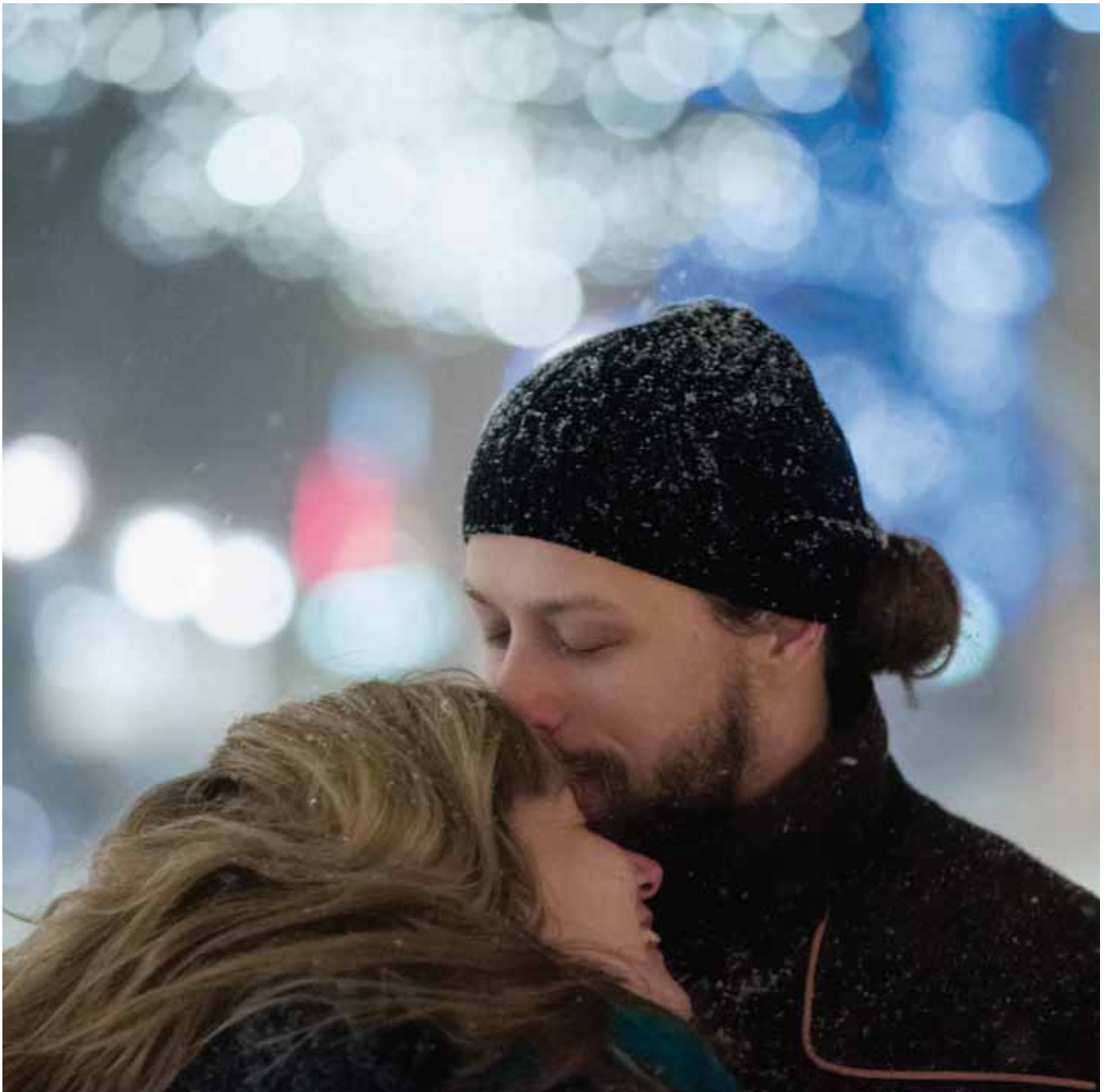


# ANNUAL REPORT 2012

THE REPORT ON SOCIAL RESPONSIBILITY



**HELSINGIN  
ENERGIA**



A person wearing a blue hooded jacket and a red backpack stands in a vast, snow-covered field. In the background, several power lines stretch across the sky, and a utility pole is visible. The scene is set during a soft, hazy light, possibly dawn or dusk.

# HELEN GROUP

The parent company of the Helen Group, Helsingin Energia, is one of the largest energy companies in Finland. It sells electric energy to about 400,000 customers in Finland and its district heating network meets over 90 per cent of the heating need of the Helsinki region. Helsingin Energia also produces and sells district cooling, which is rapidly expanding in the Helsinki region.

The design, projecting and maintenance of our energy production and distribution systems are part of our operations. Helsingin Energia is also responsible for outdoor lighting in Helsinki.

The Group' subsidiaries are Helen Sähköverkko Oy, Mitox Oy, Mankala Ab, Kiinteistö Oy Helsingin Sähkötalo, and Suomen Energia-Urakointi Oy. Helsingin Energia also has associated companies, and it owns power assets in various companies directly and through Oy Mankala Ab.

# CONTENTS

## ANNUAL REPORT 2012 The Report on Social Responsibility

Helen Group in brief.....	2
CEO's review .....	4
Helen Group in 2012.....	6

## A REVIEW OF HELEN GROUP'S BUSINESS OPERATIONS

Helsingin Energia .....	8
Subsidiaries and associated companies .....	12

## ENVIRONMENT

Environmental review.....	16
<b>Environmental financial statements</b> .....	18

Human resources .....	20
Customers.....	22
Administration .....	24
Strategy .....	26

## HELEN GROUP'S FINANCIAL STATEMENTS AND REPORT ON OPERATIONS 2012.....

Ecological footprint of the annual report .....	48
---	----

# STRONG RESULT IN A CHALLENGING MARKET SITUATION

The Helen Group achieved a strong result in a challenging market situation in the year 2012. With regard to operating activity, the most important policy decision was approval of Helsingin Energia's Development Programme towards a Carbon-Neutral Future at the start of 2012. When implemented, the development programme will fulfil the set climate targets and create the preconditions for a carbon-neutral future.

## RENEWABLE ENERGY AND ENERGY EFFICIENCY

A versatile production structure and the use of different energy sources create the basis for profitable business operations and a high security of supply also in the future. The main fuel in Helsingin Energia's combined heat and power plants continues to be natural gas. The rainy year increased hydropower production by almost 30 per cent, and its share of electricity procurement exceeded 8 per cent.

Possibilities of increasing the use of renewable energy sources, such as biofuels, wind power and solar energy, are being investigated. The Hanasaari power plant began testing pellet combustion alongside coal in October 2012. In collaboration with our partners, we are also investigating the use of biogas mixed with natural gas.

By merely increasing the use of renewable energy sources, we will not be able to overcome the climate challenges. Energy

efficiency plays a key role, and it can be implemented both in production and sensible use of energy. Helsingin Energia made sizable investments in energy efficiency in the Vuosaari and Salmisaari power plants during the year 2012.

## NEW PRODUCTS AND PRICING MODELS

District heat sales grew last year, and our customers continue to show a lively interest in district cooling.

There are several development projects under way in the heating market, aimed at assessing alternative production forms and new pricing models that are increasingly flexible. In urban areas, district heating is definitely still the most energy-efficient and environmentally friendly heating method. Outside the district heating area, it is justified to develop also new solutions. An excellent example of this is the hybrid system to be built in the Sakarimäki School in the Östersundom area, which will consist of geothermal heat, solar energy and fuel oil, and possibly also bio-oil.

Total electricity sales remained at the previous year's level. We have been active in developing and introducing new products and services in the electricity market. Good examples of these are solar panels and charging services for electric vehicles intended for real-estate customers.

## INVESTMENTS WILL GROW IN THE FUTURE

The energy market is being rapidly reformed. In a smart energy system, the old and the new are combined into a seamless whole, forming the basis for new products and services. Here at Helsingin Energia, we are developing the efficient cogeneration of heat, electricity and cooling into an even better method than before.

Energy storage is an essential part of a smart energy system. Through storage, the use of electricity, heat and cooling can be flexibly controlled, and the availability of energy can be ensured also in peak demand situations and in exceptional circumstances.

District heat accumulators have been utilised for several years already to even out peak demand situations. A new development area is building district cooling accumulators. A decision has been made to invest in large-scale electricity storage; the largest electricity storage in Finland so far is being built in the Kalasatama residential area in Helsinki.

We are also in the process of developing new large-scale solutions for smart living and intelligent electronic transport systems.

The financial impacts of Helsingin Energia's development programme are not yet in evidence in 2013. The effect of the development programme investments on the coming years' profit growth will be significant, however.

Investments in the current year will be lower than average, and they will mostly be related to normal production and district heating operations and expansion and basic improvements to the tunnel and district cooling networks. The level of investments will rise considerably as from 2014.

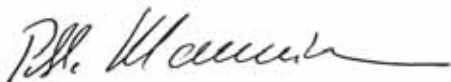
The general economic situation is reflected in the Helen Group strategy and budget. Significant uncertainty is attached to forecasting the effects on costs resulting from the operation of electricity markets and development of fuel prices. The 2013 profit levels are anticipated to fall from the previous year.

#### THANKS TO THE SKILLED PERSONNEL

I want to extend my thanks to those who do the work: all Helen employees, whose skills and professional competence have ensured our good operating preconditions and satisfied customers. In the year 2012, we were again successful in many customer satisfaction and quality surveys. We also received international recognition for our exceptionally efficient cogeneration of electricity, heat and cooling – once more.

I want to thank also our customers and interest groups for their confidence and good co-operation.

12.2.2013



Pekka Manninen  
CEO



# HELEN GROUP IN 2012

## JANUARY

The City Council of Helsinki approves the development programme Towards a Carbon Neutral Future.

The TNS Gallup survey ranks Helsingin Energia as the best energy company in the promotion of its corporate social responsibility image.

According to the survey, major electricity customers are very happy with Helsingin Energia for the sixth year running.

## FEBRUARY

The chimney of the Alppila heating plant is lit up as a meter displaying the consumption of thermal energy.

Helsingin Energia is given the international Energy Globe National Award for the most energy-efficient data centre in the world.



## MARCH

The joint project on the green cloud and data centre of Helsingin Energia, Atos and Academica receives the ICT Project of the Year award in the 600 Minutes Executive IT event.

Helsingin Energia takes part in the Earth Hour event by reporting on the changes in Helsinki's electricity consumption.

Helen Sähköverkko Oy starts to build a new substation in Lauttasaari to enable secure electricity supply to the area.



## JULY

The popularity of district cooling is growing rapidly. The 11.5 million litre cold accumulator under Pasila is taken into use.

## AUGUST

Modernisation of the Myllypuro heating plant progresses on schedule. The heating plant will be converted to be operated by natural gas, and its emissions will be minimised.

Academica, Atos and Helsingin Energia launch a new data centre project in Viikinkaari.

## SEPTEMBER

UPM, Metso, Helsingin Energia and PVO-Lämpövoima get together in the world's first research project covering the entire value chain to investigate the possibilities of replacing coal with torrefied biomass in energy production.

Helsingin Energia is to implement a heating system based on renewable energy sources in the Sakarinmäki school complex in Östersundom by 2014.



## APRIL

Helsingin Energia received the best overall rating in a comparison of 19 energy companies in the national corporate image survey 2011.

Helsingin Energia reinforces the security of district heating supply by taking thermal images of the district heating network in the entire Helsinki area from a helicopter using a thermographic camera.



## MAY

The tram and metro traffic runs on hydro-power produced by Helsingin Energia.

In the survey of ideal employers organised by Universum, Helsingin Energia's ranking rose from 39 to 33 among students of technology.



## JUNE

Helsingin Energia's street galleries are recreated. To mark the Helsinki 200 anniversary year, a street gallery is established in Unioninakseli with electricity distribution cabinets displaying works of art by renowned artists for a number of years to come.

Gasum, Metsä Fibre and Helsingin Energia investigate the possibility of building a biorefinery in Joutseno for producing biogas from wood raw material. The biorefinery would produce synthetic natural gas, e.g. for the Vuosaari power plants.

## OCTOBER

Pekka Manninen takes on his post as CEO of Helsingin Energia.

Helsingin Energia opens a blog entitled Uutta voimaa (New Power) with the objective of having a debate on renewable energy and meeting the climate targets.

Finland's first public fast-charge station for electric vehicles is opened in Runeberginkatu in Helsinki.



## NOVEMBER

Test combustion of wood pellets starts in the Hanasaari power plant.

An extensive upgrade of the Ahvenkoski hydroelectric power plant is nearing completion. As a result of the upgrade, the efficiency of the plant will increase by about 8%, and the plant will produce more renewable energy.

Helen Sähköverkko Oy completes the instalment of remotely read meters in the Helsinki region. There are now a total of over 350,000 remotely read sites in Helsinki.



## DECEMBER

Helen Sähköverkko Oy improves the security of electricity supply by adding new automatic fault management technology in the electricity network.

Helsingin Energia's customer service ranks highest in the EPSI Rating survey among both private and corporate customers.

Along with the modernisation of Helsingin Energia's Salmisaari B power plant, the electric output of the plant rises by 11 megawatts, which corresponds to the annual electricity consumption of 23,000 one-bedroom flats.

The trees in the Esplanade Park and the Christmas lights in Aleksanterinkatu are lit with energy-efficient LED lights. The landscape tower of the electricity network on the Hietaniemi headland in Ouritsaari is also decorated with festive lighting.

# HELSINGIN ENERGIA

## FAR-SIGHTED HEDGING ACTIVITIES STABILISED THE RESULT

Helsingin Energia's far-sighted hedging activities in energy trading stabilised the result for the year. We succeeded in keeping the average wholesale price of electricity on a good level, even though the spot price quoted by the Nord Pool Power Exchange was lower than expected. Helsingin Energia's wholesale electricity price was considerably higher than the Nord Pool area price for Finland, EUR 36.60/MWh.

We were also successful in the planning of short-term procurement and daily optimisation of production.

Heatsales grew by approximately 5% on the previous year, which increased the amount of heat supply. At the annual level, district heat supply was implemented as anticipated. In spite of monthly temperature fluctuations, some of which were fairly great, the year as a whole was normal in terms of temperature.

The Katri Vala Heating and Cooling Plant was utilised in the operating year. The plant's production volume increased considerably on the year before.

The completion of the modernisation project on the steam turbine of the Salmisaari power plant was delayed, which had

an impact on the amount of CHP energy and increased the costs of energy procurement in the end of the year.

One of the two machines of the Ahvenkoski hydroelectric power plant of Helsingin Energia was modernised. The first machine had been upgraded a year earlier. Due to the modernisations, the overall output of the plant increased by 3 MW.

## HANASAARI POWER PLANT SWITCHED TO WOOD PELLETS

The Hanasaari power plant started to use wood pellets as an energy source in October. During the first test period, about 500 tonnes of pellets were combusted. The pellets were supplied by Vapo Oy, and they were transported to the power plant area by a tanker lorry, from which they were unloaded into a pellet silo. The use of pellets is being tested in different mixture ratios in the period between October 2012 and April 2013. The aim of the experiments is to find out, how big a proportion of the coal combusted by the power plant can be replaced with wood pellets using the existing burners and coal mills.

The use of wood-based biomass in energy procurement is essentially included in Helsingin Energia's Development

Programme. The use of wood-based energy sources will be introduced in phases. Through the test combustion in the Hanasaari power plant, we are gearing ourselves up for the continuous co-combustion of biofuels in the Hanasaari and Salmisaari power plants in 2014.

## EXCELLENT POWER PLANT AVAILABILITY IN HELSINKI

The availability of Helsingin Energia's power plants in Helsinki was excellent during the year.

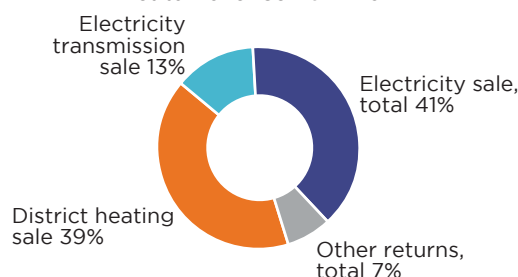
The automation and electric system of the Vuosaari A power plant were upgraded in connection with the annual overhaul, and one of the plant's two gas turbines underwent basic maintenance. After the completion of an extensive modernisation of the Kellosaari gas turbine power plant, the right to operate the plant was relinquished to Fingrid Oyj. Gas turbine No. 1 of the Kellosaari power plant underwent a general overhaul, and the plant's electric system and automation were upgraded. This way, we ensured the operational reliability and availability of the stand-by power plant that is now under Fingrid's operation control.

