



**POHJOLAN  
VOIMA**

POHJOLAN VOIMA AND CORPORATE RESPONSIBILITY 2008



# Pohjolan Voima and corporate responsibility

## The Pohjolan Voima operating model

*Pohjolan Voima is a privately-owned group of companies in the energy sector producing electricity and heat at cost for its shareholders in Finland.*

*Pohjolan Voima's core values are responsibility, reliability and competence.*

*Pohjolan Voima supplies electricity and heat to its shareholders at cost, and the shareholders cover the costs of the operations – this operating model is also called the "Mankala principle". The name is derived from a ruling issued by the Supreme Administrative Court, constituting a precedent. In this ruling, the shareholders of a company called Oy Mankala Ab were found not to have received taxable income when Mankala generated and supplied them with electricity at a price lower than the market price and the shareholders covered the company's costs on the basis of its Articles of Association.*

*Productive co-operation based on the Mankala model generates advantages of scale and efficiency, makes it possible to build new power plants and enables small companies to take part in large investments.*

*Pohjolan Voima has 21 shareholders. The shareholders are Finnish export industry, energy and distribution companies, and municipalities.*

### Corporate responsibility

#### Financial responsibility

- Operating model and shareholders' requirements and expectations
- Operability and competitiveness of the versatile production machinery
- New and innovative solutions

#### Social responsibility

- Competent, highly motivated personnel, ready to face changes
- Good working environment: open interaction, confidence and fairness
- Open and sincere communications with stakeholders
- Sound operating methods throughout the procurement chain

#### Environmental responsibility

- Awareness of the environmental impact and risks of electricity and heat production
- Uncompromising implementation of environmental protection activities
- Follow-up of changes in the operating environment and continuous development of operations with an eye on environmental issues

**Business concept, core values, operating principles and ethical principles**



## Responsibly into the future

For Pohjolan Voima, corporate responsibility means responsible management of financial, social and environmental issues. It is an unprompted responsibility that supports business operations and is determined on the basis of our core values, operating principles and ethical principles, taking the requirements and expectations of key stakeholders into consideration.

Pohjolan Voima's responsible operations are guided by corporate responsibility policies approved by the Board and presented on the Pohjolan Voima Web site.

The flow of information between the personnel and the employer, and the personnel's possibility to influence decisions, are ensured by way of representative collaboration. Group-level co-operation is called the Group meeting. The Group meeting convened three times in 2008. Operational management groups have been established to support the Corporate Executive Team and the directors in charge of operations.

### Versatile power plant capacity

Pohjolan Voima has done its part in implementing the Finnish energy and climate policy's goals by increasing the proportion of emission-free and low-emission production – i.e., nuclear power and renewable energy: biopower, wind power and hydropower. The purpose is to maintain versatile power plant capacity in Finland as well as a competitive situation open to all forms of production, energy imports and fuels.

In 2008, Pohjolan Voima continued its programme of building up electricity generation capacity, albeit in a different mood than in previous years. Several projects are under construction and being planned, but no new significant investment decisions have been made. The general uncertainty of the economy was the main reason for this.

## Open dialogue with stakeholders

Outlook and expectations for the future vary among the different actors in society. Pohjolan Voima appreciates divergent views and engages in dialogue with its stakeholders in order to identify future development.

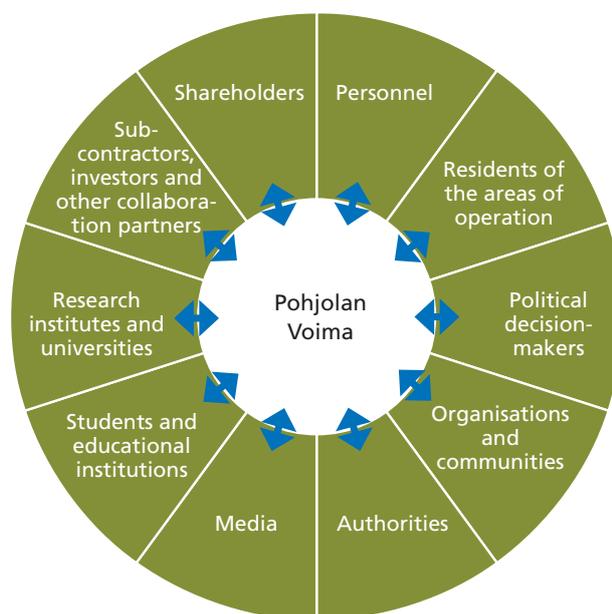
The purpose is to be aware of the expectations of stakeholders while also communicating Pohjolan Voima's goals, operating methods and standpoints. Stakeholder relations aim at interactivity – i.e., communication based on openness and sincerity.

