POSIVA

ANNUAL REPORT 2010

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Contents

Posiva and nuclear waste management

Under the Nuclear Energy Act, a producer of nuclear waste is liable for all required nuclear waste management measures and the associated costs. Teollisuuden Voima Oyj (TVO) and Fortum Power and Heat Oy (Fortum), being parties under the waste management obligation, are responsible for the on-site storage, processing and disposal of their own nuclear waste resulting from their own power plant sites. Both plant sites feature an operational disposal facility into which the reactor waste generated during the operation of the plant is placed. Waste generated from the eventual decommissioning of the power plants is to be disposed of in the same facilities.

In order to provide for the measures required after the interim storage of spent nuclear fuel, TVO and Fortum in 1995 established Posiva Oy for the purpose of seeing to the disposal of the spent nuclear fuel belonging to its owners. In the first phase, the company's tasks involve the performance of research, technical development and design work. Later, the company will assume the responsibility for the construction of the repository and its operation until its final closure. Posiva is also responsible for establishing and maintaining communication with the authorities relevant to the performance of its tasks as well as acquiring the required permits for the facilities it constructs and operates. The liabilities regarding management of nuclear waste did not change when Posiva was established; TVO and Fortum are still responsible for all the spent fuel they produce.

According to the decision-in-principle ratified by the Finnish Parliament in 2001, the spent nuclear fuel produced in the four current plant units of TVO and Fortum will be finally disposed of in Olkiluoto, Eurajoki. A further decision-in-principle was made in 2002 regarding the construction of the repository in expanded form so that it would also accommodate the spent fuel from the OL3 plant unit currently under construction.

During the summer of the year being reported, Parliament ratified the Government's decision-in-principle regarding the construction of the Olkiluoto 4 unit in Olkiluoto, Eurajoki. In the same connection, a decision-in-principle was made regarding the expansion of the repository to accommodate the spent fuel from the Olkiluoto 4 unit, a total of 2,500 tonnes of uranium. According to the decisions-in-principle ratified by Parliament, spent nuclear fuel containing a maximum of 9,000 tonnes of uranium may thus be finally disposed of at Olkiluoto.

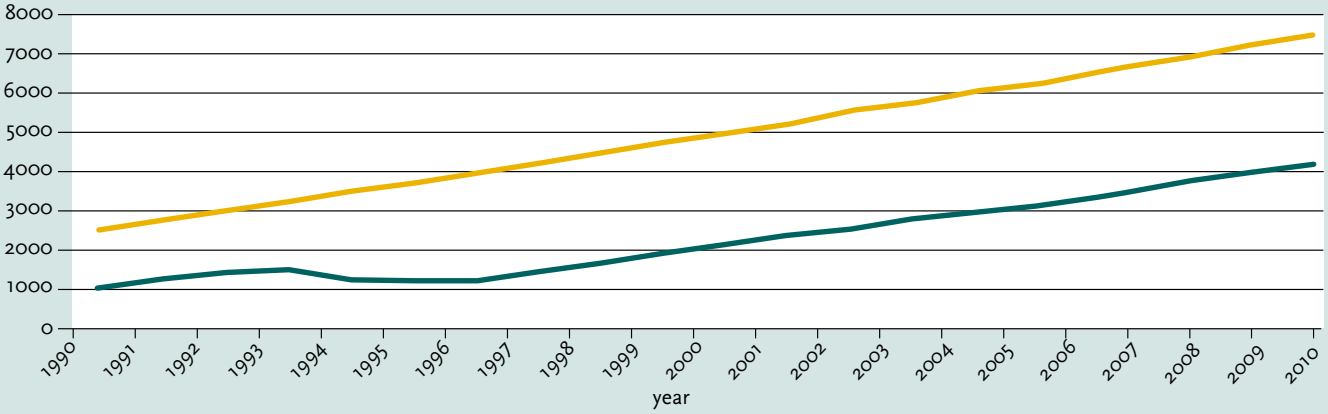
Posiva is preparing to submit the construction licence application for the repository to the Government in 2012. The Radiation and Nuclear Safety Authority and the Ministry of Employment and the Economy have assessed the degree of completion of Posiva's construction licence application on the basis of the preliminary licensing documentation supplied by Posiva. On the basis of the statements issued by the authorities regarding Posiva's preparedness for the construction licence, Posiva's preparations for the project have advanced in such a manner that Posiva has the necessary prerequisites in place for submitting the construction licence application on schedule in 2012.

Final disposal operations are scheduled to commence in 2020. Before that, the interim storage of spent fuel takes place at the power plant sites. At the end of 2010, the quantity of spent fuel in storage at the Olkiluoto NPP amounted to approximately 1,290 tonnes, while about 500 tonnes was stored at the Loviisa plant.