### KEY FIGURES, HELEN GROUP

	2012	2011
Net turnover, €million	897	876
Profit before appropriations, €million	222	271
Total assets, €million	1,756	1,720
Return on investment %	15	19
Equity ratio %	59	62

### NET TURNOVER, HELEN GROUP

Net turnover 897 € million





## A WIDER PRODUCT RANGE IN THE ELECTRICITY MARKETS

In the electricity market, we progressed in the product development of solar panels, electric vehicle charging bays and home automation. The sale of solar panels and electric vehicle charging bays was started. A fast-charge station for electric vehicles was opened in connection with Helsingin Energia's Main Building in Kamppi. Home automation was developed further for comprehensive control of energy use in homes.

In the electricity market, we introduced a new application for electricity trading which makes placing an order for electricity and requesting an offer more simple and efficient. Plussa electricity marketed jointly by Helsingin Energia and K-Plusa was launched, and a web store was opened for it at [www.plussasähkö.fi](http://www.plussasähkö.fi). We signed an agreement with Helsinki City Transport on the sale of certified hydropower to trams and the metro, produced in Helsingin Energia's own hydroelectric power plants.

## CABLE STORE CONVERTED INTO AN ENERGY-EFFICIENT COMPUTER CENTRE

We progressed in the implementation of energy-efficient computer centres, when the Viikinmäki distribution substation and cable store converted into a computer centre started operation at the turn of the year. The quality of the waste heat from cooling the computer centre is refined so that the waste heat can be used in Helsingin Energia's district heating network to heat up buildings and tap water. The computer centre is a follow-up on the projects implemented under the Uspenski Cathedral in Katajanokka, and in Suvilahti.

We continued to modernise heating plants for operation with natural gas. The modernised Myllypuro heating plant was re-commissioned at the end of the year. With regard to oil tanks, the work will continue in the current year. The Myllypuro heating plants is one of the cleanest natural gas fuelled heating plants in Finland, as its combustion technology and flue gas systems have been significantly improved.

## EXCAVATION OF CHILLED WATER STORAGE WAS COMPLETED

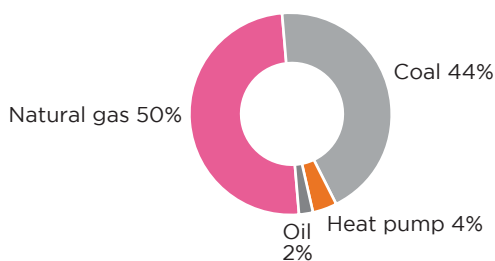
The popularity of district cooling continued to grow. In addition to business premises, hotels and shopping centres, also residential properties in Helsinki are increasingly cooled by district cooling. To be able to meet the growing demand, there is already one 11.5-million litre underground chilled water storage functioning as a cold accumulator in the district cooling system, located in the bedrock in Pasila. In the night, cold sea water is stored in the accumulator. In daytime, the stored cooling energy is utilised for cooling buildings in Helsinki.

The excavation of the second chilled water storage under the Esplanade Street in Helsinki city centre was completed in the review year. The lowest point of this cold accumulator is 90 metres below the Esplanade Street, and its volume is more than double the volume of the Pasila chilled water storage. The cold accumulator of the cooling plant will be taken into use in 2015.

### DISTRICT HEAT SUPPLY

Total 7,354 GWh

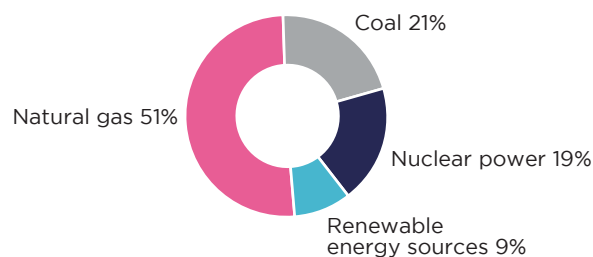
Share of combined heat and power production at the power plants in Helsinki was 88%.



### ELECTRICITY SUPPLY FOR WHOLESALE

Total 7,254 GWh

Share of electricity production at the power plants in Helsinki was 72% of which combined power and heat production was 99%.



Helsingin Energia produces district heating and district cooling in an integrated way, which means that free energy sources, such as cold sea water, waste energies and solar energy are efficiently utilised. More than 80 per cent of the district cooling energy is produced from energy sources that would otherwise be unutilised.

Already in the initial stage, extensive district cooling systems will be built in the new residential areas in Jätkäsaari and Kalasatama with the goal of reducing carbon dioxide emissions from residential buildings as well as the electricity consumption resulting from their cooling.

### SUCCESSFUL YEAR IN THE ELECTRICITY AND HEATING MARKETS

The retail sales of electricity yielded a good result. Especially the amount of electricity sold to business customers grew on the year before. A total of 5,300 GWh of electric energy was sold to customers in different parts of Finland.

The amount of district heat sold was 6,763 GWh, and the sales volume increased by 5% on the previous year. In spite of the growth, the heating requirements in 2011 and 2012 were lower than in a normal year, due to the warmer winter seasons.

The amount of district cooling sold was 87 GWh, which is approximately the same amount than on the previous year. The connected cooling load was 130 MW at the close of 2012, and the number of new district cooling sites was 30.

### MAINTENANCE SERVICES FOR POWER PLANT MODERNISATION

In the maintenance services for energy production and distribution systems, the most important projects were modernisations of Helsingin Energia's own power plants: the general overhaul of the Kellosaari gas turbine power plant, the specialist and installation services needed by the steam turbine of the Salmisaari power plant, and the maintenance services required by the automation and electrical systems of the Vuosaari A power plant, and the basic maintenance of the Vuosaari A steam turbine.

Among the key projects implemented for external customers were process equipment deliveries to the Jätkäsaari, Länsiterminaalii and Hietalahti substations for the electrification of Helsinki City Transport tramways, and the procurement and commissioning of power supply equipment for the expansion of the metro maintenance and storage facility. Neste

Oil Oyj's pumps and steam turbines were also maintained.

In maintenance services, we achieved the main profit goals set for the operating year.

### PROJECT PREPARING FOR DEVELOPMENT PROGRAMME INVESTMENTS

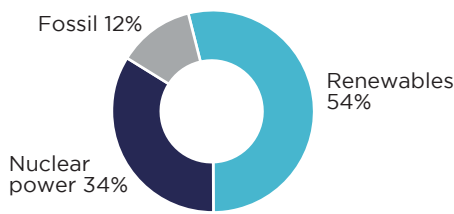
In the project and consulting services related to energy production, the year was characterised by implementation planning of Helsingin Energia's development programme investments. The fact that the Hanasaari and Salmisaari power plants will introduce wood pellets in stages constitutes a separate planning project.

The sizable planning project on the Vuosaari C power plant progressed to the EIA (Environmental Impact Assessment) stage.

In addition, planning and projecting are needed for the significant power plant investments required to reduce emissions of nitrogen oxides, sulphur dioxide and particulate matter.

Among other key projects implemented in the operating year were the modernisation of the electrical and automation systems of the Vuosaari A power plant, upgrade of the Salmisaari turbine power plant, renovation of the Kellosaari gas turbine power plant and the Ahvenkoski hydroelectric power plant, the second phase of the modernisation of the Alppila heating plant and the renovation of the Myllypuro

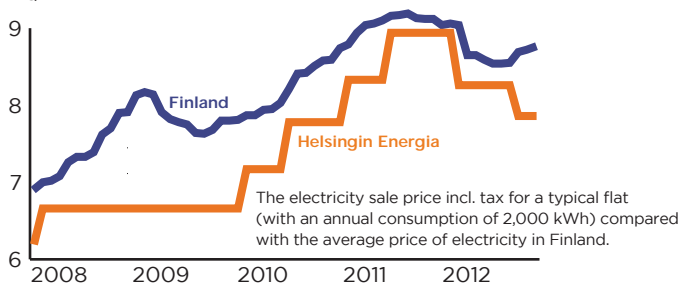
### THE ORIGIN OF ELECTRICITY SOLD TO HOUSEHOLDS AND ENTERPRISES



81% of the electricity sold was acquired from the Nordic electricity exchange. Electricity sales comprised 1.5% of separate renewable products and 15% of nuclear power separated from other production.

Specific emissions of electricity:  
Carbon dioxide 83 g/kWh, spent nuclear fuel 1 mg/kWh.  
Reference: Act on verification and notification, of origin of electricity (1129/2003).

### CONSUMER PRICES OF ELECTRICITY



heating plant to be fired by natural gas, and the Pasila underground chilled water storage, as well as the excavation of the chilled water storage to be located under the Esplanade Street.

In project and consulting services related to energy production, we achieved the main profit goals set for the year.

### ENERGY-EFFICIENT OUTDOOR LIGHTING FOR WDC PROJECTS

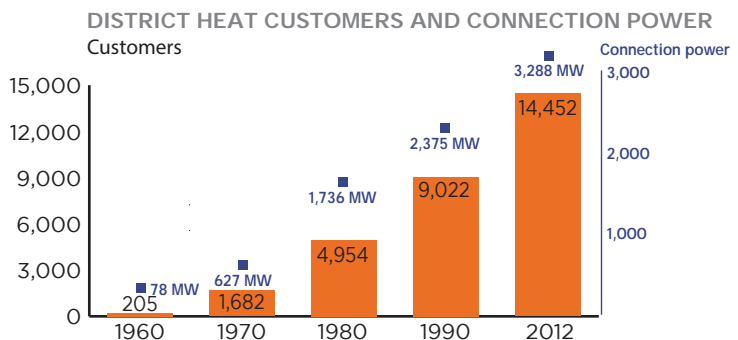
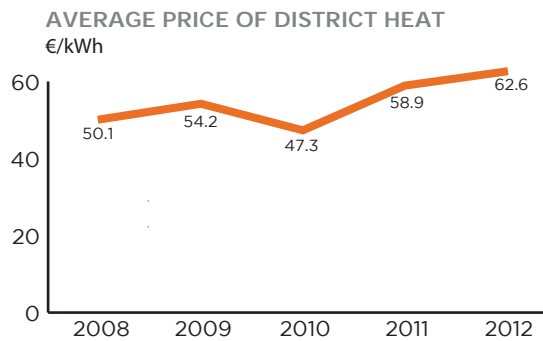
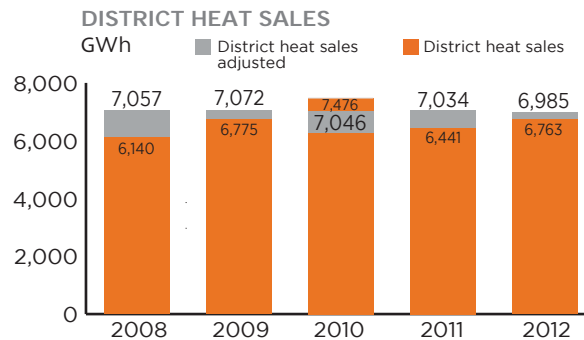
Helsingin Energia was involved with several World Design Capital Helsinki 2012 projects, such as Kruununuorenranta Oil Silo No. 468, the Tapio Wirkkala Park in Arabianranta, and the Unioninkatu Blue Line laser beam. Award-winning destinations were the lighting of the Baana Cycling Corridor and the Aurora Bridge.

Helsingin Energia supported the Lux Helsinki event for the fifth time running. The event took place in late 2012.

Our main objective was to continue producing white light of a high quality in an energy-efficient way. The number of LED light bulbs in the city increased to more than six hundred by the end of the year. The Herttoniemi test area illuminated with LED lighting was completed, and the feedback from residents has been very positive. Replacing mercury vapour lamps with more energy-efficient ones progressed during the review year, and we are now in about the middle of the project.

A total of 537 street lighting centres were upgraded. The centres are equipped with energy metering and new control devices, by which the street lighting centres and individual street lights can be remotely controlled. This way, the use of lighting is optimised and energy efficiency is improved even more. Since the start of the millennium, we have been able to reduce the lighting-point-specific energy consumption from 200 watts to 157 watts, and the consumption continues to fall.

The number of lighting points in the Helsinki lighting network increased by 700, amounting to a total of 85,300 lighting points at the close of the year.



## SUBSIDIARIES AND ASSOCIATED COMPANIES

### SECURITY OF ELECTRICITY SUPPLY HISTORICAL

Helen Sähköverkko Oy is responsible for the electricity transmission and distribution services in the Helsinki region. Turnover in 2012 amounted to EUR 120.7 million.

Total electricity consumption in the company's area of operations in 2012 stood at 4,649 GWh, showing an increase of 1.3 per cent on the previous year. The number of new connections to the electricity network was 489, making the total number of connections 31,891 at the end of the year.

The security of electricity supply in Helsinki in 2012 reached the best result in the company's history. The average outage time for customers was two minutes, which is about one-sixth of the ten-year average.

The good level of security of supplies is based on the high degree of cabling (98%) in the distribution network, which means that there are hardly any storm-related disturbances in electricity distribution. The duration of outages has also been reduced by increasing transformer automation in the distribution network.

The preparedness of outage communication has also been improved.

The new substation building in Lauttasaari was completed in late 2012, and it will be taken into use in summer 2013. In addition to Lauttasaari, the substation will also serve, e.g. the growing districts of Ruoholahti and Jätkäsaari and the Western Metro Extension. We also made a decision on building two new substations (Ilmala and Kalasatama) and the upgrade of the 110 kV switching substation in Viikinkaari. The operations of the 110 kV switching substation in Myllypuro were replaced by expanding the Mellunkylä switching substation. This freed up land for residential construction.

The distribution network was upgraded further on the basis of the network status study. Construction of the distribution network in the Jätkäsaari and Kalasatama urban development areas continued, and the development of the Kruununvuorenranta district was launched.

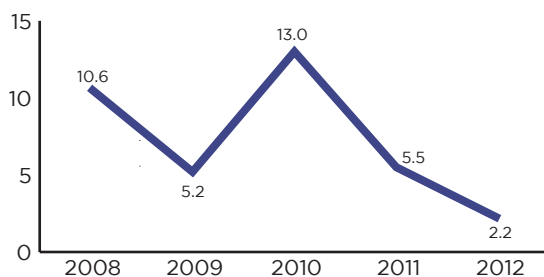
Installation of remotely read meters in the company's area of operations was completed towards the end of the year, and over 350,000 metering sites in Helsinki are now remotely read. Remote

reading makes it possible, e.g. for customers to monitor their own energy consumption hour by hour in the Sävel Plus service.

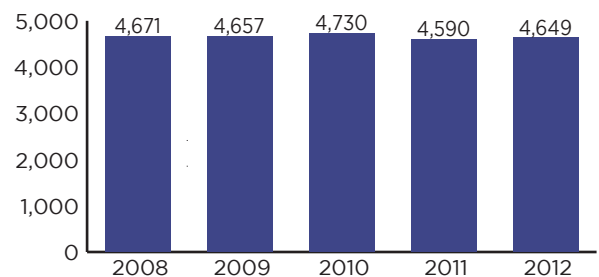
The electricity distribution network in Helsinki city centre serves a nationally significant load concentration. Due to the constantly growing loads and demands for secure electricity supplies, the load concentration will have to take on a 400 kV grid in the future. The amendment to the Electricity Market Act, which is under preparation, is scheduled to become effective in autumn 2013. After that, the Energy Market Authority will outline the solutions for grid development in the Helsinki region.

The third regulatory period on the control of reasonableness of pricing in electricity network operations started at the beginning of 2012. The Market Court gave its ruling on appeals against the regulation model on 21 December 2012. The majority of appeals were turned down, but the Market Court, nevertheless, required that the efficiency incentive of the regulation methods shall be amended, and returned the matter to the Energy Market Authority for rehandling.

**RELIABILITY OF ELECTRICITY DISTRIBUTION**  
The annual interruption duration per client, minutes



**CONSUMPTION OF ELECTRICITY IN HELSINKI**  
GWh



## INSTALLATION OF REMOTELY READ METERS KEPT BUSY

Mitox Oy produces energy metering and reading services for the needs of energy companies and real-estate customers. Company turnover in 2012 amounted to EUR 18.5 million.

The past year was busy for Mitox Oy due to the extensive installation and introduction work on remote reading projects delivered to electricity network customers. Moreover, Mitox Oy is putting the finishing touches to the remote reading project on 14,300 district heat meters in the Helsinki region, which is due to be completed by the end of 2013.

The balance settlement of distribution system operators will undergo significant changes in March 2013 and in 2015 when the Nordic balance settlement model will be adopted. The balance settlement service of Mitox Oy was updated to be compatible with the new model, and its reliability was ensured with an internal audit implemented by Helen Sähköverkko Oy. According to the end report, the process complies with excellent and appropriate practices.