### Immediate stakeholders are important

Pohjolan Voima has power plants, minority shares or other business in 22 locations in Finland. In addition to immediate pay and tax income, power plant operations carry plenty of indirect financial effects. In terms of the country's regional economy, domestic energy sources are particularly important: wood, hydropower, peat and wind. These are often utilised in regions where increasing economic activity and boosting employment rates are extremely important.

Pohjolan Voima supports not-for-profit organisations. The support is allocated to carefully selected as-

sociations. Pohjolan Voima also collaborates with sports clubs in its locations of operations.





# Responsible production of electricity competitively, reliably and in an environmentally friendly way

The basis of Pohjolan Voima's business operations lies in building, operating and maintaining versatile, competent, reliable and environmentally friendly power plant capacity in Finland. Production forms include hydropower, nuclear power, thermal power and wind power. At the beginning of 2009, Pohjolan Voima had 41 power plants.

By investing in new capacity and ensuring operability of the power plants, Pohjolan Voima ensures that its shareholders obtain energy at a competitive price. Thus, Pohjolan Voima's investments maintain the competitiveness and economic growth of Finnish society.

In the development of production capacity, Pohjolan Voima seeks new and innovative solutions that support sustainable operations. Pohjolan Voima's investments increase Finland's self-sufficiency in electricity generation and prevent climate change. The Olkiluoto 3 project is the most significant in terms of effect on climate change. In addition, particular attention has been paid to bioenergy, wind power, increasing the energy-efficiency of power plants and cutting emissions in recent years.

Pohjolan Voima continues to be the leading power plant investor in the Nordic countries. During 2008, projects with a total electric power of more than 6,000 MW were completed, underway and planned at Pohjolan Voima.

## Extensive biofuel programme

Pohjolan Voima is the leading biofuel utiliser in Europe. So far, Pohjolan Voima has realised 14 power plant investments, of which two are currently under construction, within the scope of its biofuel programme. Pohjolan Voima's share of the investments amounts to approximately € 1 billion.

Pohjolan Voima aims at efficiently utilising the biomass of the fields and woods in the vicinity of the power plants. The R&D projects associated with the programme have fo-

cused on the cultivation and harvesting methods of various biofuels and their storage, drying and combustion technologies. The biofuel programme has created new jobs, mainly in fuel procurement.

## More wind power

Pohjolan Voima has 19 wind power plants. The erection of the second phase of the wind farm totalling 30 MW in Ajos, Kemi, was completed in September 2008. The wind farm was commissioned in early 2009. Two new 3 MW wind turbines in Riutunkari, Oulunsalo, were completed in spring 2008.

Pohjolan Voima is assessing the possibility of constructing a 500–800 MW wind farm at sea off Oulu–Haukipudas in cooperation with Oulun Energia. The project's EIA programme was submitted to the liaison authority in December 2008. Similarly, the possibility of constructing a large sea wind farm off Kristiinankaupunki is being explored. The project's EIA programme was submitted in May 2008.

During 2008, wind power capacity increased by 21 MW.

## Other key projects

The EIA of the Kollaja project, which began in 2007, moved on. The final Kollaja 2008 plan could be published based on the completed environmental assessments. It takes environmental aspects into consideration in a new way. It would preserve the rapids and Natura values, improve the living conditions of riverine fish and offer people the chance to utilise the new reservoir for recreational activities.

Teollisuuden Voima applied to the Government for a Decision in Principle on the construction of a fourth nuclear power plant unit at Olkiluoto in April 2008.

