

# HELEN

**Zero emissions  
with Eco Heat**

» p.3

**Meet Ellen,  
a virtual  
influencer**

» p.4

**3 ×**

**fluorescent  
to LED**

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**Did you know?**

Electricity consumption in Finland  
peaks on weekday mornings from  
7:00 to 9:00 and in afternoons  
from 16:00 to 19:00.

## Flexibility pays off

**Demand response allows  
electricity consumers to reduce  
their bills and promote the  
common good.**

» p.6

**District heating is reliable**

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# A flexible consumer is the hero of a sustainable energy system

**DEMAND RESPONSE** is becoming a hot topic in the media. While it might be an unfamiliar concept that seems difficult to understand, it actually describes something quite mundane. Demand response simply means increasing or decreasing the consumption of electricity and heat in response to the supply.

**DEMAND RESPONSE** is an essential building block for a sustainable energy system. Without it, the frequency of the electricity network may drop and access to electricity may be compromised. Businesses have participated in demand response for a long time now, but the importance of consumers is growing year by year.

**FOR MANY YEARS**, electricity was in abundant supply, and it was remarkably affordable. Russia's war of aggression accelerated our transition to the era of wind power, where electricity production and prices fluctuate more dramatically than before. This volatility also influences the heating system, which will be increasingly reliant on electricity in the future.

**WE CAN** all be more flexible in our consumption of electricity and heat, and we should start picking up these new habits now. Whether you are an advanced energy optimiser or an ordinary consumer of electricity, you will find valuable tips for your daily life in this magazine.

**Olli Sirkka**  
CEO  
Helen Ltd



## Ellen is at home on social media

"In addition to being a social media influencer, I am featured in the Ellen's Energy Adventure children's book, which talks about energy in a fun way," says the virtual influencer **Ellen**.

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## Timing is key in electricity consumption

"I actively monitor changes in electricity prices via the Oma Helen app and try to schedule the use of electrical devices accordingly," says **Jenni Seppä**.

» PAGE 9



## District heat is a good raw material

"When district heat is delivered to the heat distribution centre at our property, we process it for use by five of our systems," says **Carl Schauman**.

» PAGE 14



# HELEN

## CUSTOMER SERVICE

Oma Helen app  
helen.fi

**Electricity:** 09 617 8080  
**24/7 phone line for movers:**  
09 617 8020  
**Billing advice:** 09 617 8040  
**Heating:** 09 617 8045  
**Cooling:** 09 617 8015

## FAULT REPORTS

**Disruptions in electricity distribution in the Helsinki region:** 08001 80808  
**Disruptions in district heating and cooling distribution:** 08001 60602  
**Real-time information on disruptions in distribution:**  
helen.fi/jakelukeskeytyt

Calls are subject to local network or mobile network charges.

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# Reduce the CO<sub>2</sub> emissions of heating to zero

## – Eco Heat Apartment offers easy climate action for Helsinki residents

### 1. What is it?

With Eco Heat Apartment, you can make the heating of your apartment CO<sub>2</sub>-free for just €1.70 per month. The origin of the heat is certified with guarantees of origin issued by the Energy Authority.

### 2. How does it work?

The heat is produced by heat pumps that utilise the waste heat contained in purified waste water. Thermal energy recovered from waste heat does not increase carbon dioxide in the atmosphere.

### 3. How do I get started?

You can order Eco Heat Apartment for any apartment heated with district heat. The service requires no alterations in your home. You can start to use it immediately.

Order now: [helen.fi/en/eco-heat-apartment](https://helen.fi/en/eco-heat-apartment)

Don't live in an apartment? For detached houses, we offer the CO<sub>2</sub>-free Eco Heat Flow product and Eco Heat Bio, which is based on renewable biomass.



## Finland's first nuclear heat plant

We have signed a Letter of Intent with the Finnish company Steady Energy with the aim of enabling an investment in a small-scale nuclear heat plant. Small modular nuclear reactors are one of the most promising solutions for rapidly and cost-efficiently decreasing the emissions of both electricity and heat production. Steady Energy's nuclear heat technology is based on state-of-the-art research by VTT Technical Research Centre of Finland.

## Renewable hydrogen production in Helsinki

We are exploring opportunities to develop an industrial hydrogen valley in the Uusimaa region in collaboration with Neste, Gasgrid, and Vantaa Energy. We want to be a key player in the hydrogen economy, and we are planning large-scale hydrogen production in Vuosaari, Helsinki. Hydrogen can replace fossil fuels in industries where direct electrification is not possible. It can also be used for large-scale energy storage.

