474.62</u>	<u>238 955.71</u>
Total	<u>3 942 964.70</u>	<u>3 468 163.90</u>
<b>10. Adjusting entries for liabilities</b>		
Interest liabilities	29 601.07	29 601.08
Salary accruals and indirect employee costs	372 909.00	398 564.90
Estimate of expenses not yet charged	1 057 630.61	648 538.00
	<u>1 460 140.68</u>	<u>1 076 703.98</u>

## PROPOSALS TO THE ANNUAL GENERAL MEETING

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The company has no distributable retained profit. The Board deduces that no dividend can be paid.

Helsinki on 19 February 2003

Mauno Paavola

Heikki Raumolin

Ami Rastas

Heikki Väyrynen

Veijo Ryhänen  
Managing Director

## AUDITORS' REPORT

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### TO THE SHAREHOLDERS OF POSIVA OY

We have audited the accounts, the financial statements and the management of Posiva Oy for the financial year 1 January - 31 December 2002. The financial statements drawn up by the Board of Directors and the Managing Director include the annual report as well as the income statement, the balance sheet and the notes to the financial statements. On the basis of the audit we have performed, we make this statement on the financial statements and the management of the Company.

The audit has been performed in compliance with good auditing practice. The accounts as well as the principles followed in drawing up the financial statements, the content and the presentation have been examined to a sufficient extent to state that the financial statements are free of material defects and deficiencies. In the examinati-

on of the management, we have examined the legality of the activities of the Board of Directors and the Managing Director as set out in the Companies' Act.

We therefore state that the financial statements have been prepared in accordance with the Accounting Act and other legislation governing the preparation of financial statements. The financial statements present true and sufficient information about the result of the Company's activities and its financial standing, as stipulated in the Accounting act. The financial statements can be adopted and the members of the Board of Directors and the Managing Director discharged from liability for the financial year audited by us. The proposal of the Board of Directors concerning distribution of dividend is in compliance with the Companies' Act.

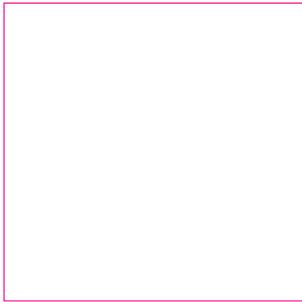
Helsinki, on 20 March 2003

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