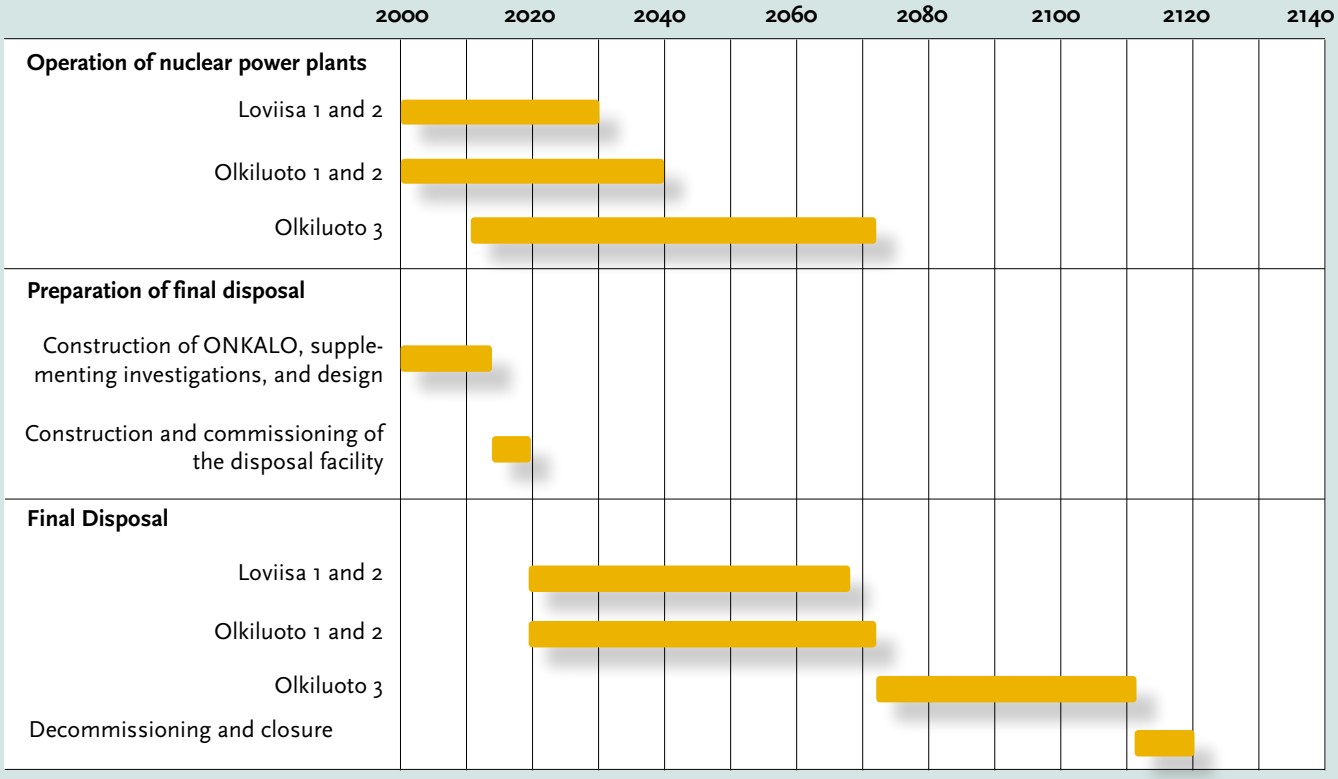
Quantity of spent fuel

Olkiluoto

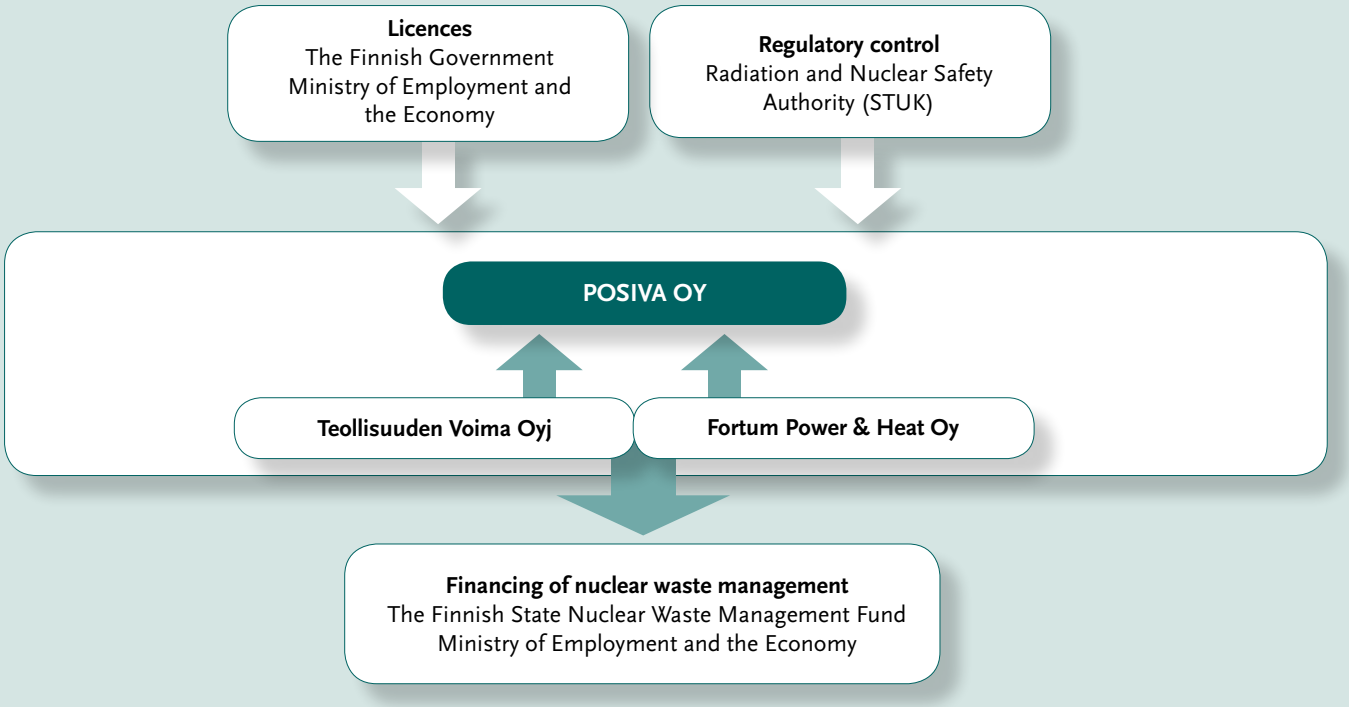
Loviisa



General Time Schedule for Final Disposal



Organisation of nuclear waste management



Review by the President

I have now completed my first year as the President of Posiva, and two years are ahead before the construction licence application will be submitted. We have seen significant events and accomplishments during the past year. We can therefore say that Posiva is advancing steadily and according to plan towards the submission of the construction licence application in 2012.

Posiva's work as the company looking after the final disposal of spent fuel produced by Fortum and TVO was very highly appreciated when the Government made on 6 May 2010 its decision-in-principle regarding the expansion of the repository for spent fuel, stating that it was in the overall interest of society. Parliament ratified this decision-in-principle of the Government on 1 July 2010.

The operations of Posiva are guided by the strategy map that was approved by its owners in 2010. It defines the values of the company – responsibility, reliability, openness and perseverance – as well as its vision, operating philosophy and goals for 2012 and 2018. The strategy also defines the success factors and activities that are essential for achieving the goals.

The construction of the research tunnel ONKALO has advanced in a systematic manner. The final disposal depth of 420 metres was reached in June, and this was celebrated with a traditional topping-out ceremony. The construction of ONKALO is approaching its completion. The only outstanding tasks are those of boring two ventilation shafts and one personnel shaft to their final depths and the excavation of certain technical auxiliary facilities. These tasks will be completed during 2011.

Things are also moving ahead above ground. Construction of the ventilation and hoist building began in the spring. The ventilation systems located in the building provide ventilation for the underground disposal facilities. The building is connected to the district heating system powered by TVO's plant units. Construction of the district heating pipeline at Posiva's site was of significant benefit to the environment because it allows utilising the heat from the plant units (that would otherwise be dumped in the sea) for heating Posiva's facilities.

The main excavation contractor for ONKALO changed during 2010. The selection process resulted in Destia Oy being selected as the new contractor. Excavation work in the bedrock facilities of Olkiluoto will continue for the next 100 years. Therefore, one of the objectives when changing the contractor was to increase the number of companies and individuals that have expertise in the excavation of repository facilities.

In December, the EU Commission sent a draft for the new nuclear waste directive to its Member States for comments. It defines the common basic requirements imposed by the EU on its Member States regarding the administration and processing of radioactive waste and spent fuel. The draft requires each Member State to have a plan for handling and management of spent fuel. It clearly expresses the principle that each waste producer, i.e. each operating licence holder, is responsible for the management and disposal of the produced waste. Finnish nuclear legislation that obligates the waste producers to look after their own waste fulfils all requirements of the draft directive. Posiva operates to meet the obligation imposed by legislation on its owners Fortum and TVO regarding the final disposal of spent fuel.

At the end of 2009, Posiva provided the Ministry of Employment and the Economy and the Radiation and Nuclear Safety Authority (STUK) with a report regarding its preparedness to submit the construction licence application in 2012. In their assessments, the Ministry and STUK stated that Posiva is appropriately approaching preparedness to submit the licence application. In their statements, the Ministry and STUK did not point out any significant flaw that would put at risk the schedule for submitting the application. Of course, there is still a lot of work to be done.

The surveys of the Olkiluoto bedrock continued in 2010 both above ground and inside ONKALO. Two new boreholes were made to study the bedrock structure and to obtain more information on groundwater. In ONKALO, the research work continued as the excavation work progressed, and new detailed studies were initiated. The work for producing the safety case required in support of the construction licence application is advancing according to plan.

In the coming years, there will be changes in Posiva's operations. The main focus will eventually shift from research and development – that have for a long time been the main activities – through design, planning and construction to actual operation. This will also be evidenced by changes in the organisation and in the development of the required competencies. As part of preparations for the future, the work for developing Posiva's management system began at the beginning of 2010. As a result of this work, the decision was taken to move from a traditional line organisation to a process management model. Process management will enhance the efficiency of resources utilisation and cooperation between organisations, and it will also support the timely attainment of goals from the point of submitting the construction licence application. The new management system is ready for introduction at the beginning of 2011. Changes were also made to the line organisation, and it was decided to introduce operation of the facility as its own activity for the first time.