# Energy concerns everyone – Ellen is a virtual influencer who encourages kids to learn about energy

### Who are you?

I am Ellen! I'm an AI-generated virtual influencer. I want to make energy easy to understand for children and young people.

### You are generated by AI?

That's right. I'm not a real person. I'm a character in the digital world. Artificial intelligence is developing rapidly, and I'm developing along with it.

### Where can you be found?

I'm at home in social media. You can find me on Helen's Facebook and Instagram accounts with the username @energia-helen.

### How do you make energy easy to understand?

In addition to being a social media influencer, I am featured in the children's book Ellen's Energy Adventure, which talks about energy in the form of a fun and educational story. The book is available as an e-book and audiobook on Storytel, among other platforms.

### What would you like everyone to know about energy?

We all need to do our part to mitigate climate change. The first step is to learn about energy and increase your understanding. Personally, I have learned a lot from the Ellen's Energy Adventure book, for example. It is also a really fun read!



### Customer benefit

As our customer, you are eligible for 30 days of free listening and a 20% discount on a 12-month Storytel Basic subscription. The benefit is available to new Storytel customers and valid until 31 December 2023.



CLAIM YOUR BENEFIT!

# 3 × fluorescent to LED

## RETROFIT TUBE

### Change it yourself

T5 and T8 fluorescent tubes in fluorescent lighting fixtures with G5 and G13 fittings can be replaced with LED tubes. You can change a fluorescent tube to a retrofit LED tube yourself. For lighting fixtures with a single fluorescent tube, making the change is easy. Unscrew the fluorescent tube and its starter. Replace them with the new LED tube and LED tube starter. The ballast can also be removed, as it will no longer be necessary, but this can only be done by a professional electrician.

## CONVERSION KIT

### Leave it to a professional

Installing an LED conversion kit requires modifications to the original fluorescent tube lighting fixture and its components. This work can only be performed by a professional electrician. The conversion kit includes the necessary components: ballasts, control electronics, lamp holders and wiring, as well as detailed installation and testing instructions. The safety of the modified lighting fixture and the new installation is ensured and verified by the person who performs the work.



## COMPARISON CHART

### Which wattage to use

Use this table to determine which wattage to choose when replacing fluorescents with LED tubes:

Fluorescent tube	LED tube
9 W	5–6 W
18 W	8–10 W
30 W	14–15 W
36 W	16–20 W
58 W	22–30 W

**DID YOU KNOW?**  
High-quality LED tubes have high luminous efficacy, which saves energy.

The lifespan of an LED tube is **15,000–50,000 hours, compared to 10,000 hours for a fluorescent tube.**

Source: Finnish Safety and Chemicals Agency (Tukes)



## A SOURCE OF PRIDE

### Zero-emission construction sites

We are transitioning to zero-emission construction sites. For Helsinki residents, this means less noise, cleaner air and a healthier environment. We have signed a Green Deal agreement to reduce construction site emissions and prepared an action plan for achieving the reductions.