In 2012, Mitox Oy launched a new service entity called MitoxMulti, which is based on open architecture. The application enables even more extensive compatibility between devices and systems than before, as well as a wider selection of energy meters.

## MORE ENERGY FROM WATER

Oy Mankala Ab is a subsidiary of Helsingin Energia. The company owns the Mankala, Ahvenkoski, Klåsarö and Ediskoski hydropower plants on the River Kymijoki.

Oy Mankala Ab owns 8.1% of Teollisuuden Voima Oy, 12.5% of Suomen Hyötytuuli Oy and 50% of Suomen Merituuli Oy.

In 2012, Mankala produced 201,127.8 MWh, Ahvenkoski 134,802.5 MWh, Klåsarö 29,704.0 MWh and Ediskoski 2,293.4 MWh of energy.

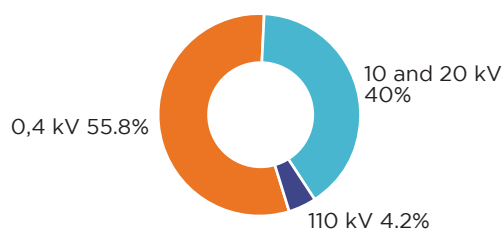
Rainbow trout and grayling were planted in accordance with the Mankala obligations. Due to problems with availability, the share of lake trout was replaced with a batch of rainbow trout, and for the same reason some of the pikeperch obli-

gation will be planted later in the year. According to the obligation of the Ediskoski power plant, sea trout, salmon and powan were planted.

The most significant investment of the year was the completion of the modernisation of the Ahvenkoski power plant where the turbine chamber, rotor, control system, screens and automation were upgraded. The surface parts of the turbine inlet channel were replaced and the generator underwent extensive maintenance work.

Total precipitation for 2012 in the Päijänne catchment area was 130% of the long-term average. As the year was very wet and one of the two machineries was out of production, plenty of water had to be run past the turbines. As a result of the modernisation project, the maximum output of Ahvenkoski increased by about 10%.

## ELECTRICITY TRANSMISSION SALE DEVIDED BY VOLTAGE LEVEL



## PLANNING PROCESS OF SIIPYY OFFSHORE WIND FARM IS IN THE FINAL STAGES

Suomen Merituuli Oy, which is owned equally by Helsingin Energia and EPV Energia Oy, aims to build two large offshore wind farms (500–1,000 MW) off the coast of the Gulf of Bothnia and the Gulf of Finland.

Suomen Merituuli Oy continued preparations for investment in two offshore wind farm projects at locations directed by the regional plans off the coast of Inkoo-Raasepori and Siipyy in Kristiinankaupunki.

The Inkoo-Raasepori project consists of approximately 60 wind turbines in the open sea area off the coast of Inkoo at a distance of some 20 kilometres from Inkoo. The Siipyy project includes about 80 wind turbines at a distance of some 10 kilometres in the sea area outside Siipyy.

In both projects, interactive EIA procedures have been carried out. According to the procedures, the wind farms can be implemented without significant harmful impacts on the environment. In Siipyy, the municipal planning process is also nearly completed. If the forthcoming water permit process progresses, it will be possible

to start building the seabed foundations of the wind farm and the wind turbines themselves within two years.

On the other hand, the Inkoo-Raasepori project has been met with opposition in the municipal planning process. In March, the City Council of Raasepori gave a decision not to allow the planning of the offshore wind farm to go ahead despite the fact that the area has been designated as a wind power area in the regional plan. In June, the City Council of Inkoo also voted against the institution of proceedings on the component master plan, which was proposed by the Technical Committee, although the offshore wind farm has a designated area in the regional plan.

## PLANNING OF THE WIND FARM PROJECTS LAUNCHED

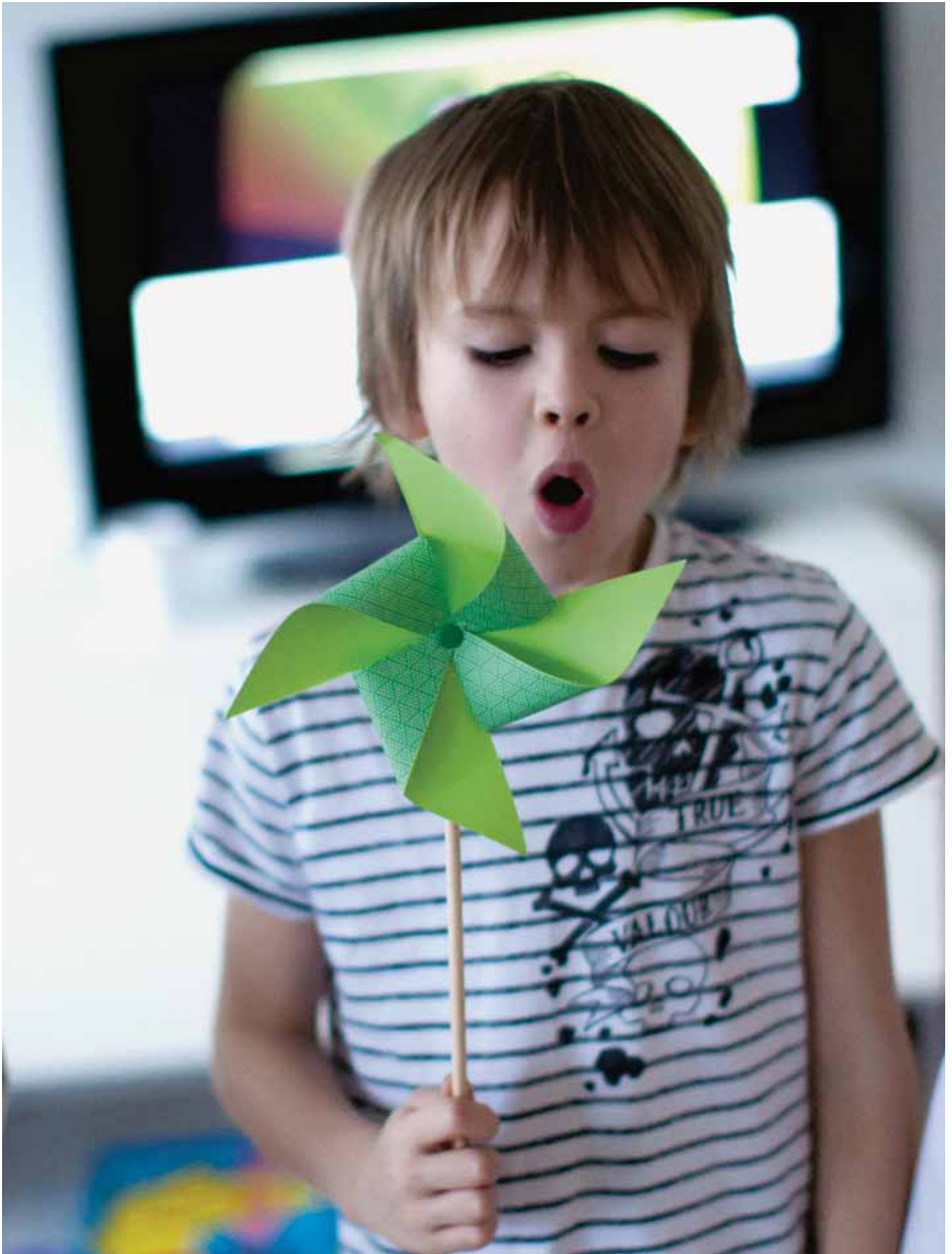
Suomen Hyötytuuli Oy is the leading wind energy producer in Finland. It is owned equally by eight Finnish energy companies. In addition to wind power production, the company's operations include marketing, research and product development. There are currently a total of 19 wind turbines in Pori and Raahe (33 MW, 85 GWh per year).

In 2012, the company made progress in many directions. The planning of the wind farm project of 10–20 turbines planned in Pyhäranta in Southwest Finland was launched. The annual electricity production of the wind farm would be 75–150 GWh. Suomen Hyötytuuli Oy has signed the necessary land tenancy agreements with the landowners of the area with the objective of launching wind power production in 2014. The environmental impact assessment procedure was carried out in spring 2012.

Plans for a wind farm to be built in the municipality of Soini were also launched. The projected number of turbines in the farm would be 25–30, producing approximately 200–255 GWh of wind power per year. The project started with wind measurements for establishing the wind conditions and making a forecast for wind energy production in the area. The project will also comply with the EIA and planning procedure.

The environmental impact assessment report on the joint venture between Suomen Hyötytuuli Oy, EPV Tuulivoima Oy and TuuliWatti Oy planned for the Korpi-Matti area in the municipality of Merikarvia was completed in the summer. The farm will consist of 30–50 wind turbines.

Helsingin Energia's subsidiaries also include Suomen Energia-Urakointi Oy and the real estate company Kiinteistö-osakeyhtiö Helsingin Sähkötalo. The most significant associated companies are Teollisuuden Voima Oyj, EPV Energia Oy, Pohjan Voima Oy, Kemijoki Oy, CLEEN Oy, and Tunturituuli Oy.



# RESPONSIBILITY CARRIES US FORWARD

For Helsingin Energia, environmental responsibility means efficient energy production, reduction of environmental impacts, and promotion of energy saving. This target bore fruit in the Corporate Reputation and Responsibility survey of TNS Gallup, organised in early 2012. According to the survey, Helsingin Energia was the best company in the promotion of its responsibility image.

## ENVIRONMENTAL STRATEGY SUPPORTS A CARBON-NEUTRAL FUTURE

During the year, we updated our environmental strategy. Its cornerstones still are sustainable development, reduction of environmental impacts and open interaction with all stakeholders.

The new environmental strategy supports our targets of striving towards a carbon-neutral Helsingin Energia and increasing the use of renewable energy sources. In addition to efficient energy production and reduction of environmental impacts, responsible operations also include helping our customers to save energy.

## SYSTEMATIC ENVIRONMENTAL OPERATIONS

In accordance with the environmental strategy, practical environmental man-

agement is implemented in the different business units of the Helen Group, i.e. where the actual operations and impacts take place.

Environmental impact management utilises operating systems, environmental handbooks for business operations, and energy efficiency systems. The entire Helen Group is committed to constant improvement of environmental operations, which is ensured with regular internal and external audits.

In addition to the operation of power plants and heating plants, energy distribution is also covered with the ISO 14001 environmental certificate. Our offices use the Green Office system, which is now ten years old.

## ENERGY EFFICIENCY PLAYS A KEY ROLE

Helsingin Energia's answer to the climate challenge is energy efficiency. It is promoted throughout the energy chain: in energy consumption, distribution and production.

Electricity, heat and cooling are produced in Helsinki at an efficiency rate that is the highest in the world, over 90 per cent.

In 2012, the efficiency of energy production was improved by modernising the Ahvenkoski hydroelectric power plant

and the Salmisaari power plant. An energy audit was also carried out on the Pato-la and Myllypuro heating plants.

An important part of energy efficiency is the sensible use of energy in homes and workplaces. More stringent energy regulations and the new energy efficiency directive also require that energy companies will have to play an increasingly active role in providing their customers with energy-related advice.

In 2012, we launched a project on reforming our energy advisory work and, as a result, our new operating model and a brand new energy exhibition facility in Sähkötalo in Kamppi will be completed in spring 2013. The aim of the new Energy Advisory Centre is to tell the story of energy: what it is and how it is produced and distributed to customers in a responsible way, while demonstrating various energy solutions for the home.

## THE TREND OF CARBON DIOXIDE EMISSIONS IS STILL FALLING

Carbon dioxide emissions from energy generation in Helsinki increased by about 4% in 2012. This was due to the somewhat higher level of energy consumption. However, the five-year moving average of carbon dioxide emissions continued to fall and was at its lowest level since 1994.

Carbon dioxide emissions in the Helsinki region amounted to about 3.4 tonnes and those from power assets outside the Helsinki region and purchased electricity to approximately 0.1 million tonnes. Specific carbon dioxide emissions caused by energy procurement were at the same level as in 2011.

Since the turn of the millennium, regional emissions in Helsinki have varied between 3.2 and 4.8 million tonnes and specific emissions from energy procurement between 240 and 330 g CO<sub>2</sub>/kWh.

### CHP PRODUCTION OF DISTRICT HEAT AT THE POWER PLANTS IN HELSINKI

Total 6,199 GWh

CHP production 88%



Separate production 12%

### CHP PRODUCTION OF ELECTRICITY AT THE POWER PLANTS IN HELSINKI

Total 5,065 GWh

CHP production 99%



Separate production 1%



## ACIDIFYING EMISSIONS HAVE SETTLED AT A LOW LEVEL

Sulphur dioxide and nitrogen oxide emissions settled at a low level. This is seen in the fact that emissions for 2012 are approaching the five-year moving average figures. As the current decade progresses, acidifying and particulate emissions will continue to fall, eventually to be halved by 2010 at the latest, by which time the full impact of the reformed environmental legislation will be felt.

Acidifying emissions increased slightly. Sulphur emissions from energy production in the Helsinki region increased by 13% on 2011, and nitrogen oxide emissions fell by 2%.

The impact of Helsingin Energia's production on the air quality of Helsinki remained low. The annual average sulphur dioxide contents at the Vallila monitoring station, which illustrates the impacts of energy generation on the air quality of Helsinki, was 2.1 Qg/m<sup>3</sup>, which is slightly lower than in the previous year (2.4 Qg/m<sup>3</sup>). This was clearly below the limit value of 20 Qg/m<sup>3</sup>, which has been set to protect the ecosystem.

In 1990, the annual average sulphur dioxide contents at the Vallila monitoring station was 16 Qg/m<sup>3</sup>. Before introducing district heating, the annual average sulphur dioxide contents in the city centre of Helsinki were typically between 50 and 100 Qg/m<sup>3</sup>.

## PARTICULATE EMISSIONS SHOWED A FURTHER FALL

Our particulate emissions were reduced on 2011. Fine particle emissions from centralised energy production in Helsinki totalled 108 tonnes while a year before they were 124 tonnes.

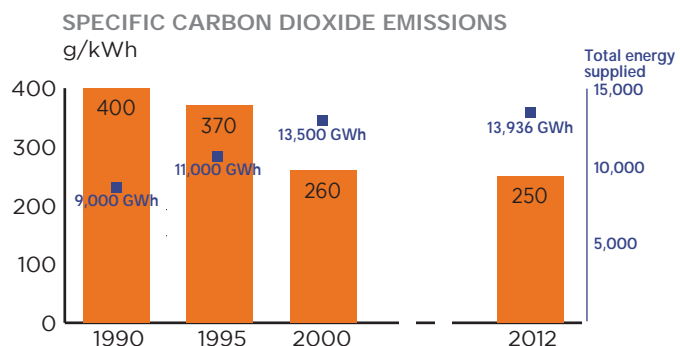
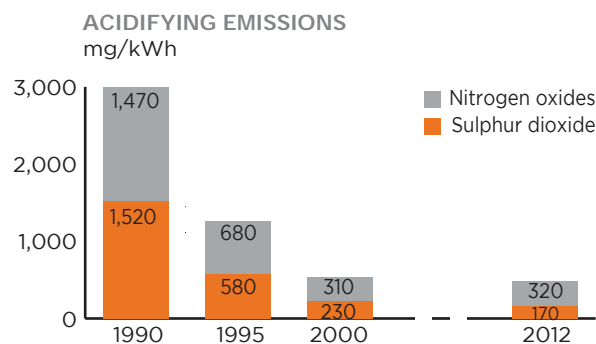
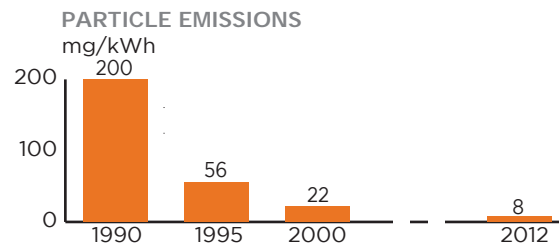
Helsingin Energia is an active participant in the fine particle programme of CLEEN Ltd, the strategic centre for science, technology and innovation for energy and environment. Measurements were carried out in connection with combustion tests carried out at the Hanasaari power plant.

## UTILISATION OF BYPRODUCTS OF COMBUSTION FELL

Utilisation of fly ash in the manufacture of cement continued, and over half of the ash was utilised. The rest of the fly ash was used for filling of quarries. The end product of desulphurisation was almost totally used in the filling of quarries.

Compared with 2011, utilisation of bottom ash was considerably reduced. As new bottom ash utilisation projects to replace the old ones were not found, the ash was transported to the intermediate storage field located in Vuosaari.

Due to district heating, thermal load into the sea is relatively low. In 2012, a very small volume of heat was discharged into the sea: 190 GWh, or 1.4% of the spent fuel energy. The load has varied between 180 and 2,200 GWh in the 2000s.