Very close cooperation has continued with SKB, the Swedish disposal company. During the past year, the most significant areas of cooperation were development of the horizontal disposal alternative and research work in Greenland, aimed at describing ice age phenomena for the safety case. Posiva's role in disposal cooperation with SKB will change because SKB has in its plans stated that it will start disposal operations after 2027 whereas Posiva will begin final disposal in 2020 in keeping with its schedule. SKB will nevertheless submit its construction licence application as early as in March 2011. The progress of this application will naturally be followed at Posiva with great interest.

European cooperation in the field of final disposal intensified significantly when the work of IGD-TP ("Implementing Geological Disposal - Technology Platform") got underway and it submitted its proposal for a strategic research programme for comments by actors in the field. The purpose of this cooperation is to develop and enhance the cooperation between EU Member States in nuclear waste management so that the first repositories in Europe can be made operational by 2025.

The long-span final disposal programme of Posiva and its owners has already been followed for almost 30 years. Its implementation has required Posiva employees, Posiva's owners as well as all experts and authority members participating in the work to have a responsible attitude, trust in the future, perseverance and openness, and, in my opinion, also an unprejudiced approach. I wish to thank you all for the good work you have done and for the results you have achieved.

Reijo Sundell
President
Posiva Oy

The Board of Directors' Report for 2010

Main events

Decision-in-principle regarding the expansion of the repository

In its plenary session on 1 July, the Finnish Parliament voted 159–35 in favour of upholding the Government's decision-in-principle regarding the expansion of the Olkiluoto repository to accommodate the spent nuclear fuel produced by the Olkiluoto 4 unit. The expansion will increase the capacity of the Olkiluoto repository by a maximum of 2,500 uranium-tons of spent nuclear fuel. According to the decisions-in-principle ratified by Parliament, spent nuclear fuel containing a maximum of 9,000 tonnes of uranium may thus be finally disposed of at Olkiluoto.

The main contractor of ONKALO changed

At the turn of the year, Posiva selected Destia Oy as the main contractor for the fifth tunnel contract (TU5) of ONKALO. The agreement signed with Destia includes the excavation of the access tunnel to the level of technical facilities at -437 metres as well as the testing and demonstration facilities to be excavated at the disposal depth (-420 m). Destia started its contract work at the ONKALO site in April of the year being reported.

ONKALO reached the disposal depth

Excavation work for ONKALO, which began in 2004, advanced to the disposal depth of -420 metres during the summer of the year being reported. The investigations carried out in the tunnel have reinforced the impression provided by above ground studies regarding the suitability of the Olkiluoto bedrock for the final disposal of spent nuclear fuel. In addition to underground research, geological surveys were also continued above ground. During the year being reported, the 55th deep investigation hole was bored in the Olkiluoto bedrock.

Posiva's operations management system was revised

Posiva's operations management system was developed using the process management model. In this development process, the work carried out by Posiva was identified and described as processes. The allocation of work and responsibilities among them was defined, together with interactions between them. The process management model is deployed in order to enhance the use of resources and attainment of goals in Posiva's disposal project. The revised operations management system is scheduled to become effective in early 2011 after approval by the relevant authorities.

Assessment by the authorities regarding Posiva's preparedness to submit its licence application

The Ministry of Employment and the Economy and the Radiation and Nuclear Safety Authority (STUK) assessed, on the basis of documentation submitted in 2009, Posiva's preparedness to submit the construction licence application. The assessments stated that Posiva is progressing well towards preparedness to submit the construction licence application. The flaws detected by the Ministry and STUK were related to areas of work that have as yet not been completed, which meant that the associated documented material could not be included in the material submitted for assessment.

Topping-out ceremony at ONKALO on 17 June 2010. The tar brushes are wielded by Construction Director Pertti Huovinen (left) and Executive Vice President Timo Äikäs (right).

Research

The contents of the Safety Case to be appended to the construction licence application have been revised on the basis of recommendations given by the Radiation and Nuclear Safety Authority. According to the revised plan, the definition and materialisation of performance targets underlying the long-term safety of disposal will be analysed in separate reports that are aimed at making the analysis of performance requirements more transparent and systematic. The changes are related to the development of Posiva's requirements management system and to the process of making compliance analyses easier in the forthcoming disposal licensing process. The quality assurance processes of the entire Safety Case have been further defined for the part of input data management and preliminary review of reports. Before publication, all main reports of the Safety Case are subjected to a documented review process in keeping with scientific principles.

Several long-term tests have been or are being initiated in ONKALO for the purpose of verifying the applicability to Olkiluoto conditions of certain models proposed for bedrock behaviour. The analysed phenomena are related to the impacts of stress changes in the bedrock, the behaviour of sulphur compounds in groundwater, flow conditions and the ability of the bedrock to slow down the movements of substances dissolved in groundwater. The tests are not expected to significantly affect the conclusions drawn on the suitability of the Olkiluoto bedrock, but they are important for verifying the reliability of input data used

for the Safety Case.

The suitability analyses of the Olkiluoto bedrock are about to culminate in the bedrock classification test. For several years, Posiva has been developing a procedure where long-term safety aspects are used as the basis for determining the general requirements for positioning the deposition tunnels and holes and for determining on that basis the practical criteria for verifying compatibility with requirements in the actual bedrock facilities. The procedure will be tested in two tunnels to be excavated in ONKALO. This excavation work will begin in early 2011.

Much of Posiva's research is currently focussed on the properties and behaviour of clay materials used for final disposal. Particular attention has been paid to the behaviour of bentonite clay in pre- or post-glacial conditions that will deviate from those prevailing today.

As part of this research, an international GAP project is in progress in Greenland. It is expected to produce information on the conditions that bentonite clay will be exposed to in conjunction with future ice ages.

Boring of a test tunnel pilot hole at the disposal depth in ONKALO.

Final disposal technology

The planning and design work for the encapsulation plant and disposal facility continued. The work was largely focussed on more detailed design and planning of various systems to provide a basis for future implementation. The transfer and installation equipment required for disposal operations form their own area of planning and design, and this work advanced to the prototype stage. An important element of this work was the design of equipment for the encapsulation plant fuel handling cell together with the preparations for the probabilistic safety analysis. For this purpose, the operational processes of the future plant entity were modelled, and the results were used to identify the key areas for improvements and further investigations with a view to optimising the operations.

For the purposes of submitting the construction licence application, the demonstration of future implementation of underground facilities will be performed with two tunnels to be excavated in ONKALO. Preparations for this excavation work were carried out in 2010. The tunnels are to be implemented in compliance with the requirements applicable to deposition tunnels. In preparation of implementing the demonstration tunnels, the applicable requirements were analysed, the implementation plans were drawn up and the suitability of the bedrock in the planned location of the tunnels was assessed in preliminary investigations. As part of the demonstration, canister deposition holes will also be bored on the floors of the tunnels. A new boring machine was designed in 2010 for this purpose.

Technical development work regarding the disposal solution focussed on the production of so-called production line descriptions for the needs of the construction licence application and the long-term Safety Case. The associated planning reports regarding the canister, bentonite buffer and backfill were completed during the year. For the buffer and backfill, design and planning work will continue as detailed design, and plenty of associated development and test activities will take place in the laboratories of cooperation parties. Preparations for a test related to buffer development work also began in ONKALO. The development and testing work for manufacturing technologies continued in line with the long-term plan.