## HOW IRRESPONSIBLE IS IT...

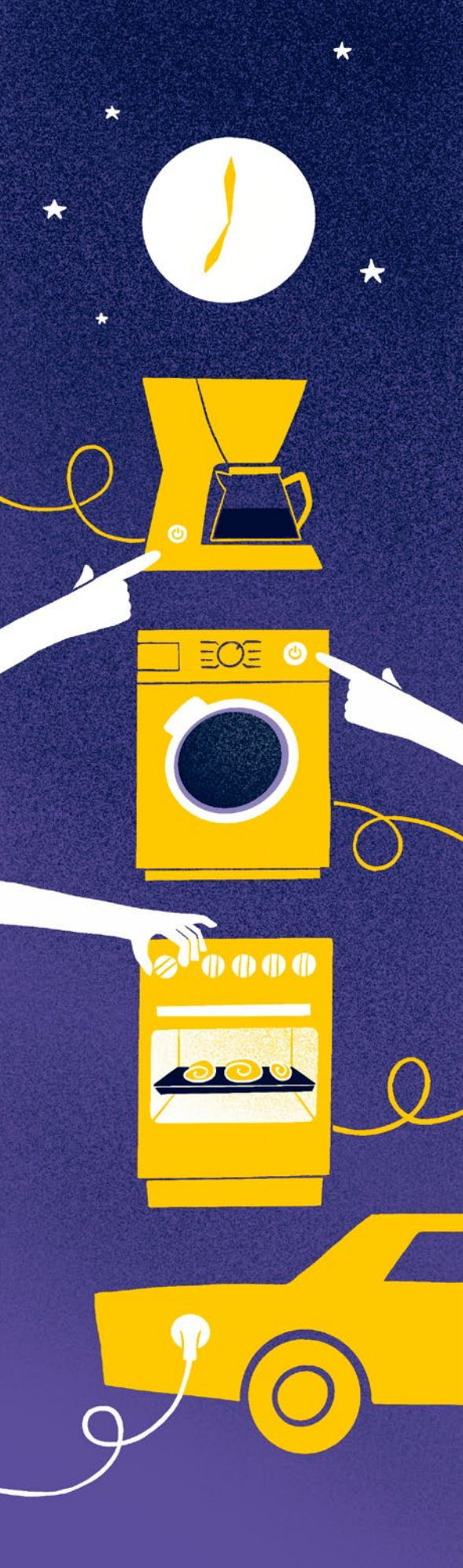
### ...to make coffee during peak electricity prices?

It is good to understand the basics of household energy consumption and fluctuating electricity prices. Housework that consumes a lot of electricity should be performed when electricity is cheap and in plentiful supply. Still, you do not need to limit your life or feel guilty about your energy usage. Feel free to put on the coffee machine when you want to have a cup of coffee.

# **Demand response**

**means reducing electricity consumption when the supply is low, and increasing it when the supply is high. It saves electricity and money, and it even works in an apartment. When a large number of households adjust their consumption at the same time, it is significant even at the national scale. Read on to find out how. »**





**R**unning the dishwasher in the early hours of the morning or heating up the sauna later in the evening helps reduce consumption peaks in the electricity system and ensure the sufficiency of electricity in Finland.

“Demand response means scheduling household energy consumption during the hours when consumption in the network is lower and the price is cheaper. As the use of weather-dependent wind and solar power in electricity production increases, household-level demand response in electricity consumption is becoming increasingly important,” says Specialist **Teemu Kettunen** from Motiva.

Electricity consumption in Finland typically peaks on weekday mornings from 7:00 to 9:00 and in afternoons from 16:00 to 19:00. If 1,500 households were to not do their laundry at the same time during these peak consumption hours and instead used the washing machine during the hours of lower electricity prices, the electricity network’s peak power consumption would be reduced by approximately 1 MW for an hour. People can even contribute to demand response by making their coffee at the right time.

“If a thousand homes didn’t make coffee at the same time during the peak consumption hours and instead switch on their coffee machines after those »

**If 1,500 households were to not do their laundry at the same time during peak consumption hours, the electricity network’s peak power consumption would be reduced by approximately 1 MW for an hour. A decrease of 100 MW is already very significant at the national level.**





# “It makes sense to use electricity when its production is high.”

TEXT MATTI VÄLIMÄKI PHOTOS ILARI VÄLIMÄKI

**IN JENNI SEPPÄ'S HOME**, electricity is used when its production is high and environmentally friendly, which is also when the price is right. The methods are easy and can be applied by anyone.

The Seppäs are a family of four living in the Martti neighbourhood of Turku in a wood-built terraced house that is nearly 100 years old. Their 120 sq.m. home has underfloor heating on the basement level, with air-source heat pumps on the other two floors. They have a tiled stove on the middle floor.

The Seppäs have been able to schedule much of their electricity consumption during the hours when electricity is cheap.

**1. IF I SEE THAT ELECTRICITY** will be more expensive tomorrow, I will do the laundry today. I actively monitor changes in electricity prices via the Oma Helen app and try to use electrical devices accordingly. We switched to spot price electricity in March partly because I wanted to take advantage of the periods when wind and hydropower plants are operating at full power, for example, and electricity is cheap.

This kind of time-based optimisation is also important for people with other types of electricity contracts. It is environmentally friendly and it helps ensure that the national electricity system operates smoothly. Fortunately,

there are many technical solutions available today that make it easier to schedule electricity consumption.

**2. WE ADDED** a smart relay switch to our electrical cabinet to control electricity consumption. The easy-to-use smart relay switch controls the hot water tank so that the water is heated automatically during the three hours of each day when electricity is the cheapest. On average, the cost of heating the water is 20–25% lower than the daily average spot price of electricity. The smart relay switch costs about €30.