# Environmental policy underpinned by values

A basic requirement for Pohjolan Voima's sustainable and long-term energy business is maintaining a healthy and diverse environment. Operations are guided by the Group's environmental policy, based on its core values: responsibility, reliability and competence. Pohjolan Voima is committed to good management and continuous improvement of environmental issues.

Pohjolan Voima manages its environmental impact extensively. Identification and evaluation of the operations' environmental effects and risks take the life-cycle perspective into consideration, for instance.

High-quality environmental protection involves not only compliance with binding requirements but also efficient use of raw materials and careful operation and maintenance of power plants. Management of the entity also includes safe handling, recycling and final disposal of by-products and waste.

Pohjolan Voima's production companies have certified environmental management systems according to the ISO 14001 standard. In addition, Teollisuuden Voima is registered in the EMAS. Environmental programmes included in the systems contribute to continuous improvement of operations.

A turbine lubricating oil leak to the floor of the boiler compartment took place at the Tahkoluoto power plant in July 2008. All the leaked oil could be retrieved, and oil did not spread outside the internal channels of the power plant. The leak was caused by a human error in the start-up of auxiliary equipment following maintenance.

## Environmental impact of electricity generation

Environmental effects are distributed in accordance with the versatile range of production forms.

The environmental impact of thermal power production primarily concerns the atmosphere. The emissions from thermal power production are limited by permit re-

strictions based on European Union decisions and national legislation. Emissions from power plants and their effects are monitored in accordance with plans validated by the relevant authorities.

The greatest impact of nuclear power results from the heat released into the sea via cooling waters. Teollisuuden Voima, which produces nuclear power, operates in accordance with the environmental permits and the environmental management system. All operations related to the construction phase of the Olkiluoto 3 plant unit are covered by a certified environmental management system.

Hydropower plants change waterways and fish stocks. The effects of hydropower production on waters are regional and localised. Pohjolan Voima has engaged in the management and restoration of water environments since the 1980s, mainly on a voluntary basis in co-operation with its stakeholders.

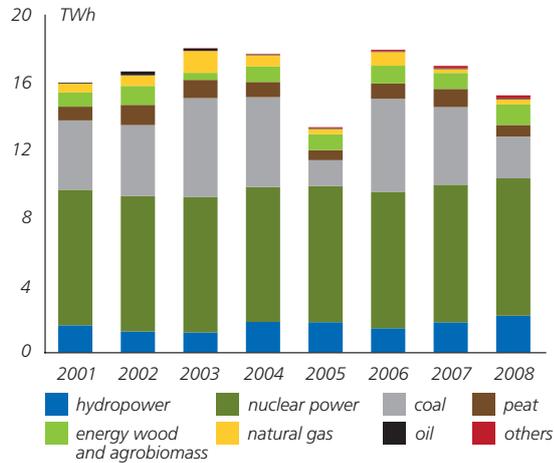
Wind turbines change the landscape. In selecting the sites for building wind power plants, particular attention is paid to the effects on the landscape, noise problems and changes in conventional land use. This requires dialogue with those living in the area affected by the project. The environmental effects of investment projects are evaluated, and harmful effects are minimised.

## Relationships with subcontractors

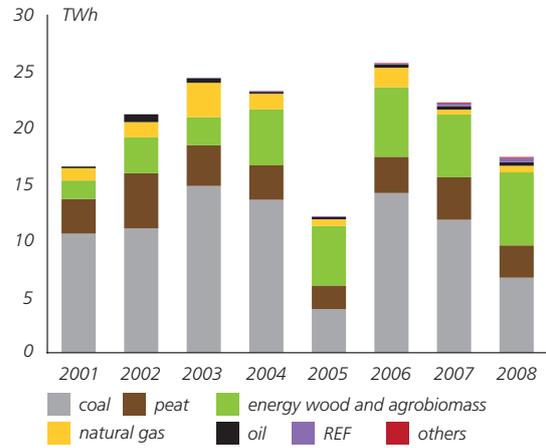
Pohjolan Voima's relationships with subcontractors are specified by the corporate procurement policy. In accordance with the policy, the various organisations of the Group are committed to communicating the corporate environmental policy to subcontractors and, in turn, expect the subcontractors to operate in harmony with it.