In parallel with the KBS-3 vertical disposal solution now constituting the reference solution, the horizontal disposal solution has been developed jointly with SKB of Sweden. The work for the current phase of the project was completed, the results were assessed and the conclusion was drawn that the work can advance to the next planned phase of the project. That phase will involve a full-scale installation emplacement test in the Äspö bedrock laboratory. The setting up of a continuation project for 2011–2014 was agreed upon with SKB late in the year. Part of the future project was proposed for inclusion in the 7th framework programme of the EU, and the Commission approved this proposal. A Posiva-led project developing the bentonite buffer installation techniques was also approved for inclusion in the same LUCOEX project.

Posiva began a two-year bentonite test in ONKALO where two test holes were bored in the research niche. Metal canisters will be inserted in them, surrounded by bentonite buffers.

The ventilation building of ONKALO reached its full height in late 2010.

Construction

Excavation of the underground rock characterisation facility ONKALO advanced by just over 500 metres. At the end of the year being reported, the total length of the tunnel was 4,570 metres. The final disposal level (-420 metres) was reached in the summer. By the end of the year, the access tunnel had reached the depth of 434 metres.

The electrical and HPAC installations in the tunnel progressed by about 300 metres. Both of these installation works extended to about 3,900 metres at the end of the year.

During the year being reported, the layout plan of ONKALO was further developed with respect to the section below the -400 metres level. At the same time, the facility requirements and excavation volumes related to research needs and technical maintenance were further specified.

The rock engineering implementation planning of ONKALO continued, both for the access tunnel and the shafts. The analyses regarding alternatives for shaft reinforcement work were completed. The design work for electrical and HPAC installations also continued according to plans.

Construction of the area above ground continued with respect to the ventilation and hoisting equipment buildings. The frame of the ventilation building was completed towards the end of the year. In the hoisting equipment building, the frame of the basement floor was completed, and construction work for the section above ground began towards the end of the year.

International co-operation

In parallel with Posiva, SKB of Sweden is also preparing for the repository licensing process in the coming years, and the licence applications will largely be based on similar technical plans and safety cases. This is made possible by the agreement, concluded in 2001 and consequently continued in 2006, regarding extensive research cooperation covering the whole disposal technology. SKB and Posiva have also sought to jointly promote pan-European cooperation in the field of geological disposal. The technology platform "Implementing Geological Disposal", established for enhancing the cooperation, is largely based on the contribution of secretariat work provided by SKB and Posiva,

much of which has been focussed on producing a strategic research plan for the platform. The draft programme forms a basis for the cooperation forum to be organised in Paris in February 2011, and later the programme will serve as a basis when the platform seeks to have the first geological repositories operational by the mid-2020s.

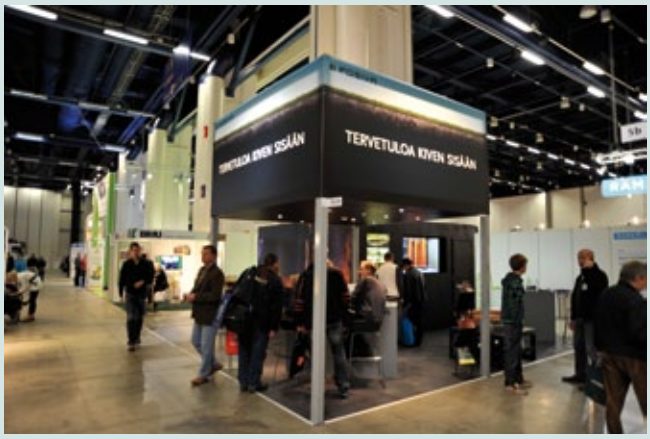
In addition to the SKB agreement, Posiva has bilateral agreements with several similar organisations responsible for final disposal in Europe and elsewhere. Posiva is also actively participating in projects initiated by the Nuclear Energy Agency of the OECD.

Corporate social responsibility and communications

Posiva's disposal project attracted plenty of media coverage during the year being reported because expansion of the repository to accommodate the spent fuel produced by the Olkiluoto 4 unit was discussed by the Government and Parliament. Media interest in Posiva's disposal project and ONKALO was evidenced by the numerous visits of journalists to Olkiluoto.

In addition to the news coverage of the expansion of the repository, Posiva communicated, among other things, its research, development and technical design programme aimed at the construction licence application in conjunction with an international RTD-seminar held in Helsinki. ONKALO's reaching the disposal depth and the associated topping-out ceremony in the summer were another noteworthy subject of communications.

The Posiva Tutkii (Posiva Researches) supplement was published on five occasions and constituted a major communication channel in the Satakunta area.



Posiva participated in the Environmental Fair organised in Helsinki in October.

An international RTD-seminar was organised at Finlandia Hall in November.

Educational cooperation continued with the upper level of the Eurajoki Comprehensive School. In addition, a Geology Day was organised for the students in the second grade of the Eurajoki Upper Secondary School. During the day, Posiva experts told the students of their education and work.

The group coordinating co-operation between the Municipality of Eurajoki and Posiva convened once during the year. The issues discussed in the meeting included the topical communication subjects of the parties, construction of ONKALO and site surveys carried out in Olkiluoto as well as the progress of the licensing process. Posiva-related issues have also been regularly discussed in the co-operation committee of Teollisuuden Voima Oyj and the neighbouring municipalities.

During the year, 64 groups of visitors and about 900 persons came to see Posiva's operation is Olkiluoto. The visitors' centre in Olkiluoto had just over 19,000 visitors during the year. The visitors' centre has an exhibition on the final disposal of spent nuclear fuel.

Environmental Management

The company manages environmental matters in line with the operations management system and annual environmental program. In February 2010, the operations management system received a certificate based on the environmental management standard ISO 14001. The periodic audit of the system was organised in October

2010. Posiva's assessment of environmental aspects was updated in the autumn. According to the assessment, the major environmental aspects in normal operations were related to ONKALO's construction, waste handling and the use of energy. An analysis of potential problem situations revealed that chemical spills pose the most significant environmental risk.

The excavation work in ONKALO produced some 60,000 m^3 of blasted rock in 2010, most of which was used for building works in the area. A total of some 25,000 m^3 of water was used in constructing the tunnel. The average rate of water seepage in ONKALO was approximately 33 l/min. The waters pumped from the tunnel (operational water and seepage waters) were first led to sedimentation and oil separation and then to the sea via an open ditch. The quality of the water was regularly monitored.

During the year, there was one occurrence of environmental damage, and the environmental authorities were duly contacted concerning this. Some water containing environmentally harmful tracer (NaI) escaped into the soil. The area was cleaned in compliance with the instructions of environmental authorities.

The purpose of the environmental program is to mitigate any negative environmental impact that may be caused by the company's operations. The actions carried out as part of the 2010 program included development of ONKALO's waste management and a continuation of the development work for preventing and controlling environmental incidents. The investigation trench excavated during the previous summer was landscaped by planting tree saplings.