## RISING TREND IN ENVIRONMENTAL COSTS WAS BROKEN

**H**elsingin Energia's environmental costs and investments returned to their normal level. In 2012, environmental costs amounted to EUR 17.8 million, which is 17% less than in the previous year. Environmental costs accounted for 3% of the total costs (4%).

As before, flue gas cleaning resulted in the highest environmental costs in 2012. The increase in denitrification costs is explained by the fact that the Salmisaari power plant is making preparations for the Industrial Emissions Directive.

The fall in environmental costs is due to seasonal fluctuation. In 2011, more than EUR 3 million was entered under the improvement of eco-efficiency due to the improvement of efficiency in Vuosaari. As it was a non-recurrent cost, the sum spent on the improvement of eco-efficiency returned to its previous level in 2012.

Research and development in environmental protection continued to grow: a total of EUR 1.7 million was spent, which is 18% more than in the previous year. Research and development activities will be growing strongly also in the future due to the rapid change in the energy sector and the increasing importance of environmental aspects.

### INVESTMENTS IN ENERGY EFFICIENCY AND AIR QUALITY

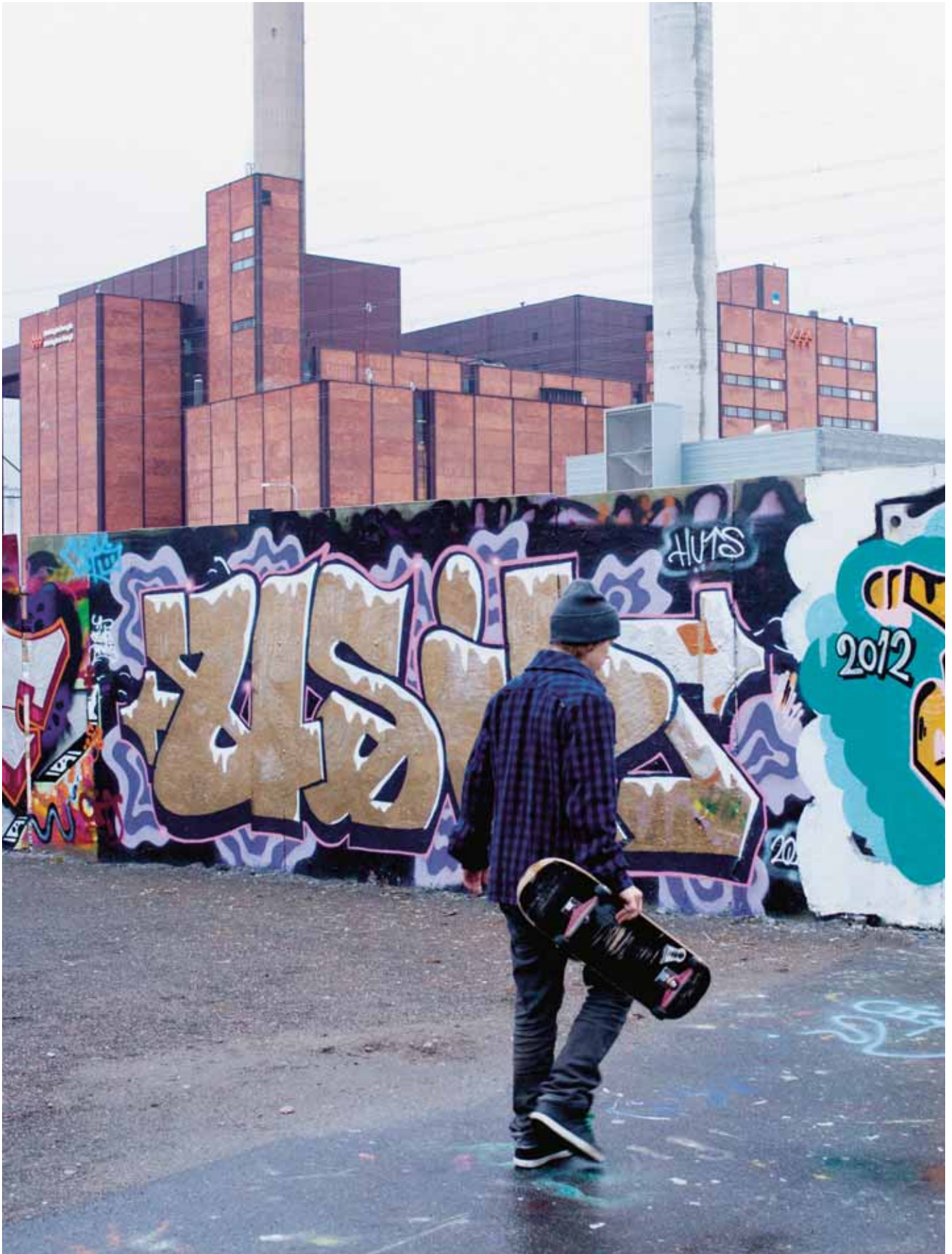
Environmental investments totalled EUR 2.1 million, which is clearly less than in 2011 (EUR 8.4 million). The fall in environmental investments is also explained by the modernisation of the gas turbine at the Vuosaari natural gas-fired power plant (EUR 6.1 million).

The greatest environmental investments in 2012 were the modernisation of heating plants (EUR 0.8 million) and the improvement of energy efficiency in the district heating network (EUR 0.6 million). We also invested in, e.g. the pellet handling system in Hanasaari and the desulphurisation of power plants.

Environmental income almost trebled on the previous year. The majority of the EUR 1.4 million accrued from the sale of obsolete machinery and equipment, and scrap.

Environmental liabilities mainly from the cleaning of contaminated land in the Hanasaari energy supply area remained unchanged.

	2012 1,000 €	change %	2011 1,000 €
<b>ENVIRONMENTAL COSTS</b>			
<b>Protection of air, soil and surface waters</b>			
Desulphurisation	4,575	-14	5,337
Denitrification	530	57	337
Removal of particles	335	-17	403
Waste management and utilisation of combustion products	2,827	1	2,805
Other waste management	825	-53	1,756
Monitoring of emissions and environmental impacts	285	43	198
<b>INTERACTION</b>			
Energy-saving advice	1,787	14	1,567
Environmental communication and marketing	503	11	452
<b>Environmental management and training</b>	1,539	-18	1,883
<b>Environmental protection research and development</b>	1,692	18	1,431
<b>Landscaping</b>	-		2
<b>Noise and vibration abatement</b>	1		3
<b>Improvement of eco-efficiency</b>	141	-96	3,243
<b>Depreciation on environmental protection investments</b>	2,761	33	2,073
<b>ENVIRONMENTAL COSTS IN ALL</b>	17,800	-17	21,490
<i>of turnover</i>	2.3%		2.8%
<i>of all expenses</i>	3.0%		4.0%
<b>ENVIRONMENTAL INVESTMENTS</b>	2,162	-74	8,433
<i>of all investments</i>	2.9%		11.1%
<b>ENVIRONMENTAL LIABILITIES</b>	18,800	0	18,800
<i>of balance sheet total</i>	1.2%		1.2%
<b>ENVIRONMENTAL REVENUE</b>	1,420	184	499



# ANTICIPATING SUSTAINABLE REGENERATION

The Helen Group has continued to focus on far-reaching development work to ensure the expertise of its personnel. In 2012, we invested especially on the retention and recruitment of excellent, skilful and motivated employees

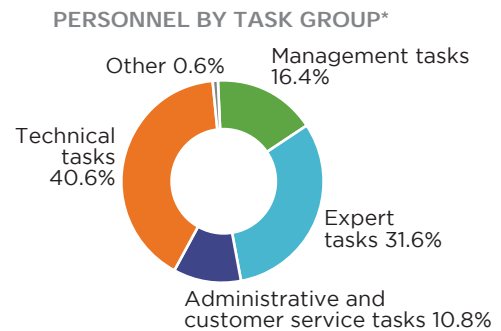
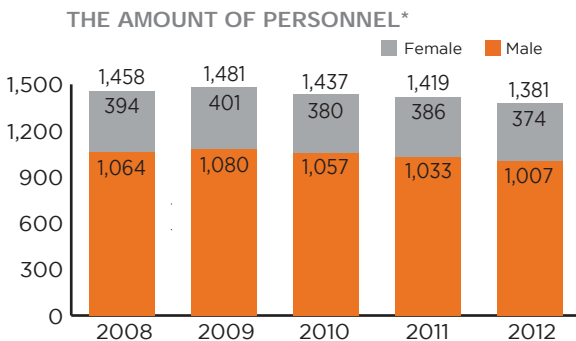
Broad and systematic co-operation with educational establishments and students is a necessity when competing for future experts. The co-operation also supports Helsingin Energia's targets in corporate social responsibility. For example, the Yrityskylä project, launched in 2012 and aimed at 6th-graders, promotes the schoolchildren's civic skills and sensible energy use. Helsingin Energia participates in the prevention of youth unemployment by offering plenty of summer jobs and opportunities for trainee and thesis work.

Helsingin Energia earned the top overall rating for the energy sector in the 2012 survey on the national corporate image organised by Taloustutkimus Oy. Its ranking rose by eight to 29 in the Finnish Professionals Survey by Universum in the survey group of professionals with an academic background in engineering. Helsingin Energia's success in the image surveys reflects its strong reputation as an employer: interest in Helsingin Energia's vacancies has remained at a high level.

The challenges related to changes in the energy sector require constant regeneration and investment in the development strategy-based expertise. In addition to various training events and development projects, expertise has been expanded with, e.g. internal mobility. Multiformal learning is supported by web-

based courses, such as the online occupational safety course at the end of 2012. Helen Group's occupational safety has continued to improve on the basis of the number and degree of severity of industrial accidents.

Heating Markets and Helen Portfolio Management were awarded the Investors in People certificate for their long-standing development work. Previously, Electricity Market has also been awarded with the certificate. In the EPSI Rating study we ranked first in customer service among energy companies.



\*Helsingin Energia, Helen Sähköverkko Oy and Mitox Oy

## HEIDI NOUSIAINEN

### Development Manager, Development of Energy Operations

I joined Helsingin Energia in 2009. At the time, my main tasks involved the profitability analyses of various projects, development of reporting and other business development tasks.

My present post is development manager in Development of Energy Operations. Current issues in my work include the implementation project of the development programme compiled by Helsingin Energia. In the project, we are investigating the possibility of replacing the Hanasaari power plant with a multifuel power plant to be built in Vuosaari. Our task is to provide the City of Helsinki with as accurate an investment estimate as possible for making a decision on the Vuosaari multifuel power plant concept in 2015.

Before moving to Helsinki, I studied at the Lappeenranta University of Technology where I gained Master of Science degrees in Engineering and in Economics and Business Administration. That has been an extremely useful combination because in my work I need understanding

of both the energy sector and economics. In the future, I want to carry on improving my energy and environmental knowledge.

The best thing about working for Helsingin Energia is that I am able to have an impact on the City's operations and I have an opportunity to fulfil my inner wish to make this world a better place. I am also happy that Helsingin Energia supports a good balance between work and family life, for example, by enabling part-time work.



## ANTON LAARI

### Process Engineer, Salmisaari power plants

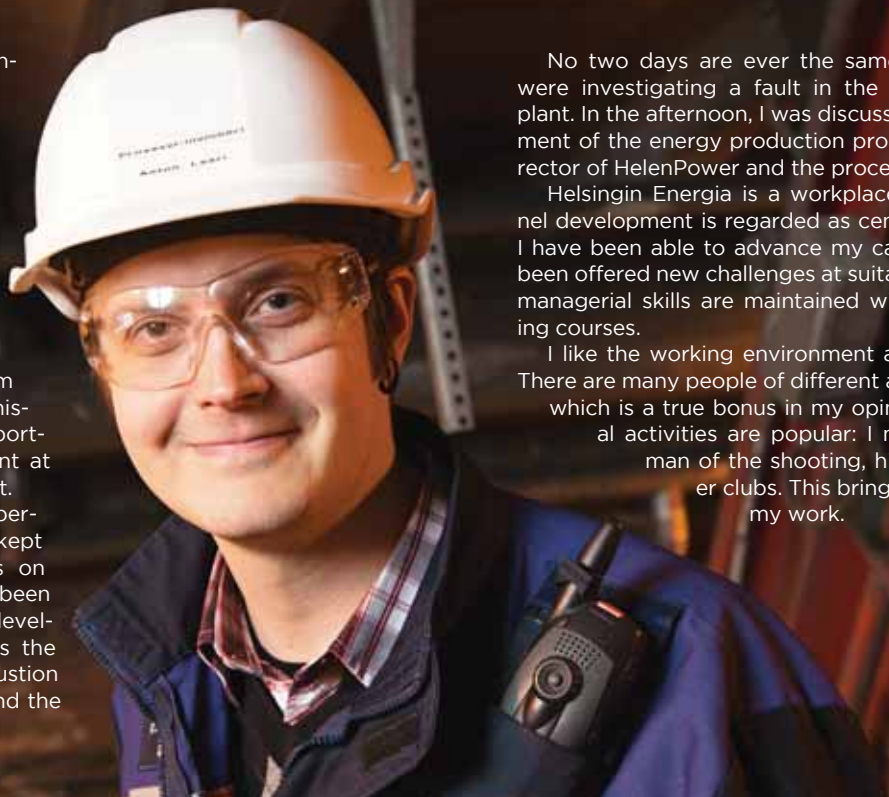
I started working for Helen-Engineering as a Bachelor's thesis worker in 2006. After I completed the thesis, I graduated as energy and environmental engineer and have been working for Helsingin Energia ever since. My current post is manager of the development and support team. The team is responsible for, e.g. emissions monitoring and reporting and their development at the Salmisaari power plant.

The change in the operating environment has kept us Salmisaari employees on our toes. Recently, I have been busy working on various development projects, such as the preparation of bio-combustion to be launched in 2014 and the automation upgrade.

No two days are ever the same. Yesterday we were investigating a fault in the desulphurisation plant. In the afternoon, I was discussing the development of the energy production process with the director of HelenPower and the process team.

Helsingin Energia is a workplace where personnel development is regarded as centrally important. I have been able to advance my career, and I have been offered new challenges at suitable intervals. My managerial skills are maintained with regular training courses.

I like the working environment and people here. There are many people of different ages in our team, which is a true bonus in my opinion. Recreational activities are popular: I myself am chairman of the shooting, hiking and snooker clubs. This brings added value to my work.



## CUSTOMERS APPRECIATE HONESTY AND AN EFFICIENT SERVICE

Excellent customer service is at the heart of Helsingin Energia's operations, and we are working hard to achieve it every day. Our employees' dedication to quality assurance is reflected by the numerous awards that Helsingin Energia was granted also in 2012.

Helsingin Energia has often ranked high in the annual EPSI Rating survey. This was also the case in 2012: Helsingin Energia scored highest with private and corporate customers in the comparison between power companies. Our customer service was also awarded with Excellence Finland's three-star EFQM Recognized for Excellence prize.

At Helsingin Energia, excellent customer service means ensuring a secure supply

of electricity and heat, developing future energy solutions, and offering sustainable and smart products, and last but not least, having a friendly attitude in customer service. Helsingin Energia serves its city in a diverse way. In 2012, we launched the renovation of the Energy Advisory Centre located in Sähkötalo in Kamppi. After the reopening, we will be able to offer information about energy production and ways to save energy even more extensively than before.

District heat and district cooling are examples of sustainable and smart products. District heat is mainly produced with low-emission and safe natural gas. District cooling, on the other hand, also brings more renewable energy to district heat when the heat gathered from a property's

cooling circuit is transmitted to the district heating network. Helsingin Energia's district heating and cooling customers appreciate the ease, low prices and energy-efficiency of the products.

For the customers of Helsinki's electricity network services, 2012 was a good year with respect to security of supply – the average outage time for customers was the shortest in history. The significance of a reliable electricity supply for customers has been emphasised in the past few years, and more and more attention is now paid to it. Awareness about consumption and environmental issues is also growing among Helsinki residents. This is seen, for example, in the growing popularity of Helsingin Energia's energy consumption monitoring service Sävel Plus.



## DISTRICT COOLING IS A SENSIBLE PARTNER TO DISTRICT HEAT

### Housing company Lemminkäinen Talo Oy

Lemminkäinen Talo Oy selected district cooling for housing company Asunto Oy Helsingin Hymni because, as a result, there was no need to use condensers and refrigerants in the building. The decision was made on the basis of the environmental friendliness of a refrigerant-free system.