Pohjolan Voima considers it important for fuel suppliers to be aware of the environmental impact of their operation, and good management of environmental issues is encouraged.

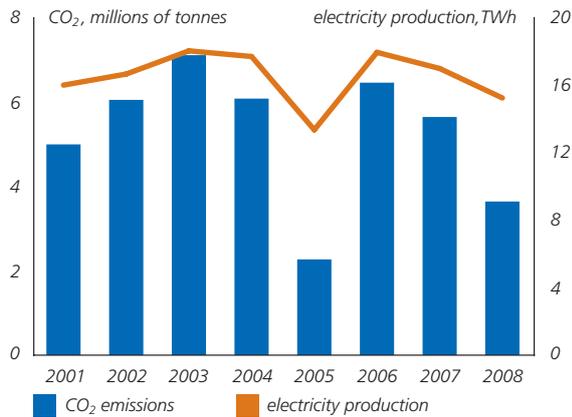
**Pohjolan Voima's electricity production, by energy source, TWh**



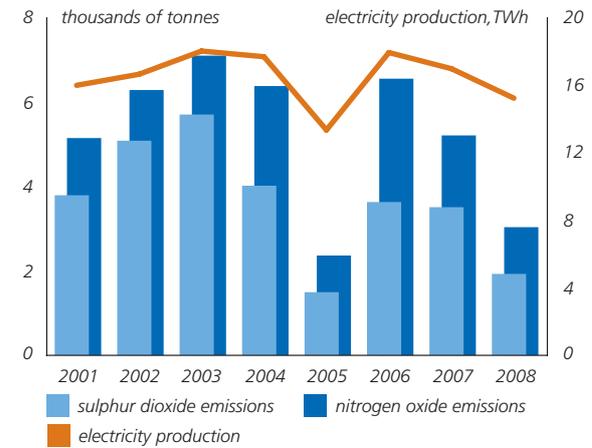
**Pohjolan Voima's fuels in electricity and heat production 2001–2008, TWh**



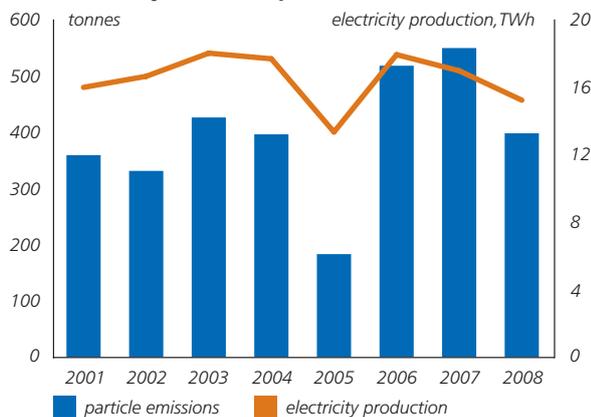
**Pohjolan Voima's production of electricity and heat and CO<sub>2</sub> emissions 2001–2008**



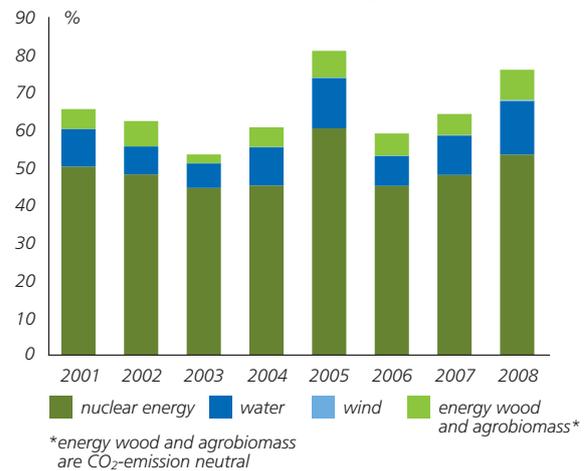
**Acidifying emissions from Pohjolan Voima's electricity and heat production**



**Particle emissions from Pohjolan Voima's electricity and heat production**



**CO<sub>2</sub>-emission-free energy sources of Pohjolan Voima's electricity production**



# Moving forward with competence

Pohjolan Voima is a safe and solid employer willing to develop its working environment to become as encouraging as possible. The company aims at efficient operations by ensuring that competent employees are retained in the company, by increasing the required competence levels and by supporting the personnel in changes.