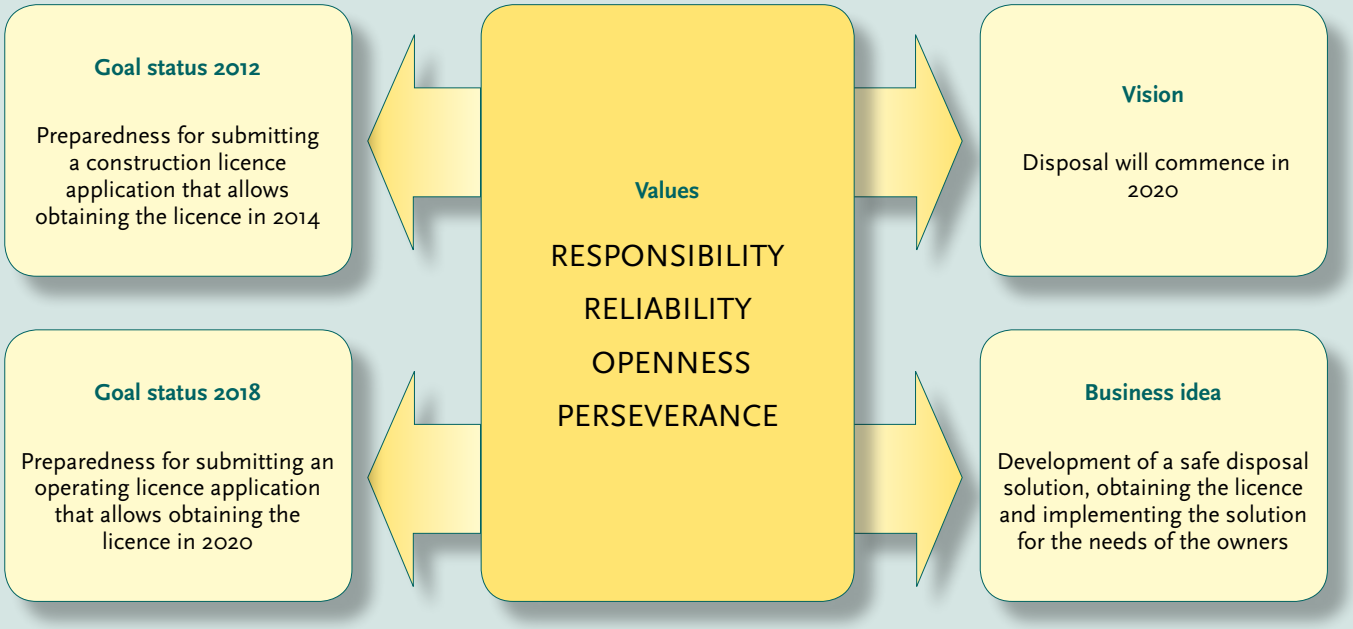
Operations management system

Posiva's operations management system consists of manuals providing an overview of Posiva's operations, as well as of supplementary descriptions, codes of practice and instructions. The purpose of the operations management system is to ensure that Posiva's disposal facility meets the relevant safety requirements and that Posiva's operations are safe, timely and cost effective.

During 2010, the operations management system was developed using the process management model. In this development process, the work carried out by Posiva was identified and described as processes. The allocation of work and responsibilities among them was defined, together with interactions between them. The process management model is deployed in order to enhance the use of resources and attainment of goals in Posiva's disposal project. The revised operations management system is scheduled to become effective in early 2011 after approval by the relevant authorities.

The coverage and functionality of the operations

Posiva's strategy map 2010



Work on the interior of ONKALO's ventilation building began towards the end of the year.

management system was assessed in management reviews carried out in the spring and autumn. Self-assessment of Posiva's operations management system was performed in September-October. Recommendations of the IAEA regarding management systems (GS-R-3) were used as the frame of reference. Four internal audits regarding the processes of the operations management system were performed in 2010 for assessing the functioning of the system. In addition, supplier audits were performed with key suppliers.

In January and October 2010, Det Norske Veritas carried out the periodic audits regarding the ISO 9001 quality certificate granted on 15 December 2008.

Risk management

At Posiva, any matters that may endanger the attainment of goals or the operation of the company are perceived as risks.

Risk management is organised in a holistic manner in compliance with the operational targets set by Posiva's owners and with the principles of good governance. Posiva's risk management supports the materialisation of the company's strategic plans and its associated project plan in the long term and the materialisation of the action plan in the short term. Posiva's risk management is a systematic operation where risks are identified and assessed, and their management measures are efficiently planned, implemented and monitored. Risk management is implemented at the strategic and operative levels in line with the instructions included in the operations management system.

A holistic risk management model was being developed for Posiva during 2010. The principles of risk management were recorded, and the Board of Directors approved them in December. The process description of risk management was updated to be consistent with the action model, and instructions were issued to support risk management work. The action model was tested and further developed in a pilot project concerning the engineered barrier system process. The work for including the action model as part of all Posiva operations will continue in 2011.

Risk management actions planned on the basis of the map of strategic risks updated late in the previous year were carried out during the year. In the autumn, the Operations Team updated the risk assessment of strategic risks in line with the new risk management model.

The company's most significant risks were related to decisions taken in Posiva's operating environment that will affect the progress of Posiva. In addition, there are risks associated with the availability of expertise and with unexpected changes in costs due to, for example, changes in plans or increases in cost levels.

The Board of Directors from left to right: Pekka Leskelä, Veijo Ryhänen, Reijo Sundell, Sami Hautakangas, Jarmo Tanhua.

Administrative bodies

BOARD OF DIRECTORS

Teollisuuden Voima Oyj
- Jarmo Tanhua, Chairman
- Veijo Ryhänen

Fortum Power and Heat Oy
- Sami Hautakangas
- Pekka Leskelä

Jenni Takala, Secretary, Teollisuuden Voima Oyj

President Reijo Sundell and Executive Vice President Timo Äikäs have attended the Board meetings.

The Board of Directors convened seven times.

PRESIDENT

Reijo Sundell

OPERATIONS TEAM

Reijo Sundell, Chairman

Members
- Markku Friberg, Safety Manager
- Pertti Huovinen, Construction Director
- Timo Seppälä, Communications Manager, Secretary
- Anja Smeekes, Financial Manager
- Elisa Vahteristo, HR Manager
- Juhani Vira, Research Director
- Timo Äikäs, Executive Vice President

The Operations Team convened 23 times.

The Operations Team
Back row from left to right: Timo Äikäs, Anja Smeekes, Timo Seppälä
Front row from left to right: Elisa Vahteristo, Juhani Vira, Pertti Huovinen, Reijo Sundell, Markku Friberg

COMMITTEES APPOINTED BY THE BOARD

Technical Committee
Teollisuuden Voima Oyj
- Liisa Heikinheimo
- Mikko Kosonen
- Juha Riihimäki

Fortum Power and Heat Oy
- Jari Tuunanen, Chairman
- Ilpo Kallonen
- Jyrki Kohopää

Posiva
- Juhani Vira
- Timo Äikäs
- Pertti Huovinen
- Kimmo Lehto, Secretary

The Committee convened four times.

Financial Committee
Teollisuuden Voima Oyj
- Klaus Luotonen, Chairman
- Veijo Ryhänen
- Timo Palomäki

Fortum Power and Heat Oy
- Tiina Tuomela
- Sami Hautakangas
- Mikko Huopalainen

Posiva
- Reijo Sundell
- Anja Smeekes
- Jussi Palmu, Secretary

The Committee convened five times.

Auditors

CPA Eero Suomela,
nominated by PricewaterhouseCoopers Oy
CPA Robert Kajander,
nominated by Deloitte & Touche Oy

Shares of ownership

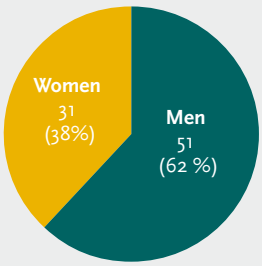
Posiva Oy is a joint venture owned by Teollisuuden Voima Oyj and Fortum Power and Heat Oy. Teollisuuden Voima Oyj owns 60% and Fortum Power and Heat Oy 40% of Posiva.