Co-operation with Helsingin Energia was smooth and uncomplicated. During the Alvar Aallon katu 3 project, meetings were held approximately every four weeks, and the decisions made in these meetings were implemented as agreed. Lemminkäinen Talo Oy is also expanding district cooling to its Alvar Aallon katu 5 and Töölönlahdenkatu 3 addresses and possibly also to other projects.

### Forum

Forum, which is one of the most historic and best-known shopping centres in Finland, was connected to the district cooling network in October last year.

Forum is exploring ways of increasing the appeal of service provision in the city centre, also taking into account climate issues with responsible infrastructure solutions. Joining the district cooling network was a natural move in connection with the expansion of the shopping centre.

*“The decision was made on the basis of the environmental friendliness of a refrigerant-free system.”*

Forum found it important that district cooling is mainly produced from sea water and other renewable energy sources which would otherwise be unutilised, without

using refrigerants that are harmful to the environment. Selecting district cooling is the most effective way to reduce the carbon dioxide emissions of the building in the Helsinki city centre. District cooling is also used for transmitting the heat produced in the Forum shopping centre to the Helsinki district heating network where it is recycled to heat up buildings and tap water.

### Skanska

Skanska selected district heat and district cooling for its new headquarters because it wanted to make the building as energy efficient as possible. Constructed by Skanska Commercial Development Finland, the building is part of the Manskun Rasti office complex in Ruskeasuo in Helsinki.

The headquarters was recently awarded with the highest, platinum-level certificate in the LEED environmental rating system. The recognition was given, above all, for the energy efficiency of the building. Its total energy consumption is 75 kWh/m<sup>2</sup>/year. All four office buildings in Manskun Rasti also meet the EU Green Building criteria, i.e. their energy consumption is at least 25 per cent lower than required by the current construction regulations.

In March 2012, Skanska was awarded with the Vuoden Kauko special mention in Helsingin Energia's annual district heating and cooling stakeholder seminar. The special mention is given to a person or organisation promoting energy-efficient use of district heating and cooling in their operations.

Skanska's operations emphasise the minimisation of environmental impacts caused by its operations and the choices it makes. The company provides district heating and cooling to Helsinki residents in an efficient way, using safe and healthy premises with advanced building technology. Skanska has combined the environmental rating of properties, energy saving, and ambient temperature control of buildings in an exemplary way using smart district heating and cooling solutions.

## CONSUMERS ARE INCREASINGLY KNOWLEDGEABLE

### Delifox Restaurants

Delifox owns a total of five restaurants in Helsinki, e.g. Vastarannan Kiiski and Punavuoren Ahven, the Black Door pub, the Stage rock bar, and a new restaurant to be opened in Eerikinkatu. The restaurants are popular among local residents.

*“Outstanding and long-term co-operation, reliability and reputation carried a lot of weight.”*

Locality was also important to Delifox when it was selecting its electricity company. Outstanding and long-term co-operation, reliability and reputation also carried a lot of weight.

Delifox also appreciates Helsingin Energia's active development of services. One of the most important services in Delifox's opinion is that electricity consumption is clearly displayed. The electricity consumption of various restaurants can be compared with one another in the Sävel Plus service, which will reveal, for example, any faulty equipment. Real-time electricity invoicing also makes budgeting easier.



The Directors of the Helen Group are Director Marko Riipinen, Heating Market; CEO Risto Harjanne, Helen Sähköverkko Oy; CEO Lassi Metsälä, Mitox Oy; Director Ari Laine, HelenPower; Director Jarmo Karjalainen, Customer Service and Communications; Director Markku Saukkonen, HelenEngineering; CEO Pekka Manninen, Helsingin Energia; Director Kauno Kaija, Group Services; Director of Business Development Markus Lehtonen; Chief Legal Counsel Jaana Eklund; Director Harri Mattila, HelenPortfolioManagement; Environmental Director Martti Hyvönen; Director Kaj Grönroos, HelenService; Director Jukka Niemi, Electricity Market.

### HELSINGIN ENERGIA BOARD

The Helsingin Energia Board with its nine members develops and supervises Helsingin Energia's operations. The Board usually makes decisions at the CEO's proposal.

### CEO

Helsingin Energia's CEO is responsible for Helsingin Energia's business operations and their development. The CEO acts as Chairman of the Management Group and the Group's Directors.

### MANAGEMENT GROUP

Helsingin Energia's Management Group, which has six members, is responsible for communicating on matters relating to Helsingin Energia's operations to the directors of business units and the employee representative, and acts in support of the CEO in the preparation of matters.

### DIRECTORS

The Directors of the Helen Group are responsible for acting in support of the CEO of Helsingin Energia and the managing directors of its subsidiaries in the processing and communication of matters and preparation of decision-making. The directors determine the Group-level strategic policies in a comprehensive way, thus providing guidelines for groups focusing on special issues.

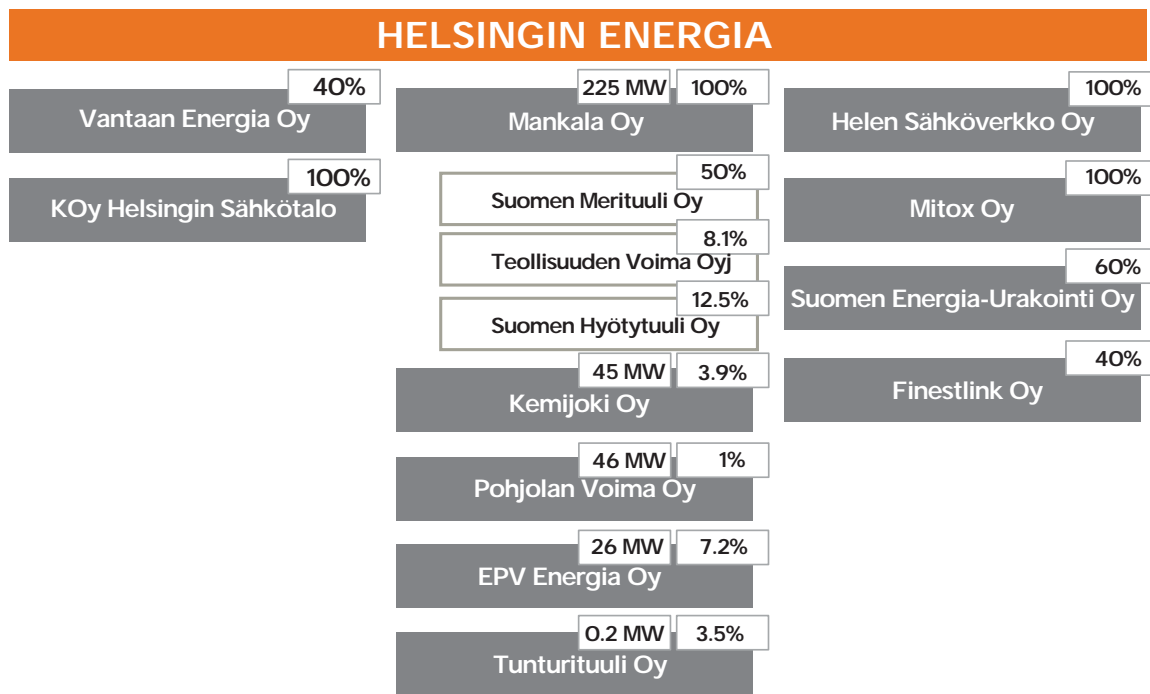
### CORPORATE GOVERNANCE AND RISK MANAGEMENT

Helen Group's corporate governance with respect to public company Helsingin Energia is based on the law, ordinance, corporate governance guidelines of the City of Helsinki, and good corporate governance within Helsingin Energia. The corporate governance of the Group's subsidiaries is based on the law, articles of association, Helen Group's good corporate governance, and the key principles of the City's management and administration.

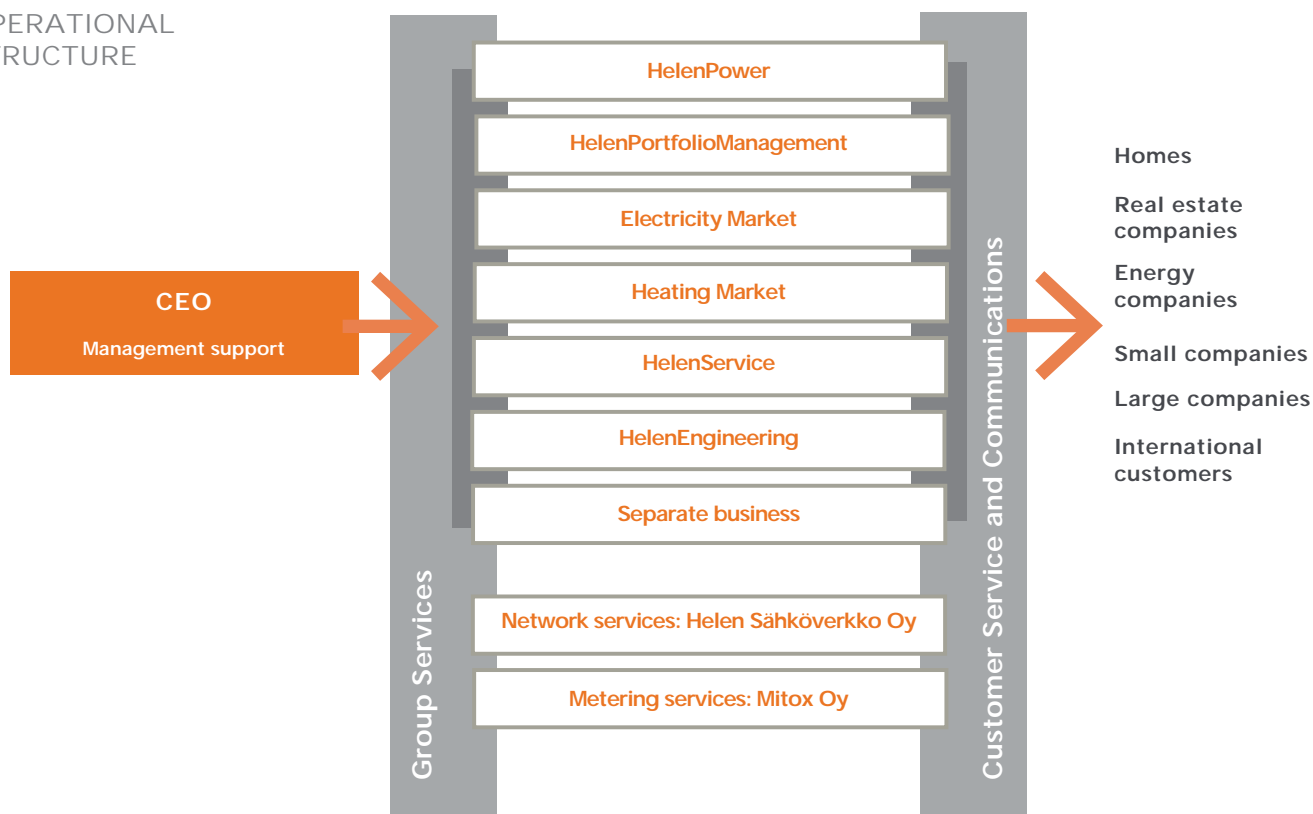
Helen Group complies with the Finnish Corporate Governance Code 2010, where applicable, e.g. with respect to risk management principles. Helsingin Energia's Board decides on Helsingin Energia's risk management principles. The Boards of Directors of the subsidiaries, which are acting according to the rules of procedure they have approved, will approve the risk management policies and principles of internal control of the companies.



GROUP AND OWNERSHIP



OPERATIONAL STRUCTURE



# TOWARDS A CARBON-NEUTRAL FUTURE

## Strategic goals

We strive for **profitability and growth**

We take an active part in **climate change mitigation**

Our customers and other interest groups have **confidence in our operations**

A strong **corporate culture** helps us to succeed



# Four steps to implementation

## 1. WE DEVELOP ENERGY EFFICIENCY

Improvement of energy efficiency is the fastest and most effective way to mitigate climate change. Helsingin Energia aims to be a forerunner in energy efficiency. We strive to optimise energy efficiency in all parts of the chain: in production, distribution and consumption.

The efficiency of our combined heat and power plants is already among the best in the world. With systematic power upgrades, we are seeking opportunities to produce energy as efficiently as possible also in the future. Energy efficiency is also improved in connection with the modernisation of heating plants.

Helen Sähköverkko Oy, which is responsible for electricity distribution in the Helsinki region, has made significant investments to improve energy efficiency in electricity distribution. The pilot project on load control, which was launched in 2012, will be continued. By shifting consumption to periods of lower electricity consumption, it is possible to make significant reductions in peak electricity production which, in turn, reduces emissions.

Helsingin Energia is investing strongly in energy advisory services for consum-

ers. Customers are given personal advice on improving the efficiency of their own energy use at Helsingin Energia's refurbished energy exhibition facility, on the company website and in the social media. Finland's first and most advanced energy consumption monitoring service, Sävel Plus, is being developed further: with the service, all customers have the opportunity to obtain information about their own consumption of electricity, district heat and district cooling at the hourly level.

## 2. WE INCREASE THE USE OF RENEWABLE ENERGY

Helsingin Energia is making preparations for increasing the use of biofuels at the Salmisaari and Hanasaari power plants. As from 2014, the share of biofuels in those power plants will be 5-10 per cent, corresponding to about 100,000 tonnes of wood pellets a year. Necessary modification investments will be investigated at the same time if the City Council decides to increase the share of biofuel to 40 per cent in 2015.

As a parallel alternative we are preparing a new multi-fuel power plant construction to Vuosaari.

We are making substantial investments in studying the possibilities of utilising biofuels. Helsingin Energia's power plants need a lot of fuel, and there is only a limited space available for fuel storage in the middle of the city.

Helsingin Energia is taking part in a joint venture together with Gasum Oy and Metsä Fibre Oy to establish the possibilities of refining biogas at a facility operating in connection with a pulp mill. The biogas could be used as fuel in the present natural gas-fired plants in Vuosaari.

A research project concerning the utilisation of so-called bio coal, i.e. torrefied biomass, is also underway. In the project, the use of torrefied biomass on an industrial scale is investigated for the first time.

Hydropower is an essential part of the Helen Group's energy procurement. Our hydropower capacity comes through our subsidiaries and associated companies on the Rivers Kymijoki and Kemijoki. The hydroelectric power plants have undergone power upgrades with technical modifications. The latest hydropower plant that has been modernised is the Ahvenkoski plant along the River Kymijoki. The objective is to utilise existing hydropower capacity as efficiently as possible.

## POLICIES OF THE DEVELOPMENT PROGRAMME

In January 2012, the City Council of Helsinki approved Helsingin Energia's Development Programme Towards a Carbon-Neutral Future. The programme focuses on climate targets, increasing use of renewable energy, and issues related to air quality and urban space. The objective is for the City Council to be able to decide on the basis of the latest information in 2015 wheth-

er to build a new multifuel power plant in Vuosaari or whether to implement investments to modify the Hanasaari and Salmisaari power plants, which would make it possible to increase their share of biofuel to 40 per cent. Once realised, the development programme will meet the set climate targets and create preconditions for a carbon-neutral future.

Helsingin Energia procures wind power through Suomen Hyötytuuli Oy and Tunturituuli Oy. In order to increase wind power production, we are planning offshore wind power outside Siipyy and Inkoo-Raasepori in partnership with EPV Energia Oy through Suomen Merituuli Oy. On realisation, the amount of electricity generated by the offshore wind farm of Siipyy with its 80 wind turbines would correspond to the amount of electricity consumed by over half a million one-bedroom apartments.

Utilisation of renewable energy outside the district heating network is piloted in a project where an extensive hybrid heating solution will be implemented at the Sakarinmäki School Centre in Östersundom. About 80-100 per cent of the heat needed by the school centre will be produced with renewable energy: solar heat, geothermal heat and possibly bio-oil. The school complex project is the first stage of a more extensive renewable energy development taking place in Östersundom.

### 3. WE DEVELOP SMART ENERGY SYSTEMS

The district cooling network in the Helsinki region is being expanded further. District cooling is the most energy-efficient and ecological cooling method, and it reduces carbon dioxide emissions. In district cooling, it is possible to capture surplus heat produced in properties and utilise it in the production of district heat. The objective is to offer district cooling even more extensively also for the cooling of residential properties.

The Helen Group is a forerunner in the development of smart grids and especially in the promotion of the so-called dynamic load control. Balancing of consumption peaks is important in terms of the availability of the electricity network, but it can also be used for reducing carbon dioxide emissions to a significant extent.

New solutions are being taken into use in existing properties and in new residential construction sites.

### 4. WE OFFER NEW PRODUCTS AND SERVICES

Helsingin Energia offers its customers an increasing number of services that enable energy-efficient and comfortable living conditions. The services include solutions with solar panels, which can also be used for generating electricity and selling it at a spot market price to Helsingin Energia.