Pohjolan Voima will reinforce critical competence required in the future through systematic career planning and development plans of key personnel. Plans have been made in anticipation of ageing and retirement, and measures have been taken to start the transfer of competence to new key persons.

The operational management group for HR development issues is directly subordinate to the Corporate Executive Team. The operational management group supports Pohjolan Voima's management in areas related to the personnel and personnel development requiring development, communication and coordination laterally between different organisations. The training committee, on the other hand, processes issues related to practical training and makes development proposals to the operational management group. There is a separate training committee operating under the Teollisuuden Voima Corporate Executive Team. The focus has been on intra-group training, and 47 people took part in managerial coaching customised for the personnel during the year. Teollisuuden Voima has its own managerial coaching underway.

The performance review process was specified and items concerning well-being at work, flow of information and distribution of workload were included in it.

At the end of 2008, the Pohjolan Voima Group had 1,401 permanent employees. Men accounted for 79% and women 21% of the personnel. Equality is promoted by selecting the best candidate for each job on the basis of training, experience and suitability, regardless of gender, ethnic background or similar factors.

## Co-operation in disseminating information

The company's good relationships with shop stewards and their unions have guaranteed a good, conflict-free situation in terms of industrial peace in the company. The company has a solid tradition of agreeing on issues at the local level, and several procedures that best fit the site in question are agreed upon based on the collective labour agreements.

Co-operation is realised through the co-operation committees at power plant locations, the personnel representatives in the executive groups of the subsidiaries, and the Group meeting which convenes 2 to 3 times each year. Teollisuuden Voima is not represented in the Group meetings.

## Committed and motivated personnel

Pohjolan Voima carries out a personnel survey once every two years. The survey covered all Pohjolan Voima Group companies except for TVO. According to the results of the 2008 survey, employees are more committed to their employer and work than Finns and North Europeans on average. The motivation can be seen in that the employees are satisfied with their possibilities to influence decisions and job content. The average duration of employment is 16.5 years. The turnover rate is 6%.

Working parties were established to develop management, flow of information and compensation based on the results of the personnel survey.

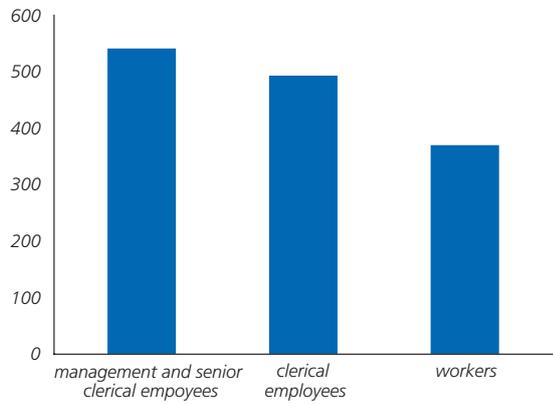
## Occupational safety as a part of the work day

Pohjolan Voima aims to create a healthy, safe working environment. In order to reach this objective, the company actively takes care of the physical, mental and social well-being of its employees.

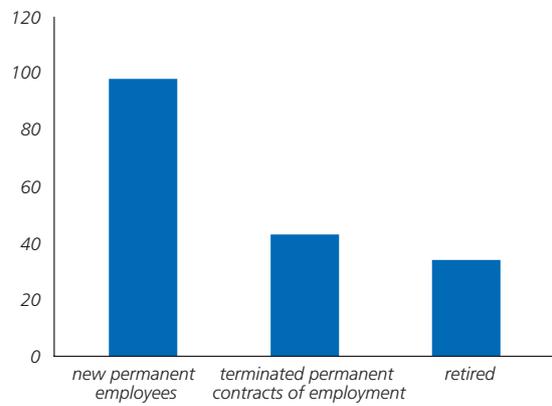
There were 24 accidents at work or during the journey to or from work during the year. A zero-accident result was achieved at the sites of Kokkolan Voima Oy, Laanilan Voima Oy, Proma-Palvelut Oy's Nokia and PVO-Vesivoima Oy's Isohaara, Jumisko and Kokemäenjoki sites. A total of 96 employees participated in occupational safety training during 2008. The aim is to make occupational safety a part of every employee's work day so that persons at all organisational levels are aware of their own responsibility. The follow-up of close call situations has been made more effective by implementing a notebook to be carried at the site for recording the situation and informing the supervisor of it. Also, an employees' industrial safety card is a requirement at the sites, aiming to improve occupational safety at the sites.