Personnel and organisation

At the end of the year, Posiva had 92 employees (88 in 2009). During the year, Posiva employed an average of 96 (90) persons, some of them with a fixed-term contract and some doing summer jobs. During the year, the company recruited five (12) new permanent employees, mainly to different specialist positions related to nuclear waste management. Four (six in 2009) persons left the company, one (3) of them due to retirement.

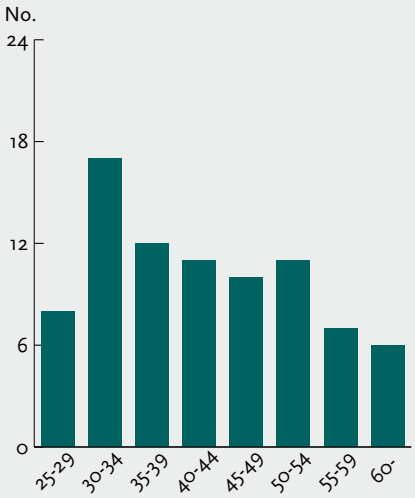
A support functions and competence management development project was implemented in 2010. The course in nuclear waste management intended for new Posiva employees and entitled "Johdanto käytetyn polttoaineen loppusijoituksen turvallisuusarvioinnin perusteisiin" (Introduction to the basics of safety assessment regarding the disposal of spent nuclear fuel) was integrated in the national pilot course of nuclear waste management, implemented for the first time in 2010 and coordinated by Aalto University. Internal training was organised in line with the annual training programme, including training in subjects related to long-term safety, groundwater, managerial skills, authority matters, industrial safety and rescue operations. In addition to internal training courses, Posiva employees also participated in a national course in nuclear matters as well as in several external courses and seminars in their respective areas of expertise. Posiva participates, in the capacity of an expert organisation, in a committee appointed by the Ministry of Economy and the Employment for preparing actions aimed at securing the availability of competence in nuclear technology.

The new collective union contracts for the energy sector became effective in the spring of 2010. Employment matters were discussed in the HR relations meetings between personnel groups. The entire personnel of Posiva are included in a performance bonus scheme. Performance bonuses can be transferred directly to the Group's personnel fund.

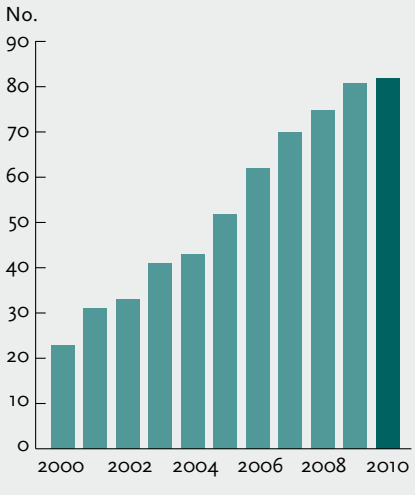


Gender distribution

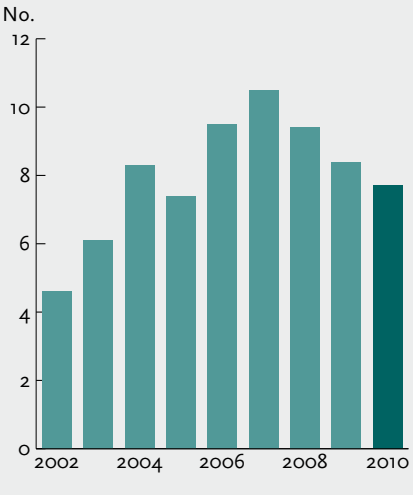
Age structure of Posiva personnel



Number of employees

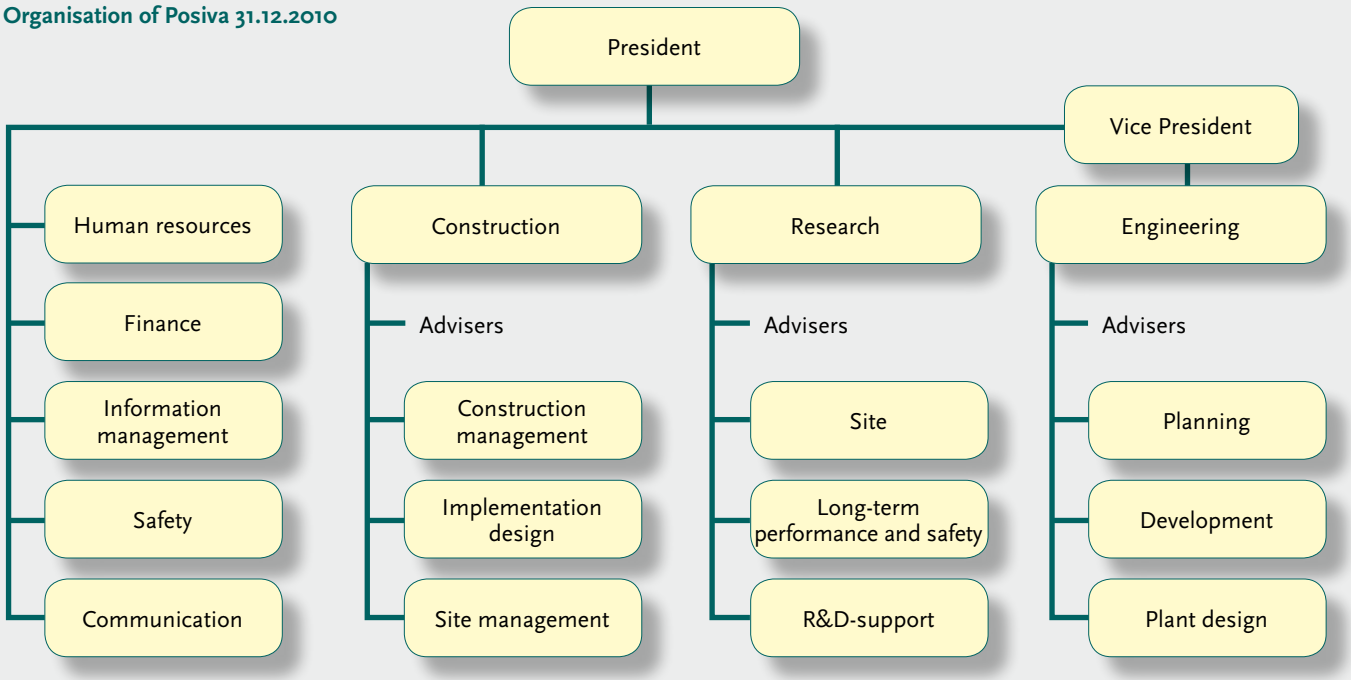


Number of training days per person



Posiva personnel at Vuojoki Mansion in November.

Organisation of Posiva 31.12.2010



Stress measurements in the ONKALO access tunnel in the repository level.

Office premises

Posiva has offices in Eurajoki at Olkiluoto and at the Vuojoki Mansion. In Olkiluoto, there are Posiva employees working at the central office and in the ONKALO office building.

Economy and finance

Posiva's shareholders bear the costs related to its main line of business, i.e. management of spent nuclear fuel from the Olkiluoto and Loviisa power plants, as well as the research, construction and development necessitated by it. Charges made by the company account for most of its revenues. In addition, the company carries out minor assignments for its owners and external customers. The company's sales amounted to EUR 60.5 (58.3) million, of which the main line of business accounted for EUR 60.5 (58.1) million.