The new services also meet the growing needs of housing co-operatives to make preparations for more widespread use of electric vehicles. An increasing number of various solutions for charging poles are offered to all customer groups.

Investments are made in the development of new services, and users are encouraged to take part in the development work as widely as possible already in the research and piloting stages.



# Stakeholder work in support of strategy implementation

## CITY RESIDENTS HAVE A VOICE IN DEVELOPMENT PROGRAMME IMPLEMENTATION

Helsingin Energia's development programme necessitates an Environmental Impact Assessment Procedure (EIA), which will start in the spring 2013. Interaction with city residents and other stakeholder groups is an important part of environmental impact assessment. The interactive work began with a qualitative survey to chart the residents' expectations regarding Helsingin Energia's development programme.

As the main channel of interaction, the blog 'Uutta voimaa' (New Power) was set up, where experts from Helsingin Energia report on the progress of the development programme, answer questions, and receive ideas and feedback. A website has also been set up for the EIA process, tracking the progress of the investigations related to it. Information on EIA and the development programme is also provided through newsletters as well as the [helen.fi](http://helen.fi) website and Helen magazine.

Power stations are typically visited by stakeholder groups interested in the energy sector, such as students and professionals in the field. In addition to normal visiting activity, numerous open doors events have been arranged, where people have been shown around the plants and told about the development programme and the changes it will bring to energy production.

## NEW KIND OF LIAISON WORK WITH SCHOOLS

Helsingin Energia has long traditions of liaison work with schools, particularly in connection with advice on energy use. New type of collaboration with schoolchildren took place in conjunction with the renewable energy pilot project at Sakarinmäki School Centre, when the pupils were involved in thinking about new ways of producing and consuming energy.

Energy-themed workshops were organised for the pupils, with almost 300 children of different ages taking part. The workshops were the first phase of Helsingin Energia's and Sakarinmäki School Centre's school liaison work entitled 'Energiakaveri - Energikompis' (Energy Friend). In the next phase, the teachers will be included to generate ideas on how the daily life at school and increasing pupils' understanding of energy issues can be integrated in the teaching.

The school is moving over to using renewable energy sources, and it wants to make the change obvious also from the children's point of view. In the workshops, the pupils looked for and identified concrete things related to heating energy consumption at the school and considered how heat will be generated after 2014, when the project is completed. The students have been genuinely enthusiastic, and their feedback has exceeded expectations.

Sakarinmäki School Centre comprises Finnish- and Swedish-speaking elementary schools, lower secondary schools and a daycare centre. The total number of pupils at the school centre is about 370.

## INTERESTING SUGGESTIONS FOR CITY SPACE FROM 'CITY TEMPERATURE' DESIGN COMPETITION

Helsingin Energia organised a design competition entitled 'Stadin lämpötila' (City Temperature) with the aim of developing new district heating and cooling product innovations for public spaces, to create a new dimension and experience in the urban environment. The competition participants were design, architecture and energy technology students and newly qualified professionals.

The first prize was won by an architecture student at Aalto University, Maiju Suomi, and Architect Tuukka Päivärinne with their work 'Magnolia'. The suggestion creates an oasis in the city, where warm boulders provide a place for relaxing even in cold weather.

Second prize went to Kristian Forsberg, an architecture student at Aalto University, for his work 'Sopukat'. In the suggestion, a seat for bus and tram stops benefits from district heating in winter and district cooling in summer. The winner of the third prize was Landscape Architect Lauri Lemmenlahti with his work 'Lämpöpiste', which is a combination of a seat and a meeting place.

Helsingin Energia will evaluate the possibilities of implementing the works and possible locations during the spring.



## NEW ENERGY AND TECHNOLOGY

**H**elsingin Energia's strategic goal is to take an active part in the mitigation of climate change and to strive for sustainable growth in its business operations. Helen Group's research and development activities support the implementation of these goals and enable a carbon-neutral future. Key themes include bioenergy, smart energy systems, electric vehicles, and local renewable energy production.

During the year of operations, extensive utilisation of bioenergy in different forms was the most important research area in energy production. There were several ongoing research projects on torrefied biomass. The biogas development concept in co-operation with Gasum Oy and Metsä Fibre is progressing well. Test combustion of pellets started at the Hanasaari power plant in October 2012.

*"We aim to enable electrification of traffic by developing the charging infrastructure."*

A smart energy system consists of combined heat and power generation and supplementary microgeneration, and energy automation. The Smart Kalasatama project aims to build a model smart grid area in Kalasatama in Helsinki for piloting of new solutions. A smart energy system includes, for example, local renewable electricity generation, an infrastructure that supports electric vehicle use, energy storage, and automation of homes and commercial buildings.

Storage of electric energy is a key part of a smart energy system: it can accommodate the variations of locally produced solar and wind power and consumption fluctuations. Storage enables flexible use of the electricity network while ensuring availability of electricity also in exceptional circumstances. An energy storage facility will be built in Kalasatama: its discharge capacity will correspond to the peak output of approximately 4,000 solar panels.

*"Load control of electric heating improves the opportunities to utilise distributed renewable energy."*

The development projects are implemented in relation to district heat production and demand flexibility. Renewable energy and hybrid systems in heating are developed in the local energy system project in Östersundom. New solutions for emission reduction were implemented in peak-load and reserve heating plants. The demand flexibility models for district heating are studied in co-operation with the Aalto University.

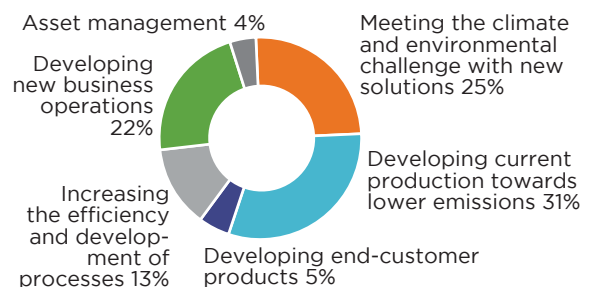
At the end of last year, Helen Sähköverkko Oy was the first company in Finland to introduce a method of controlling remotely read meters where

consumption peaks are balanced by shifting the electricity use of sites with electric storage heating to the night-time hours when the market price of electricity is at its lowest. Load control of electric heating balances consumption peaks and improves the opportunities to utilise distributed renewable energy. It is also the first step in the utilisation of the opportunities provided by the smart grid, forming a basis for new demand flexibility services in electricity.

Electric vehicle charging services are actively developed. We aim to enable electrification of traffic by developing the charging infrastructure. During the operating year of 2012, the first general plan for an electric vehicle charging network in Helsinki was completed, consisting of more than 100 charging bays. In the autumn, we joined our partners to start preparation for a nationwide model for common use at electric vehicle charging bays. The plan will be completed in late spring 2013.

CLEEN Ltd is the strategic centre for science, technology and innovation for energy and environment, and it promotes the research activities and collaboration of its partners. Helsingin Energia takes part in a number of CLEEN projects focusing on smart grids and the energy market, energy efficiency, carbon capture technologies, and measurement and monitoring of environmental impacts.

DISTRIBUTION OF R&D COSTS



## **SGEM**

### **(Smart Grids and Energy Markets)**

The aim of the Smart Grids and Energy Markets programme is to develop energy markets that support energy efficiency and environmental solutions and to outline the future electricity grid infrastructure.

## **CCSP**

### **(Carbon Capture and Storage Program)**

CCSP is a research programme for carbon capture and storage (CCS) where Helsingin Energia's main focus is on issues related to cogeneration and biofuels.

Although CCS is a widely researched subject on the global scale, there is not much research elsewhere focusing on combined heat and power generation.

## **MMEA**

### **(Measurement, Monitoring and Environmental Assessment)**

The aim of the measurement, monitoring and environmental assessment research programme is to develop new methods for measuring and observing the status of the environment and emission sources.

## **EFEU**

### **(Efficient Energy Use)**

The EFEU study utilises a systematic, method-based approach in the measurement, examination and optimisation of energy efficiency.





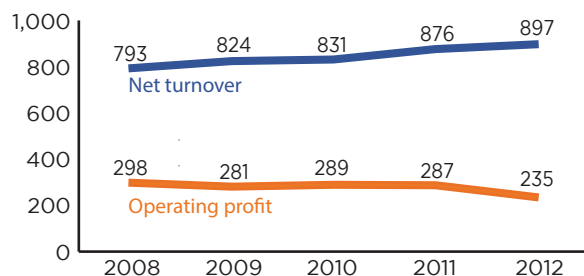
# HELEN GROUP FINANCIAL STATEMENTS AND REPORT ON OPERATIONS 2012

Key Figures	34
Report on Operations for the Financial Year	35
Profit and Loss Account	39
Balance sheet	40
Cash Flow Statement	42
Notes to the Financial Statements	43
Auditor's report	47

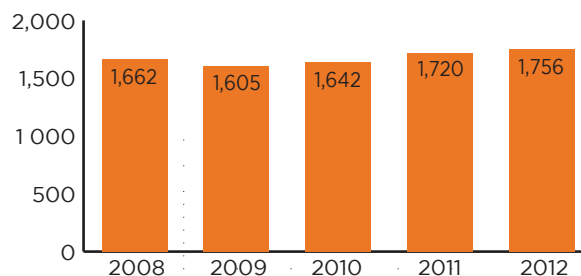
# Helen Group Key Figures

	2012	2011	2010	2009
<b>Net turnover</b> (M€)	<b>897</b>	876	831	824
<b>Operating profit</b> (M€)	<b>236</b>	287	289	281
<b>Total assets</b> (M€)	<b>1,756</b>	1,720	1,642	1,605
<b>Return on investment %</b>	<b>15</b>	19	20	19
<b>Equity ratio %</b>	<b>59</b>	62	63	63
<b>Investments</b> (M€)	<b>130</b>	109	120	120

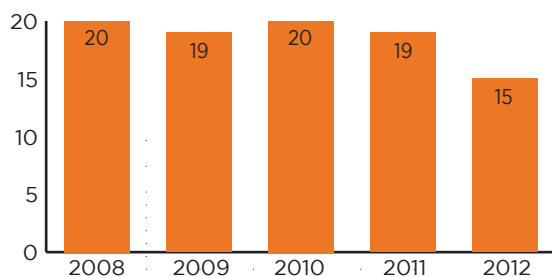
**NET TURNOVER AND OPERATING PROFIT**  
€ in millions



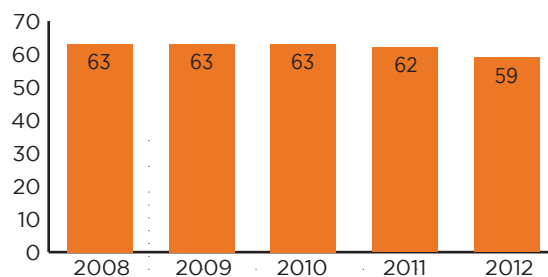
**TOTAL ASSETS**  
€ in millions



**RETURN ON INVESTMENT**  
%



**EQUITY RATIO**  
%



## Computations of indicators

### Return on investment, %

$$\frac{\text{Net profit before extraordinary items + other interest and financial expenses}}{\text{Average invested capital}} \times 100$$

### Equity ratio, %

$$\frac{\text{Equity + reserves}}{\text{Total equity and liabilities - advances received}} \times 100$$

# HELEN GROUP'S REPORT ON OPERATIONS FOR THE FINANCIAL YEAR 1.1. - 31.12.2012

**Helen Group** is a commercial entity, which consists of the parent company Helsingin Energia and its wholly owned subsidiaries Helen Sähköverkko Oy, Mitox Oy, Oy Mankala Ab, the Real Estate Company Helsingin Sähkötalo, as well as of Suomen Energia-Urakointi Oy, 60% owned by Helsingin Energia. The associated companies of the Helen Group are Suomen Merituuli Oy, Vantaan Energia Oy and Finestlink Oy.

In the accounts of the City of Helsinki, Helsingin Energia is included in the financial statements of the City of Helsinki, and the subsidiaries of Helen Group are included in the consolidated financial statements of the City of Helsinki.

As a municipal corporation, **Helsingin Energia** operates in the whole Finnish electricity retail market and in the Nordic electricity wholesale market. Over 90% of the heat demand in Helsinki is covered with district heat, and district cooling is rapidly expanding in Helsinki. Helsingin Energia's operations model is based on unbundled business and service operations in compliance with the Electricity Market Act, the natural Gas Market Act and the Act on Competition Restrictions. The corner stones of Helsingin Energia's business operations are competitiveness, operational reliability and environmental awareness.

Helsingin Energia generates electricity, heat and cooling for its customers at its own power plants located in Helsinki. In addition, the company procures electricity through its power assets. Energy-efficient combined heat and power generation at the power plants in the Helsinki area accounts for more than 70% of the electricity supplied and 84% of the heat produced. The rainy year increased hydropower production by almost 30%, and its share of electricity procurement exceeded 8%. As much as 80% of the cooling energy supplied by Helsingin Energia comes from emission-free energy sources. Carbon dioxide emissions from energy production in Helsinki remained at the previous year's level, amounting to approx. 3.4 million tonnes.

Helsingin Energia's production for 2012 was as forecast. In addition to combined heat and power generation, district heat production used heating plants and the Katri Vala Heating and Cooling Plant to augment the heating requirement in the exceptionally cold early part of the year. District heat sales to customers were 6.8 TWh, 5% higher than in 2011. At 7.5 TWh, total electricity sales remained at the previous year's level. District cooling production utilising cold sea water, the heat content in purified waste water and, in summertime, the excess energy of combined heat and power generation, totalled 87 GWh.

## Sales trend

The turnover of Helsingin Energia was EUR 767 million, showing an increase of EUR 8 million on the previous year. The revenues from electricity sales fell by EUR 28 million, while those from heat sales increased by EUR 34 million. The increase in the revenues from heat sales was mainly due to an increase in fuel taxes. Other revenues include those from service sales, connection fees for heating, and gas sales.

## Subsidiaries

**Helen Sähköverkko Oy** concentrates on electricity network operation in compliance with the Electricity Market Act and provides transmission and distribution services to its customers in the Helsinki area. Helen Sähköverkko Oy's turnover accounts for approx. 13% of Helen Group's turnover. The turnover for the review period was EUR 121 million. Helen Sähköverkko Oy had 109 employees at the end of the review year.

Total electricity consumption in Helsinki was 4.6 TWh (4.5 TWh in 2011).

**Mitox Oy** provides a wide range of energy metering services to companies operating in the energy and real-estate sectors. Mitox Oy provides the metering services required by Helsingin Energia and Helen Sähköverkko Oy. Mitox Oy had an average of 96 employees during the accounting period.

The company operates in a competitive metering market. The sector's total volume is on the increase. Behind the increase is the fact that energy companies increasingly invest in remote reading of energy meters. Another reason is that the need for metering increases as the electricity market develops.

Mitox Oy's turnover for 2012 stood at EUR 18.4 million. The bulk of the turnover came from selling metering services to the Helen Group.

**Oy Mankala Ab** is a hydropower company owned by Helsingin Energia. The company owns the Mankala, Ahvenkoski, Klåsarö and Ediskoski hydropower plants. Oy Mankala Ab has an 8% share in Teollisuuden Voima Oy.

In the operating year, the Mankala hydropower plant produced 201,128 MWh, Ahvenkoski 134,803 MWh, Klåsarö 29,704 MWh and Ediskoski 2,293 MWh of energy.

Oy Mankala Ab operates on the absorption principle. The company's turnover for the financial year was EUR 34 million.

**Real Estate Company Helsingin Sähkötalo** is responsible for the administration and development of the Sähkötalo real estate. Sähkötalo also functions as Helsingin Energia's Main Building.

**Suomen Energia-Urakointi Oy** is a service company specialised in electronic urban technology, providing design, installation, operation and data transmission services for networks and equipment related to electricity transmission, distribution and use. Helsingin Energia owns approx. 60% of the company. The other owners are Vantaan Energia Oy and Lahti Energia Oy.

Suomen Energia-Urakointi Oy's turnover for 2012 was EUR 36 million. The company's business operations consist of installation and design activities. The bulk of the sales volume comes from installation activities, which mainly consist of construction and maintenance of medium and low-voltage networks, traffic lights and lighting networks. The focus of design activities is on outdoor lighting systems.

### **Group turnover**

The turnover for the operating year was EUR 897 million, showing an increase of EUR 21 million on the previous year.

### **Expenses**

Total expenses excluding planned depreciation grew by EUR 62 million. The growth was mainly due to the impact of increased fuel taxes on fuel prices. Fuel costs increased by EUR 32 million on the year before Production for own use amounted to EUR 6 million, and planned depreciation to EUR 77 million, while depreciation on goodwill was EUR 3 million.