Occupational health care is preventive. In addition to GP-level health care, more extensive examination methods can also be used in situations that threaten the ability to work. Sickness percentage was 4% (excluding TVO).

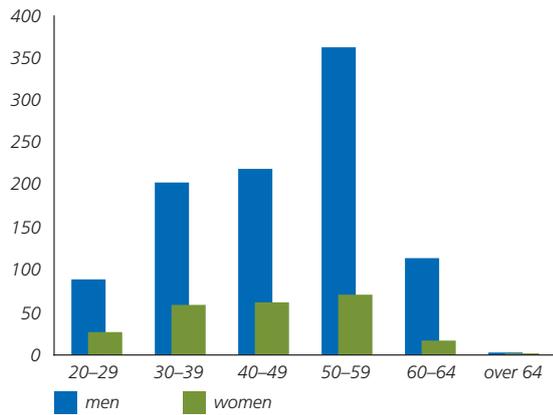
**Breakdown of personnel by personnel groups**



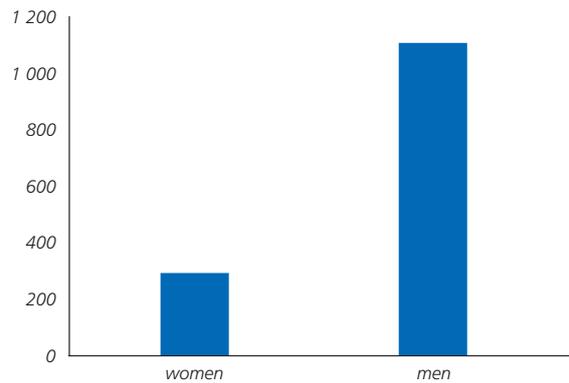
**Turnover in 2008**



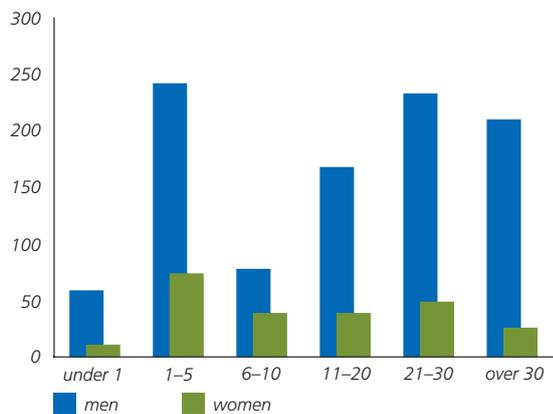
**Breakdown of personnel by age on 31 Dec 2008, permanent employment**



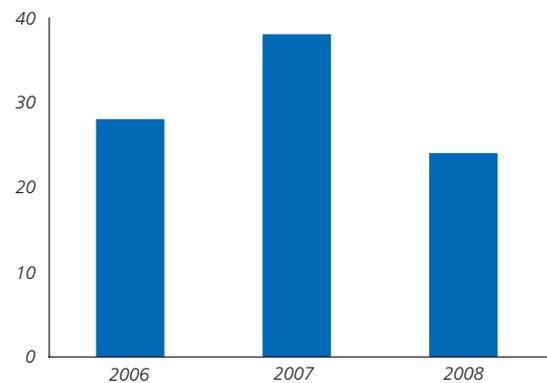
**Breakdown of personnel by gender on 31 Dec 2008**