Posiva attends to the nuclear waste management tasks stipulated in the Nuclear Energy Act on behalf of the power generation companies, its owners. Consequently, the company charges for the annual costs arising from this, including the acquisition cost of property, plant and equipment. Since the nuclear waste management costs will not accrue income in the future for the companies with waste management obligations, nor for Posiva, Posiva's nuclear waste management costs have been deducted in total as annual costs, even the acquisition cost of property, plant and equipment. The companies with waste management obligations make provisions for the cost of nuclear waste management by paying annual nuclear waste management fees to the State Nuclear Waste Management Fund.

Extent of research and development operations

Posiva's current operations mainly consist of extensive research and development work aimed at establishing the prerequisites of final disposal. In 2010, a total of some EUR 43.9 (45.8) million was used for R&D, accounting for 72.6% (78.6%) of sales. The research and development activities encompass, besides ONKALO, surveys above ground, the development of encapsulation and disposal technology and the planning and design of the repository.

Key indicators

Due to the company's principle of operations, the presentation of key financial indicators is not meaningful for illustrating the company's financial position or financial performance. The financial statements do not show a profit or loss.

Events after the end of the financial period

No events having an impact on business developments have taken place since the end of the financial period.

Assessment of probable future developments

The company's operations are expected to continue during the current financial period primarily as in the previous year. Sales are expected to increase somewhat compared with the previous financial period.

Distribution of profits

The company does not have any unrestricted equity, which is why no dividends can be distributed.

ONKALO site is situated about two kilometers from the Olkiluoto nuclear power plant.

Financial statements

INCOME STATEMENT

	1.1. - 31.12.2010	1.1. - 31.12.2009
Turnover	60 518 853.76	58 316 524.12
Other income	131 665.21	131 848.44
Personnel expenses	-6 042 381.93	-5 847 095.61
Depreciation	-374 453.01	-391 873.11
Other expenses	-54 202 286.38	-52 104 704.29
Profit/loss from operations	31 397.65	104 699.55
Financial income and expenses	-27 987.22	-101 995.02
Profit/loss before extraordinary items	3 410.43	2 704.53
Extraordinary items +/-	0.00	0.00
Profit/loss before appropriations and taxes	3 410.43	2 704.53
Income taxes	-3 410.43	-2 704.53
Profit/loss for the financial year	0.00	0.00

BALANCE SHEET

ASSETS	31.12.2010	31.12.2009
Non-current assets		
Intangible assets		
Intangible rights	10 544.25	10 324.38
Other non-current expenditure	1 352 485.83	1 660 471.58
	1 363 030.08	1 670 795.96
Tangible assets		
Buildings	88 335.28	92 015.92
Machinery and equipment	184 414.10	231 033.58
	272 749.38	323 049.50
Investments		
Other shares and holdings	208 771.50	208 771.50
Other loan receivables	4 499 316.69	4 832 443.52
	4 708 088.19	5 041 215.02
Total non-current assets	6 343 867.65	7 035 060.48
Current assets		
Current receivables		
Trade receivables	119 024.45	323 010.38
Loan receivables	333 126.78	325 764.48
Other receivables	479 378.67	108 835.76
Prepayments and accrued income	1 614 761.90	1 423 900.00
	2 546 291.80	2 181 510.62
Cash and cash equivalents	15 922 459.40	12 886 054.31
Total current assets	18 468 751.20	15 067 564.93
Total assets	24 812 618.85	22 102 625.41

EQUITY AND LIABILITIES		
Equity		
Share capital	1 682 000.00	1 682 000.00
Retained earnings/loss	0.00	0.00
Profit/loss for the financial year	0.00	0.00
	1 682 000.00	1 682 000.00
Liabilities		
Non-current liabilities	6 641 882.10	7 034 095.68
Current liabilities		
Advances received	2 300 641.10	1 492 146.46
Trade payables	7 425 593.75	5 577 657.43
Other current liabilities	732 078.14	1 272 859.21
Accruals and deferred income	6 030 423.76	5 043 866.63
	16 488 736.75	13 386 529.73
Total equity and liabilities	24 812 618.85	22 102 625.41

CASH FLOW STATEMENT

1 000 €	2010	2009
Operating activities		
Operating profit/loss	31	105
Adjustments to operating profit/loss *	374	402
Change in working capital **	2 737	1 129
Interest received	146	148
Interest paid	-173	-251
Taxes paid	-2	0
Cash flow from operating activities	3 113	1 533
Investing activities		
Acquisition of intangible and tangible assets	-18	-11
Proceeds from sale of intangible and tangible assets	1	34
Acquisition of shares	0	-7
Withdrawals of loans granted	326	319
Cash flow from investing activities	309	335
Financing activities		
Withdrawals of long-term loans	221	221
Repayment of long-term loans	-607	-601
Cash flow from financing activities	-386	-380
Change in financial assets	3 036	1 488
Financial assets January 1	12 886	11 398
Financial assets December 31	15 922	12 886

* Adjustments to operating profit/loss		
Depreciation and write-downs	374	392
Gain (-) or loss (+) from divestment of non-current assets	0	10
Total	374	402
** Change in working capital		
Increase (-) or decrease (+) in non-interest-bearing receivables	-359	-233
Increase (+) or decrease (-) in short-term non-interest-bearing liabilities	3 096	1 362
Total	2 737	1 129

NOTES TO FINANCIAL STATEMENTS 31 DECEMBER 2010

GENERAL INFORMATION ABOUT THE COMPANY

Posiva Oy is a joint venture company owned by Teollisuuden Voima Oyj and Fortum Power and Heat Oy.
Copies of the financial statements are available at www.posiva.fi and at Olkiluoto, FI-27160 Eurajoki.

ACCOUNTING PRINCIPLES

Measurement principles and methods and accrual principles and methods

Measurement of non-current assets
Intangible rights, other non-current expenditure as well as property, plant and equipment are capitalised at immediate acquisition cost less depreciation/ amortisation according to plan. The depreciation/amortisation according to plan equals the maximum amounts allowed by the Finnish Business Tax Act.

The acquisition costs of property, plant and equipment acquired for nuclear waste management prescribed by the Nuclear Energy Act have been deducted in their totality as annual costs because nuclear waste management costs will not accrue income in the future for the companies with waste management obligations, nor for Posiva.

The depreciation/amortisation periods for other non -current assets are as follows:

Intangible rights	Straight-line depreciation over 10 years
Other long-term expenditure	Straight-line depreciation over 10 years
Computer software	Straight-line depreciation over 5 years
Property, plant and equipment	Reducing balance depreciation at 25%

Research and development costs
The research and development costs have been recognised as annual costs during the year in which they were incurred.