**3. THE UNDERFLOOR HEATING** is controlled by smart thermostats. When the electrician installed the smart relay switch in our electrical cabinet, he also put in new smart thermostats for underfloor heating. I can set the thermostats so that our home is nice and warm at 8 a.m. after the underfloor heating has been on at night during the hours when electricity is cheap.

The cost of the smart thermostats was reasonable, and I expect them to generate significant savings in winter. Of course, we also adjust the air-source heat pumps in the same manner. We aim for time-based optimisation but, at least for now, we do it manually. It makes sense to keep the house cooler at night and when no-one is home.



“I actively monitor changes in electricity prices via the Oma Helen app and try to use electrical devices accordingly,” Jenni Seppä says.



The easy-to-use smart relay switch now controls the hot water tank so that the water is heated automatically during the three hours of each day when electricity is the cheapest.

» hours, the peak power demand in the electricity network will decrease by 1–1.5 MW for 10 minutes. If 10,000 homes do the same, you reach a reduction of 10 MW,” Kettunen explains.

“A decrease of 100 MW is already very significant at the national level.”

### **A housing company’s sauna bookings should be scheduled consecutively**

“There is significant daily and monthly variation in the balance between electricity consumption and production. The most challenging periods in terms of the adequacy of electricity in Finland are windless and cold winter days,” Kettunen notes.

Fingrid estimates that, on days of sub-zero temperatures with little wind, electricity consumption in Finland will reach approximately 14,300 MW. Domestic production will cover an estimated 12,800 MW of that demand, and the remainder can be imported from Sweden and Estonia.

There are many ways for people living in apartments to save electricity and consume it sensibly.

“The underfloor heating in bathrooms can be controlled by a panel with time-based settings. Washing machines and dishwashers should only be run with full loads,” Kettunen explains.

In apartment buildings, the major sources of electricity consumption are electric sauna heaters

and EV charging points. The saunas in the apartments should be used when electricity is cheap.

“The housing company’s sauna bookings should be scheduled consecutively on selected days. Sauna heaters can be automatically controlled based on the sauna bookings. Using dynamic load management in the charging of electric cars divides charging power between the cars evenly based on the available electrical power for charging,” Teemu Kettunen notes.

With regard to the housing company’s parking areas, the pre-heating of cars as necessary should be kept in mind, and the car heater outlets should be equipped with timers.

### **Good outlook for the adequacy of electricity this coming winter**

Electricity shortages were a threat in Finland last winter, but Fingrid expects the situation to be better in the coming winter.

“Last winter, Olkiluoto 3 was only in test use, but now it can produce electricity at full power. In addition, approximately 1,500 MW of new wind power has been connected to the main grid after last spring,” says **Tuomas Rauhala**, Unit Manager, Flexibility Market Innovations at Fingrid.

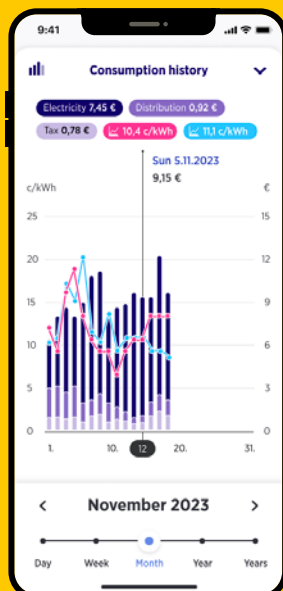
The availability of imported electricity from Finland’s neighbouring countries has also improved.

# 4 x Oma Helen

Oma Helen helps to optimise electricity consumption and save electricity.

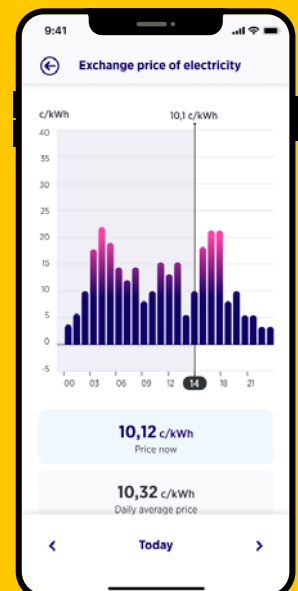
## 1. Consumption history

In the consumption history view, you can examine your electricity consumption at the daily, weekly, monthly or annual level. You get an overview of your electricity consumption and learn to recognise opportunities for optimising consumption.