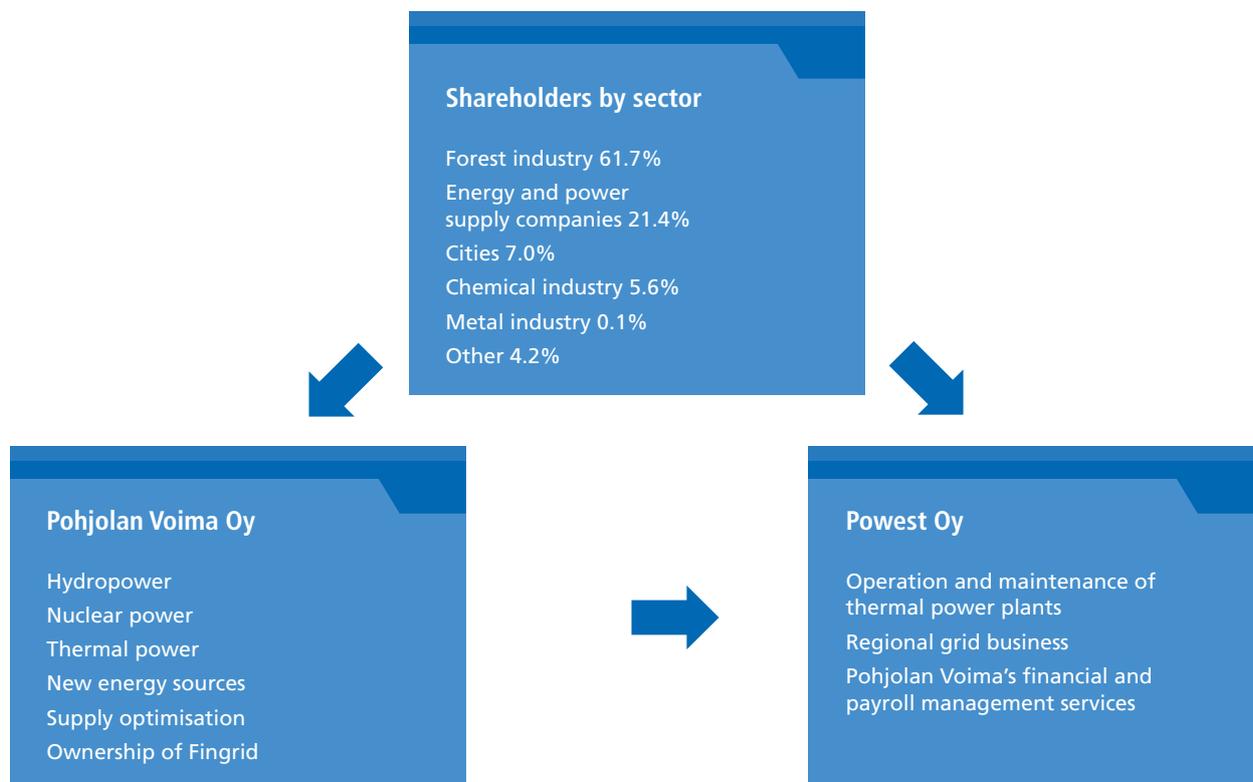
**Years of employment, 31 December 2008**



**Accidents**



# Investments and wellbeing for Finland



## Pohjolan Voima's investments since 1990

	Electricity MW	Pohjolan Voima's share MW	Pohjolan Voima's share € M
Bioenergy plants	1,115	825	1,039
Wind turbines	48	33	49
Hydropower investments	128	128	98
Nuclear power investments	1,948	1,129	1,919
Gas power plants	160	75	74
Coal power plant investments	649	193	142
Estlink sea cable*	350	70	7
<b>TOTAL</b>	<b>4,398</b>	<b>2,452</b>	<b>3,329</b>