NOTES TO THE INCOME STATEMENT

	2010	2009
1. Turnover		
Income, main line of business	60 479 560.08	58 076 929.13
Income, auxiliary line of business, shareholders	15 287.45	23 677.54
Income, auxiliary line of business, other companies	24 006.23	215 917.45
Total	60 518 853.76	58 316 524.12
2. Other income		
Rental income	64 946.25	71 771.40
Subsidies received	66 071.54	46 687.31
Other income	647.42	13 389.73
Total	131 665.21	131 848.44
3. Personnel		
Average number of personnel	96	90
Number of employees on 31.12.	92	88
Personnel expenses		
Wages and salaries	5 017 543.96	4 819 845.88
Pension expenses	779 967.60	822 227.33
Other compulsory personnel expenses	244 870.37	205 022.40
Total	6 042 381.93	5 847 095.61
4. Depreciation		
Depreciation plan		
Planned depreciation is the maximum depreciation under Finnish Business Tax Act.		
Planned depreciation		
Intangible rights	1 595.72	1 802.66
Other long-term expenditure	307 985.75	309 505.74
Buildings	3 680.64	3 834.00
Machinery and equipment	61 190.90	76 730.71
Total	374 453.01	391 873.11

NOTES TO THE INCOME STATEMENT

	2010	2009
5. Other expenses		
Rents	2 824 670.43	2 803 559.37
Infrastructure services	5 851 194.86	4 804 597.06
Research services	25 894 078.44	23 301 555.76
Research facility expenses	13 542 009.99	15 519 282.17
Other expenses	6 090 332.66	5 675 709.93
Total	54 202 286.38	52 104 704.29
Acquisition costs of fixed assets used for nuclear waste management are booked as annual expenses under Section 5:1 of the Accounting Law.	13 594 666.74	15 742 952.17
Auditors' fees		
Audit fees	18 000.00	12 000.00
Auditors' statements	600.00	2 780.00
Total	18 600.00	14 780.00
6. Financial income and expenses		
Interest income and other financial income		
Interest income from long-term investments	116 575.50	123 775.09
Other interest and financial income	29 083.31	23 877.68
Total	145 658.81	147 652.77
Interest and other financial expenses		
To others	173 646.03	249 647.79
Total	173 646.03	249 647.79
Total financial income (+) and expenses (-)	-27 987.22	-101 995.02

NOTES TO THE BALANCE SHEET

7. Non-current assets	Intangible rights	Other non-current expenditure	Intangible assets total
Intangible assets			
Acquisition cost 1.1.2010	42 107.91	3 260 179.14	3 302 287.05
Increase	1 815.59	0.00	1 815.59
Acquisition cost 31.12.2010	43 923.50	3 260 179.14	3 304 102.64
Accumulated planned depreciation 1.1.	31 783.53	1 599 707.56	1 631 491.09
Planned depreciation	1 595.72	307 985.75	309 581.47
Book value 31.12.2010	10 544.25	1 352 485.83	1 363 030.08
	Buildings	Machinery and equipment	Tangible assets total
Tangible assets			
Acquisition cost 1.1.2010	138 183.20	837 604.36	975 787.56
Increase	0.00	15 004.55	15 004.55
Decrease	0.00	-770.00	-770.00
Acquisition cost 31.12.2010	138 183.20	851 838.91	990 022.11
Accumulated planned depreciation 1.1.	46 167.28	606 570.78	652 738.06
Accumulated depreciation from deduction	0.00	-336.87	-336.87
Planned depreciation	3 680.64	61 190.90	64 871.54
Book value 31.12.2010	88 335.28	184 414.10	272 749.38

Investments	2010	2009
Other shares and holdings	208 771.50	208 771.50
Other loan receivables	4 499 316.69	4 832 443.52
Total	4 708 088.19	5 041 215.02

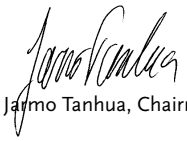
NOTES TO THE BALANCE SHEET

	2010	2009
8. Prepayments and accrued income		
Prepaid rent	1 548 190.00	1 327 020.00
Other deferred income	64 265.00	55 200.00
Other prepaid expenses	2 306.90	41 680.00
Total	1 614 761.90	1 423 900.00
9. Share capital		
Share capital 1.1.	1 682 000.00	1 682 000.00
Changes in share capital	0.00	0.00
Share capital 31.12.	1 682 000.00	1 682 000.00
10. Debts fall due in more than five years	5 228 472.96	5 697 303.51
11. Accruals and deferred income		
Accrued interests	1 982.07	1 813.19
Accrued wages and salaries	1 597 186.37	1 468 142.57
Estimate of expenses not yet charged	4 431 255.32	3 573 910.87
Total	6 030 423.76	5 043 866.63
12. Commitments		
Rent liabilities		
Rent liabilities falling due in less than a year	442 340.00	442 340.00
Rent liabilities falling due later	5 308 080.00	5 750 420.00
Total	5 750 420.00	6 192 760.00

Posiva has rented from Teollisuuden Voima Oyj a land area for the final disposal of spent nuclear fuel. The rental period is from 1 July 2003 to 30 June 2013. The rental agreement is subject to notice in case the land area is not suitable for the final disposal of spent nuclear fuel. The rent is checked every two years according to cost-of-living index. The rent was EUR 394 999.24 in 2010 (EUR 395 132.80 in 2009).

SIGNATURES TO THE ANNUAL REPORT AND FINANCIAL STATEMENTS

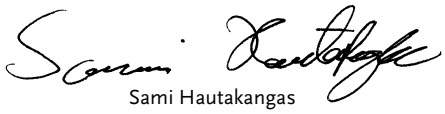
Helsinki, 24 February 2011



Jarmo Tanhua, Chairman

Pekka Leskelä

Veijo Ryhänen



Sami Hautakangas

Reijo Sundell, President

AUDITORS' REPORT

To Posiva Oy's Annual General Meeting

We have audited the accounts, the financial statements, the annual report and the management of Posiva Oy for the financial year 1 January – 31 December 2010. The financial statements include the balance sheet, income statement, funds statement and the notes to the financial statements.

The responsibilities of the Board of Directors and the President

The Board of Directors and the President are responsible for drawing up the financial statements and annual report as well as for giving correct and necessary information that is in accordance with Finnish regulations governing the preparation of financial statements. The Board of Directors is responsible for organising proper monitoring of accounting and financial management. The President is responsible for ensuring that accounts are in compliance with legislation and that financial management has been organised in a reliable manner.

The responsibilities of the Auditor

We are obligated to issue a statement on the financial statements and the annual report on the basis of our audit. The Auditing Act prescribes that we are obligated to observe the principles of professional ethics. We have performed the audit in compliance with the good auditing practice observed in Finland. Good auditing practice requires us to plan and perform the audit to obtain reasonable assurance about whether the financial statements and the report by the Board of Directors are free from material misstatement and whether the members of the Board of Directors or the President are guilty of an act or omission that may result in liability for damages, or violated the Finnish Limited Liability Companies Act or the Articles of Association.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements and the review by the Board of Directors as well as about other information presented therein. The procedures selected depend on the auditor's judgment, including the assessment of risk of material misstatement due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements and the review by the Board of Directors. The auditor evaluates internal control in order to be able to design audit procedures that are appropriate in the circumstances, but not for the purpose of issuing a statement regarding the effectiveness of the company's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the executive management, as well as evaluating the overall presentation of the financial statements and the review by the Board of Directors.

We believe that we have obtained a sufficient amount of appropriate audit evidence to provide a basis for our statement of opinion.

Statement of opinion

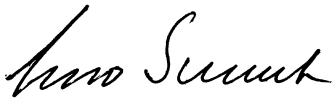
We therefore state that the financial statements and the annual report present true and sufficient information about the result of the Company's activities and its financial standing, as stipulated in the Finnish regulations governing the preparation of financial statements and the annual report. The annual report is consistent with the financial statements.

Other statements of opinion

We recommend that the financial statements be adopted. The Board of Directors' proposal regarding the application of profits shown on the balance sheet and on the distribution of other unrestricted equity is compliant with the Finnish Limited Liability Companies Act. We recommend that the members of the Board of Directors as well as the President be discharged from liability for the financial year audited by us.

In Helsinki on 17 March 2011

PricewaterhouseCoopers Oy
Authorised Public Accountants



Eero Suomela
CPA

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Authorised Public Accountants

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CPA

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