### **Fixed assets and other long-term investments**

In 2012, Helen Group's investments amounted to EUR 130 million (EUR 109 million in 2011). Helsingin Energia implemented several modernisation projects in power plants, improving production output and energy efficiency. Heating plants were improved to reduce their emissions. Helsingin Energia invested EUR 27 million in district heating (EUR 30 million in 2011), EUR 6 million in district cooling (EUR 8 million in 2011), EUR 28 million in power plants (EUR 21 million in 2011) and EUR 8 million in outdoor lighting systems (EUR 8 million in 2011). The investments in improving Helen Sähköverkko Oy's security of supply amounted to EUR 47 million (EUR 27 million in 2011).

### **Profit trend**

Helen Group's operating profit stood at EUR 236 million (EUR 287 million in 2011), accounting for 26% of the turnover. Profit before appropriations was EUR 222 million (EUR 271 million in 2011). Return on investment (ROI) was 15%, calculated according to the mean value of the capital invested in the financial year.

## Key figures

	2012	2011	2010
Turnover, EUR million	897.1	876.2	831.5
Operating profit, EUR million	235.6	286.9	289.3
Operating profit %	26	33	35
Return on equity (ROE) %	21	25	26
Equity ratio	59	62	63
Personnel on average	1,633	1,663	1,713

## Environment and quality

The cornerstones of Helen Group's business operations are excellent security of supply, environmental responsibility, and the principles of sustainable development. Helen Group's operations are based on ecologically efficient combined heat and power generation, as well as district heating and district cooling.

Centralised energy production falls within the scope of the EU Emissions Trading Scheme (EU ETS). The energy and climate policy of the Helsinki City Council will impact the future energy production decisions in Helsinki. Helsingin Energia has devised a development programme which, when implemented, will cover the targets set by the City Council and help pave the way towards a carbon-neutral future. The most important method of attaining the climate policy targets is to raise the share of renewable energy production forms in the present production structure. In accordance with its development programme, Helsingin Energia has started testing wood pellet combustion in the Hanasaari power plant. Through these tests, Helsingin Energia is preparing for co-combustion of biofuels to be launched in 2014 in the Hanasaari and Salmisaari power plants.

Our tools for keeping environmental impacts under control are the power plants' common environmental management system, which complies with the ISO 14001 standard, the environmental handbooks of the different business units and the Green Office environmental criteria applied to all office premises. Helsingin Energia will draw up a separate environmental report and environmental financial statements, which will not be verified, however.

## Organisation of internal control and risk management

It is the responsibility of Helsingin Energia's management to ensure that the municipal corporation has efficient risk management and internal control practices with regard to the extent and content of its economy and business operations.

With regard to the extent and structure of its operations, Helsingin Energia has extensively assessed the most significant risks and uncertainty factors, along with other factors affecting operational development. In risk management, the different types of risks are identified and operating procedures are documented and maintained. The essential thing is that business risks are managed and the related control functions are in order.

Internal control and risk management have been organised by including risk-management thinking in all activities in the municipal corporation. The responsibility for controlling risks has been differentiated by assigning it to persons who are independent of operational business activities

Operating principles and risk management instructions approved by the Board have been drawn up for Helsingin Energia's energy trading. The electricity market is highly volatile and predictability is expected to weaken. Competition will become keener in the end customer market. Fluctuation of electricity exchange prices will pose business risks in wholesale and retail sales as well as electricity procurement. Helsingin Energia is prepared for risks and uses derivatives to hedge procurement and sales.

The development of fuel prices and emissions trading pose a profitability risk relating to increases in production costs. In addition, the availability of fuels is an uncertainty factor. The power plant real estates have been insured by the Insurance Fund of the City of Helsinki and the production of the power plants has been insured by taking out business interruption insurance.

### Organisation and auditors

Seppo Ruohonen acted as CEO of Helsingin Energia and Oy Mankala Ab until 30 September 2012. He was followed by Pekka Manninen, who took up his post as the new CEO of Helsingin Energia and Oy Mankala Ab on 1 October 2012. Risto Harjanne has acted as Managing Director of Helen Sähköverkko Oy, Lassi Metsälä as Managing Director of Mitox Oy, Sami Aho as Managing Director of the Real Estate Company Helsingin Sähkötalo, and Taisto Lehonmaa as Managing Director of Suomen Energia-Urakointi Oy.

Ernst & Young Julkispalvelut Oy, Authorised Public Accountants, have audited the consolidated financial statements of the Helen Group. Mikko Ryttilahti, authorised public accountant, has acted as the auditor with the main responsibility.

### Outlook for the future

The general economic situation is reflected in the Helen Group strategy and budget. The euro crisis and the weaker growth outlook for the economy pose challenges for the current financial year. Significant uncertainty is attached to forecasting the cost impacts of the operation of the electricity market and development of fuel prices.

The policies on increased utilisation of renewable energy and use of carbon-free and low-emission energy sources will create significant investment needs in the next few years. The financial impacts of Helsingin Energia's development programme are not yet in evidence in 2013.

The follow-up on Helsingin Energia's development programme will be updated so that the City Council can make a decision in 2015, based on latest information, on the proposal concerning the Vuosaari multi-fuel power plant or increasing the biofuel volumes at the present Salmisaari and Hanasaari power plants.

When implemented, Helsingin Energia's development programme will fulfil the set climate targets and create the preconditions for a carbon-neutral future. The effect of the development programme investments on the coming years' profit growth will be distinctly negative.

The 2013 profit levels are anticipated to fall from the previous year. Our competitive edge will be preserved with a steady investment programme, which will ensure the efficiency and usability of our production assets. The investment programme will amount to EUR 64 million, which is lower than average, and the investments will mostly be related to normal production and district heating operations and expansion and basic improvements to the tunnel and district cooling networks. The level of investments will rise considerably as from 2014.

Helsinki, 12 February 2013



Pekka Manninen  
CEO

PROFIT AND LOSS ACCOUNT 1.1.–31.12.	HELEN GROUP		HELSINGIN ENERGIA	
	2012 1,000 €	2011 1,000 €	2012 1,000 €	2011 1,000 €
<b>NET TURNOVER</b>	<b>897,094</b>	876,209	<b>766,539</b>	758,372
Variation in work in progress	-1,759 (decr)	2,296 (incr)	-	-
Work performed by the undertaking for its own purpose and capitalized	5,817	4,446	4,754	3,506
Other operating income	9,504	10,631	18,332	19,175
<b>Operating expenses</b>				
Raw materials and consumables				
Fuel	-321,173	-289,233	-321,173	-289,233
Energy, materials and consumables	-87,174	-94,459	-76,922	-87,102
Variation in inventories	1,897 (incr)	16,168 (incr)	1,567 (incr)	16,429 (incr)
External services	-40,751	-33,138	-31,951	-28,360
Staff expenses	-94,875	-94,225	-71,806	-71,596
Depreciation according to plan	-77,185	-71,002	-49,432	-45,985
Depreciation in goodwill	-2,797	-3,068	-	-
Other operating charges	-53,044	-37,771	-47,612	-33,625
<b>OPERATING PROFIT</b>	<b>235,554</b>	286,854	<b>192,296</b>	241,581
<b>Financial income and expenses</b>				
Income from associated companies	6,647	8,714	-	-
Dividend income	2,175	-	17,682	11,511
Other interest and financial income	4,950	1,982	8,131	7,791
Interest and other financial expenses	-27,553	-26,611	-18,292	-19,106
<b>PROFIT BEFORE APPROPRIATIONS AND TAXES</b>	<b>221,773</b>	270,939	<b>199,817</b>	241,777
Change in depreciation reserve	-	-	2,668	2,668
Change in other reserves	-	-	-207	-218
Income taxes	-6,499	-9,899	-	-
Return on equity capital	-47,400	-47,400	-47,400	-47,400
Minority interests	121	843	-	-
<b>PROFIT FOR THE FINANCIAL YEAR</b>	<b>167,995</b>	214,483	<b>154,878</b>	196,827

**BALANCE SHEET**

	HELEN GROUP		HELSINGIN ENERGIA	
	2012 1,000 €	2011 1,000 €	2012 1,000 €	2011 1,000 €
<b>ASSETS</b>				
<b>NON-CURRENT ASSETS</b>				
<b>Intangible assets</b>				
Intangible rights	50,317	53,471	49,821	53,197
Goodwill	21,417	24,351	-	-
	<u>71,734</u>	<u>77,822</u>	<u>49,821</u>	<u>53,197</u>
<b>Tangible assets</b>				
Land and waters	27,685	27,685	-	-
Buildings and constructions	153,845	157,324	77,435	80,971
Machinery and equipment	932,783	873,570	651,623	615,974
Advance payments and construction in progress	24,959	27,270	11,834	18,100
	<u>1,139,272</u>	<u>1,085,849</u>	<u>740,891</u>	<u>715,045</u>
<b>Investments</b>				
Holdings in group undertakings	-	-	269,584	269,584
Investments in associated companies	107,824	110,183	128,205	128,205
Participating interests	141,568	140,944	22,875	22,481
Other shares and similar rights of ownership	750	597	148,782	146,000
	<u>250,142</u>	<u>251,724</u>	<u>569,446</u>	<u>566,270</u>
<b>CURRENT ASSETS</b>				
<b>Inventories</b>				
Fuel	80,772	79,205	80,772	79,205
Work in progress	1,429	3,188	-	-
Other inventories	1,397	1,067	-	-
	<u>83,598</u>	<u>83,460</u>	<u>80,772</u>	<u>79,205</u>
<b>Long term receivables</b>	17	17	17	17
<b>Current receivables</b>				
Accounts receivable	65,651	54,726	73,639	53,719
Prepayments and accrued income	72,923	59,501	46,201	40,877
Other receivables	49,606	25,762	19,080	8,546
	<u>188,180</u>	<u>139,989</u>	<u>138,920</u>	<u>103,142</u>
<b>Cash in hand and at banks</b>	23,216	80,916	14,785	14,803
<b>TOTAL ASSETS</b>	<b>1,756,159</b>	<b>1,719,776</b>	<b>1,594,653</b>	<b>1,531,679</b>



<b>BALANCE SHEET</b>	<b>HELEN GROUP</b>		<b>HELSINGIN ENERGIA</b>	
	<b>2012</b> 1,000 €	<b>2011</b> 1,000 €	<b>2012</b> 1,000 €	<b>2011</b> 1,000 €
<b>EQUITY</b>				
<b>CAPITAL AND RESERVES</b>				
Share and basic capital	474,290	474,290	474,290	474,290
Revaluation reserve	59	59	-	-
Other reserves	52,693	52,693	52,693	52,693
Retained earnings	339,623	324,049	320,030	323,203
Profit for the financial year	167,995	214,483	154,878	196,827
	<b>1,034,660</b>	<b>1,065,574</b>	<b>1,001,891</b>	<b>1,047,013</b>
<b>MINORITY INTERESTS</b>	<b>622</b>	<b>636</b>	<b>-</b>	<b>-</b>
<b>APPROPRIATIONS</b>				
Depreciation reserve	-	-	44,311	46,979
Reserve for investment	-	-	95,300	95,300
Other untaxed reserves	-	-	1,596	1,389
<b>PROVISIONS</b>	<b>8,404</b>	<b>8,404</b>	<b>8,404</b>	<b>8,404</b>
<b>LIABILITIES</b>				
<b>Long-term debts</b>				
Subordinated loan	1,600	-	-	-
Loans from credit institutions	138,439	156,258	-	-
Loans from the city	165,161	173,570	165,161	173,570
Other interest-bearing liabilities	72,250	68,848	109	94
Deferred tax liabilities	11,205	8,633	-	-
	<b>388,655</b>	<b>407,309</b>	<b>165,270</b>	<b>173,664</b>
<b>Current liabilities</b>				
Loans from credit institutions	22,945	46,662	-	-
Loan instalments	8,409	8,409	8,409	8,409
Advances received	17	106	-	-
Accounts payable	42,254	45,306	51,631	48,136
Deferred income and accrued liabilities	32,959	39,575	17,045	21,920
Other current liabilities	217,234	97,795	200,796	80,465
	<b>323,818</b>	<b>237,853</b>	<b>277,881</b>	<b>158,930</b>
<b>TOTAL EQUITY AND LIABILITIES</b>	<b>1,756,159</b>	<b>1,719,776</b>	<b>1,594,653</b>	<b>1,531,679</b>

**CASH FLOW STATEMENT 1.1.–31.12.**

	HELEN GROUP		HELSINGIN ENERGIA	
	2012	2011	2012	2011
	1,000 €	1,000 €	1,000 €	1,000 €
<b>CASH FLOW FROM OPERATING ACTIVITIES</b>				
Income financing				
Operating profit	235,554	286,854	192,296	241,581
Depreciations	79,982	74,070	49,432	45,985
Provision affecting operating profit	7,111	-8,714	13,758	-
Financial income and expenses	-13,781	-15,915	7,521	196
Return on equity capital	-47,400	-47,400	-47,400	-47,400
Other corrections	9,584	5,026	-10,060	10,188
<b>Cash flow before change in working capital</b>	<b>271,050</b>	<b>293,921</b>	<b>205,547</b>	<b>250,550</b>
<b>Change in working capital</b>				
Increase (-) or decrease (+) in inventories	-138	-18,464	-1,567	-16,429
Increase (-) or decrease (+) in current receivables	-48,192	15,949	-30,595	8,153
Increase (+) or decrease (-) in current liabilities	14,535	-14,319	30,188	-20,447
Income taxes	-3,989	-5,662	-	-
<b>CASH FLOW FROM OPERATING ACTIVITIES (A)</b>	<b>233,266</b>	<b>271,425</b>	<b>203,574</b>	<b>221,827</b>
<b>CASH FLOW FROM INVESTING ACTIVITIES</b>				
Cash flow from non-current assets	-145,497	-107,715	-94,697	-74,813
<b>CASH FLOW FROM INVESTING ACTIVITIES (B)</b>	<b>-145,497</b>	<b>-107,715</b>	<b>-94,697</b>	<b>-74,813</b>
<b>CASH FLOW FROM FINANCING ACTIVITIES</b>				
Increase (+) or decrease (-) in current liabilities	77,370	49,674	99,500	48,057
Change in long-term debts	-22,825	458	-8,395	-8,369
Other changes in equity	-200,014	-200,015	-200,000	-200,000
<b>CASH FLOW FROM FINANCING ACTIVITIES (C)</b>	<b>-145,469</b>	<b>-149,883</b>	<b>-108,895</b>	<b>-160,311</b>
<b>CHANGE IN CASH AND CASH EQUIVALENTS (A + B + C)</b>	<b>-57,700</b>	<b>13,827</b>	<b>-18</b>	<b>-13,298</b>
<b>Cash and cash equivalents at the beginning of the year</b>	<b>80,916</b>	<b>67,089</b>	<b>14,803</b>	<b>28,101</b>
<b>Cash and cash equivalents at the end of the year</b>	<b>23,216</b>	<b>80,916</b>	<b>14,785</b>	<b>14,803</b>
	<b>-57,700</b>	<b>13,827</b>	<b>-18</b>	<b>-13,298</b>

## NOTES TO THE FINANCIAL STATEMENTS

### Accounting principles

Financial statements are prepared according to Finnish Accounting Standards.

### Depreciation plan

Depreciation according to plan is calculated as straight-line depreciation on the original acquisition cost based on the useful economic life of the non-current assets.