\*) Not a capacity-increasing investment

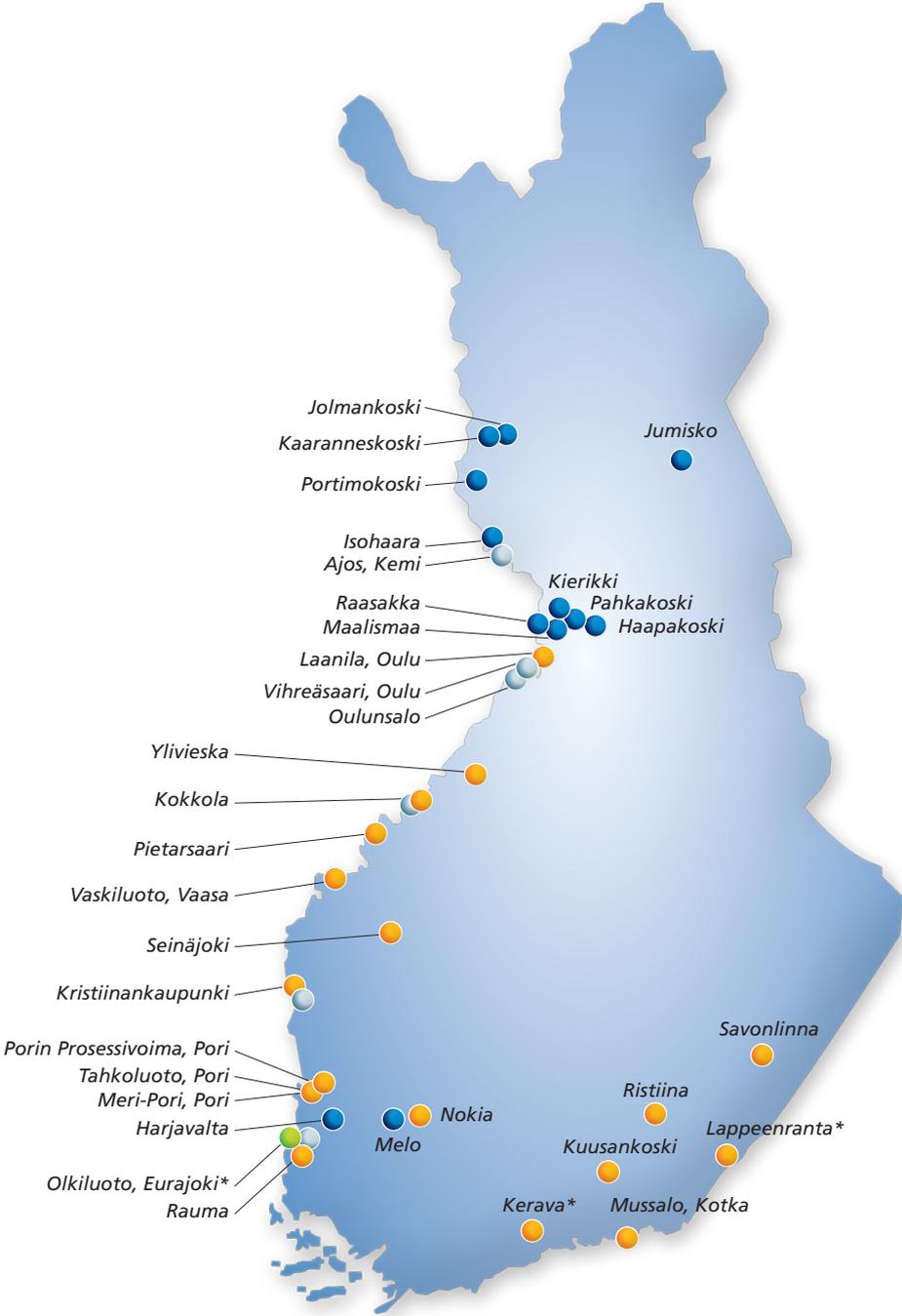
## Pohjolan Voima's key figures\*

	2008	2007	2006	2005	2004
Turnover, € million	919	766	888	601	667
Operating result, € million	-5	-23	-7	-8	0
Net interest-bearing liabilities, € million	2,597	1,977	1,790	1,633	1,063
As percentage of turnover, %	283	258	202	272	159
Equity ratio, %	26	32	33	36	43
Total assets, € million	4,728	3,839	3,586	3,311	2,664
Investments, € million	768	383	325	704	427
Average number of personnel	1,128	1,090	1,032	938	873

\*) Powest subgroup is not included in the consolidated Financial Statements

# Production capacity

- Hydropower plants
- Nuclear power plants
- Wind turbines
- Thermal power plants
- \* Under construction





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