#### Depreciation period, years

Residential buildings	30-40
Other buildings and constructions	20-40
Network	15-40
Production machinery and equipment	15-40
Other machinery and equipment	3-10
Intangible assets	3-5

	HELEN GROUP		HELSINGIN ENERGIA	
	2012 1,000 €	2011 1,000 €	2012 1,000 €	2011 1,000 €
<b>1. Net turnover</b>				
Electricity sales	367,005	394,555	367,005	394,555
Electricity transmission	116,531	114,465	-	-
Heat	346,960	312,632	346,960	312,632
Other income	66,598	54,557	52,574	51,185
<b>Total €</b>	<b>897,094</b>	<b>876,209</b>	<b>766,539</b>	<b>758,372</b>
<b>2. Variation in work in progress</b>	<b>-1,759</b>	<b>2,296</b>	<b>-</b>	<b>-</b>
<b>3. Work performed by the undertaking for its own purpose and capitalized</b>	<b>5,817</b>	<b>4,446</b>	<b>4,754</b>	<b>3,506</b>
<b>4. Other operating income</b>				
Rents	6,215	8,389	8,753	8,370
Capital gains	-	57	-	-
Emission allowances	609	485	609	485
Other income	2,680	1,700	8,970	10,320
<b>Total €</b>	<b>9,504</b>	<b>10,631</b>	<b>18,332</b>	<b>19,175</b>
<b>5. Energy and fuels</b>				
Electricity supplied by group undertakings and participating interests	41,936	41,990	41,936	41,990
Purchases of electricity	12,260	24,419	12,260	24,419
Purchases of heat	279	425	279	425
Purchases of fuels	321,173	289,233	321,173	289,233
Change in inventories	-1,897	-16,429	-1,567	-16,429
Other goods and materials	32,699	27,886	22,448	20,270
<b>Total €</b>	<b>406,449</b>	<b>367,524</b>	<b>396,528</b>	<b>359,908</b>
<b>6. External services</b>				
Base network payments	13,960	9,777	-	-
Other external services	26,791	23,361	31,951	28,360
<b>Total €</b>	<b>40,751</b>	<b>33,138</b>	<b>31,951</b>	<b>28,360</b>

	HELEN GROUP		HELSINGIN ENERGIA	
	2012 1,000 €	2011 1,000 €	2012 1,000 €	2011 1,000 €
<b>7. Staff</b>				
<b>Average number of personnel</b>				
Number of monthly salaried employees	1,497	1,422	1,078	995
Number of hourly waged employees	136	241	136	241
<b>Personnel</b>	<b>1,633</b>	1,663	<b>1,214</b>	1,236
Wages and salaries	72,903	72,355	54,190	53,847
Pension expenses	18,169	18,306	14,874	15,157
Other personnel expenses	3,802	3,564	2,743	2,592
<b>Personnel expenses total €</b>	<b>94,875</b>	94,225	<b>71,807</b>	71,596
Tax value of perks	135	146	135	146
<b>Total €</b>	<b>95,010</b>	94,371	<b>71,942</b>	71,742
<b>8. Other operating charges</b>				
Purchase of emission allowances	16,752	3,393	16,752	3,393
Other expenses	36,292	34,378	30,860	30,232
<b>Total €</b>	<b>53,044</b>	37,771	<b>47,612</b>	33,625
<b>9. Financial income and expenses</b>				
Income from associated companies	6,647	8,714	-	-
Dividend income	2,175	-	17,682	11,511
Other financial income	4,950	1,982	8,131	7,791
<b>Financial income €</b>	<b>13,772</b>	10,696	<b>25,813</b>	19,302
Interest expenses of the establishment loan	18,198	19,039	18,198	19,039
Other interest expenses	9,355	7,572	94	67
<b>Financial expenses €</b>	<b>27,553</b>	26,611	<b>18,292</b>	19,106
<b>10. Decrease in depreciation reserve</b>				
Covered with investment reserve €	-	-	2,668	2,668
<b>11. Change in other reserves</b>				
Reserve for supporting renewable power sources	-	-	207	218

	HELEN GROUP		HELSINGIN ENERGIA	
	2012 1,000 €	2011 1,000 €	2012 1,000 €	2011 1,000 €
<b>12. Non-current assets</b>				
<b>Intangible assets</b>				
<b>Acquisition cost 1 Jan.</b>	<b>85,804</b>	76,321	<b>83,846</b>	74,421
Increases 1 Jan. - 31 Dec.	31,631	9,483	31,259	9,426
Decreases 1 Jan. - 31 Dec.	32,774	-	32,774	-
<b>Acquisition cost 31 Dec.</b>	<b>84,661</b>	85,804	<b>82,332</b>	83,846
Accumulated depreciation according to plan 1 Jan.	31,978	29,955	30,649	28,845
Depreciation 1 Jan. - 31 Dec.	2,147	2,024	1,862	1,804
Book Value 31 Dec.	50,536	53,826	49,821	53,197
<b>Goodwill</b>				
<b>Acquisition cost 1 Jan.</b>	<b>53,215</b>	53,215	-	-
Increases 1 Jan. - 31 Dec.	-	-	-	-
Decreases 1 Jan. - 31 Dec.	-	-	-	-
<b>Acquisition cost 31 Dec.</b>	<b>53,215</b>	53,215	-	-
Accumulated depreciation 1.1.	29,213	26,151	-	-
Depreciation 1 Jan. - 31 Dec.	2,797	3,068	-	-
Book Value 31 Dec.	21,199	23,996	-	-
<b>Land and waters</b>				
<b>Acquisition cost 1 Jan.</b>	<b>27,685</b>	27,630	-	-
Increases 1 Jan. - 31 Dec.	-	55	-	-
Decreases 1 Jan. - 31 Dec.	-	-	-	-
<b>Acquisition cost 31 Dec.</b>	<b>27,685</b>	27,685	-	-
Book Value 31 Dec.	27,685	27,685	-	-
<b>Buildings and structures</b>				
<b>Acquisition cost 1 Jan.</b>	<b>329,252</b>	313,955	<b>236,823</b>	235,261
Increases 1 Jan. - 31 Dec.	6,938	15,296	2,977	1,561
Decreases 1 Jan. - 31 Dec.	118	-	-	-
<b>Acquisition cost 31 Dec.</b>	<b>336,071</b>	329,252	<b>239,799</b>	236,823
Accumulated depreciation according to plan 1 Jan.	171,928	162,966	155,852	149,332
Depreciation 1 Jan. - 31 Dec.	10,299	8,962	6,512	6,520
Book Value 31 Dec.	153,845	157,324	77,435	80,971
<b>Machinery and equipment</b>				
<b>Acquisition cost 1 Jan.</b>	<b>1,744,053</b>	1,604,371	<b>1,362,889</b>	1,263,436
Increases 1 Jan. - 31 Dec.	126,203	139,753	77,408	99,469
Connection fees	-	-	-	-
Decreases 1 Jan. - 31 Dec.	2,251	72	702	-
<b>Acquisition cost 31 Dec.</b>	<b>1,868,004</b>	1,744,053	<b>1,439,595</b>	1,362,889
Accumulated depreciation according to plan 1 Jan.	870,483	810,466	746,915	709,254
Depreciation 1 Jan. - 31 Dec.	64,738	60,017	41,058	37,661
Book Value 31 Dec.	932,783	873,570	651,623	615,974
<b>Advance payments and construction in progress</b>				
<b>Acquisition cost 1 Jan.</b>	<b>27,270</b>	62,091	<b>18,099</b>	39,449
Increases 1 Jan. - 31 Dec.	22,507	20,318	7,880	11,002
Decreases 1 Jan. - 31 Dec.	25,950	55,140	14,146	32,352
<b>Acquisition cost 31 Dec.</b>	<b>23,826</b>	27,270	<b>11,834</b>	18,099
<b>Book Value 31 Dec.</b>	<b>23,826</b>	27,270	<b>11,834</b>	18,099

**Investments 31.12.2012**

	Residence	HELEN GROUP			HELSINGIN ENERGIA		
		Amount	Share-%	Book value 1,000 €	Amount	Share-%	Book value 1,000 €
<b>Shares</b>							
<b>Holdings in group undertakings</b>							
Oy Mankala Ab	litti	-	-	-	42,500,262	100.00	<b>158,617</b>
Helen Sähköverkko Oy	Helsinki	-	-	-	42,000	100.00	<b>84,000</b>
Mitox Oy	Helsinki	-	-	-	520	100.00	<b>1,560</b>
Kiinteistöosakeyhtiö							
Helsingin Sähkötalo Oy	Helsinki	-	-	-	1,000,000	100.00	<b>22,000</b>
Suomen Energia-Urakointi Oy	Helsinki	-	-	-	3,625	60.40	<b>3,407</b>
<b>Investments in associated undertakings</b>							
Vantaan Energia Oy	Vantaa	684,363	40.00	<b>105,923</b>	684,363	40.00	<b>127,305</b>
Finestlink Oy	Helsinki	9,000	40.00	<b>901</b>	9,000	40.00	<b>900</b>
Suomen Merituuli Oy	Vaasa	1,000	50.00	<b>1,000</b>			
<b>Other shares</b>							
Teollisuuden Voima Oyj	Helsinki	99,630,381	8.10	<b>117,973</b>			
EPV Energia Oy	Vaasa	481,470	7.19	<b>19,964</b>	481,470	7.19	<b>19,964</b>
Pohjolan Voima Oy	Helsinki	288,371	0.83	<b>1,216</b>	288,371	0.83	<b>1,216</b>
Kemijoki Oy	Rovaniemi	22,982	0.94	<b>1,075</b>	22,982	0.94	<b>1,075</b>
Asunto Oy Meri-Kamppi	Helsinki	776		<b>401</b>	776		<b>401</b>
Elisa Communications Oyj	Helsinki	53,364		<b>67</b>	53,364		<b>67</b>
CLEENOy	Helsinki	100	4.10	<b>100</b>	100	4.10	<b>100</b>
POWEST Oy	Helsinki	4,436		<b>30</b>	4,436		<b>30</b>
Suomen Hyötytuuli Oy	Pori	276	12.50	<b>1,087</b>			
Tunturituuli Oy	Espoo	141	3.50	<b>24</b>	141	3.50	<b>24</b>
Suomen Messut osuuskunta	Helsinki	1		<b>0</b>	1		<b>0</b>
<b>Other shares and similar rights of ownership</b>							
Capital loans				<b>382</b>			<b>148,782</b>

# AUDITOR'S REPORT

We have audited the accounts, the financial statements and the report of the Board of Directors of Helsingin Energia, which operates as a public corporation of the City of Helsinki, for the period from 1 January to 31 December 2012. The financial statements comprise both the consolidated and the public corporation's balance sheet, income statement, cash flow statement, and notes to the financial statements.

## **CEO's responsibility**

The CEO is responsible for the preparation of the financial statements and the report of the Board of Directors and for the fact that they give a true and fair view in accordance with the regulations governing the preparation of financial statements and the report of the Board of Directors in Finland.

## **Auditor's responsibilities**

It is our duty to issue a statement on the financial statements, consolidated financial statements and the report of the Board of Directors based on our audit. The Auditing Act requires that we follow the principles of professional ethics. Good auditing practice requires that we plan and perform the audit to obtain reasonable certainty as to whether the financial statements and the report of the Board of Directors contain material misstatement.

An audit involves performing procedures to obtain audit evidence about the figures and other information presented in the financial statements and the report of the Board of Directors. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement, whether due to fraud or error. In making those risk assessments, the auditor considers internal control that is relevant to the public corporation's preparation of financial statements and the Board of Directors' report in such a way that they are correct and provide sufficient information. The auditor makes an assessment of internal control in order to be able to design audit procedures that are appropriate in the circumstances, though not with the purpose of giving an opinion on the efficiency of internal control in the public corporation. An audit also includes evaluating the appropriateness of the principles used in preparing the financial statements and the reasonableness of the accounting estimates made by management as well as the overall presentation of the financial statements and the report of the Board of Directors.

We believe that we have obtained audit evidence that is sufficient and appropriate in order to provide a basis for our audit opinion.

## **Opinion**

In our opinion, the financial statements and the report of the Board of Directors give a true and fair view of the financial performance and financial position of the company in accordance with the regulations governing the preparation of the financial statements and the report of the Board of Directors in Finland. The information in the report of the Board of Directors is consistent with the information in the financial statements.

Helsinki, 12 February 2013

Ernst & Young Julkispalvelut Oy  
Chartered Public Finance Auditors

Mikko Ryttilahti  
Chartered Public Finance Auditor, Authorised Public Accountant

## ECOLOGICAL FOOTPRINT OF THE ANNUAL REPORT

Efforts have been made to take environmental issues into account as widely as possible in the production of Helsingin Energia's annual report. The best materials and production methods in terms of the environment and purpose of use were selected for various tasks. In spite of this, the publication has left a trace on the environment: its production has required energy and raw materials while producing waste and emissions.

**PURPOSE OF USE:** Annual report with a long-term archiving period

**SCALE:** 48 pages + covers

**SIZE:** 210 x 270 mm

**PRINT RUN:** 300 copies

**PAPER:** The selected paper is FSC-certified and Swan eco-labelled Amber Graphic 120 g/m<sup>2</sup> (inside pages) and 300 g/m<sup>2</sup> (cover). The wood fibre has been sourced from responsibly managed forests. No chlorine gas is used in the bleaching process. The paper mill has ISO 14001 and FSC certification. A Paper Profile environmental product declaration and carbon footprint calculation are available for the paper.

**CHEMICALS:** Only Swan eco-labelled chemicals have been used in the paper manufacture, prepress operation, printing and binding. The annual report is printed with vegetable oil-based printing inks.

**PRINTING WORKS:** The annual report is printed by Edita Prima Oy in Helsinki. The printing works uses electricity produced by renewable energy, it is ISO 14001 certified and entitled to use the Nordic Swan label and a label of origin. The printing works compensates for the carbon dioxide emissions it produces by investing in UN-supervised renewable energy projects in developing countries.

**THE USE OF THE ANNUAL REPORT** is easy and places a low burden on the environment. No extra devices or energy are needed for reading the report. The report can be browsed time and again, and it is easy to carry with you.

**THE PRODUCTION OF ONE COPY OF THE ANNUAL REPORT REQUIRED:**

**WOOD:** 0.6 dm<sup>3</sup>

**WATER:** 1.2 litres

**ENERGY:** 0.7 kWh

**THE PRODUCTION OF ONE COPY OF THE ANNUAL REPORT CREATED:**

**WASTE:** 735 g, of which recyclable waste 720 g (655 g paper, 63 g aluminium and 2 g cardboard), combustible waste 4 g, hazardous waste 3 g, and landfill waste 9 g (from paper manufacture).

**EMISSIONS INTO THE WATER:** 6 g (from paper manufacture)

**THE CARBON FOOTPRINT OF THE ANNUAL REPORT**

CO<sub>2</sub> emissions into the air 450 g, of which the share of paper manufacture including transport totalling about 170 g. The emission amounts are approximate. The carbon footprint of the annual report corresponds to driving a car for 2.5 kilometres.

The ecological footprint of this annual report, as of any publication, is significantly affected by what happens to it after use. Dear Reader, please recycle this report when you no longer need it. The wood fibre can be recycled for an average of six times.

The ecological footprint was calculated by Mika Ruuskanen who is responsible for the Green Edita programme.



### ANNUAL REPORT, THE TEAM HELSINGIN ENERGIA

Communications and marketing:

Ulla-Maija Alander, Marina Galkin-Aalto,

Sanna Jääskeläinen, Arto Korhonen,

Anu Peltonen, Kari Pilkkakangas, Seija Uusitalo

Environment: Martti Hyvönen and  
the environmental team

Financial Statements: Antti Hellaakoski and Jani Hirvijärvi

Printing office: Edita Prima Oy, 2013

### PHOTOS

Lauri Eriksson, Juhani Eskelinen,  
Marina Galkin-Aalto, Pekka Hannila,  
Kari Pilkkakangas, Tommi Tuomi,  
Arkkitehtitoimisto Virkkunen & Co



## ADDRESS

### HELSINGIN ENERGIA

Postal address:  
00090 HELEN, Finland

Telephone exchange:  
+358 9 6171

Fax:  
+358 9 617 2360

[www.helen.fi](http://www.helen.fi)

Visiting addresses:  
Main office Sähkötalo  
Kampinkuja 2, Helsinki  
Malmirinne 6, Helsinki

Vuosaari Power Plants  
Käärmeniementie 6-8, Helsinki

Hanasaari Power Plants  
Parrukatu 1-3, Helsinki

Salmisaari Power Plants  
Porkkalankatu 9-11, Helsinki

Kellosaari Stand-by Power Plant  
Kellosaarencatu 12, Helsinki

Vanhakaupunki Hydropower Plant  
Hämeentie 163, Helsinki

Ahvenkoski, Kläsarö and Ediskoski Hydropower Plants  
Voimalantie 31, Ahvenkoski

#### Subsidiaries:

Helen Sähköverkko Oy  
(Sörnäistenkatu 1, Helsinki)  
00090 HELEN, Finland

Mitox Oy  
(Parrukatu 5, Helsinki)  
PL 469, 00101 Helsinki, Finland

Oy Mankala Ab  
Sitikkalantie 189  
47400 Kausala, Finland

Kiinteistö Oy Helsingin Sähkötalo  
(Kampinkuja 2, Helsinki)  
00090 HELEN, Finland

Suomen Energia-Urakointi Oy (SEU)  
(Ohrahuhdantie 13, Helsinki)  
PL 469, 00101 Helsinki, Finland

#### Associated companies:

Vantaan Energia Oy  
Peltolantie 27  
01300 Vantaa, Finland

Finestlink Oy  
(Töölönkatu 4, Helsinki)  
PL 40, 00101 Helsinki, Finland

Suomen Merituuli Oy  
c/o EPV Energia Oy  
Frilundintie 7  
65170 Vaasa, Finland