## 2. Exchange price of electricity

Keep an eye on the hourly spot price of electricity to plan your consumption and schedule it for the hours when the price of energy is at its cheapest. The hourly price chart shows the hourly Nord Pool spot prices for Finland. The hourly prices for each day are announced the preceding afternoon. You can also set up push notifications on your phone to highlight the cheapest and most expensive hours of the next day. This makes the planning of electricity consumption even smoother.



**Fingrid estimates that the adequacy of electrical power will be good in the latter part of the 2020s. The use of weather-dependent wind power will require more flexibility in electricity consumption and investments in electricity storage solutions.**



“Last winter, there were challenges with nuclear power production in Sweden and France, and the availability of gas was an issue in Central Europe. The common electricity market means that those difficulties had an impact on the availability of electricity in Finland,” Rauhala adds.

Electricity consumption in Finland will increase substantially in the next few years due to the electrification of heating, transport and industry, for example.

According to Fingrid’s estimate, the adequacy of electrical power will remain good towards the end of the 2020s. However, the use of weather-dependent wind power will require even more flexibility in electricity consumption and significant investments in electricity storage solutions, for instance.

“Flexible electricity consumption by households also plays an important role. We saw that during the coldest days of last winter when everyone saved electricity and were flexible with their consumption. Even small demand response helps at the national level to ensure that we have enough electricity in Finland,” Rauhala concludes.

### **Helen helps to increase flexibility**

The choices people make in daily life can directly influence their electricity bills and contribute to



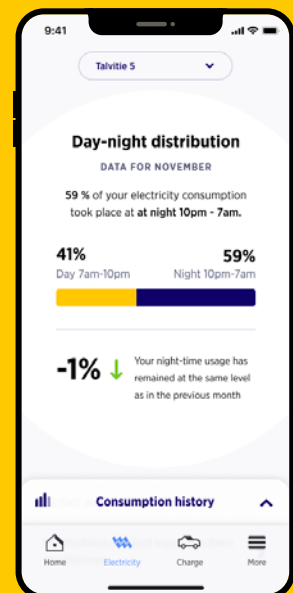
### **3. Electricity situation in Finland**

Monitor the electricity situation to schedule your electricity use during periods of low consumption and improve Finland’s self-sufficiency in energy. You will also get daily tips on how to save electricity. Monitoring the electricity situation helps you take smart energy action.



### **4. Day-night distribution**

The day-night distribution shows you how your electricity consumption is distributed over the hours of the day and night, and what your distribution looks like compared to other households of a similar type. Scheduling consumption during the night-time hours often presents opportunities for saving in electricity costs.



- » flexibility in the electricity network. For example, the hourly spot price of exchange electricity is typically lowest in the evening, at night and on weekends.

“Helen Smart Electricity is an example of an electricity contract that combines the advantages of fixed-price electricity and hourly spot prices. For businesses, we offer demand response agreements that use smart control to help reduce the company’s electricity demand when the hourly spot prices are high,” says **Tea Erätuuli**, Corporate Social Responsibility Manager at Helen.

Helen’s Kiinteistövahti service and smart heat distribution centre services help housing companies save time and effort, and promote the optimisation and reduction of energy consumption for heating.

### **Even cleaner electricity**

Helen’s goal is to be a carbon-neutral energy company by 2030. The production of electricity and heat will continue to be based on diverse energy sources.

“We have increased the use of heat pumps and bioenergy in heat production, and we have large wind and solar farms under construction. We are also exploring the use of small-scale nuclear power and hydrogen technology in energy production, as well as carbon dioxide capture solutions. We have also invested in energy storage,” Erätuuli explains.

In the energy systems of the future, data will be used even more effectively to maintain balance between energy production and consumption. This will create new electricity saving opportunities in apartment buildings as well.

“With automation, a ground source heat pump can heat the hot water tank during the hours when electricity prices are low, for example. It is also possible that, in the future, the changing hourly spot prices of electricity can be better incorporated into the load management of housing companies’ EV charging points,” suggests Teemu Kettunen from Motiva. ✕

**In the future, data will be used even more effectively to maintain balance between energy production and consumption.**





## Electricity storage solutions promote flexibility

**ELECTRICITY STORAGE** solutions are becoming an increasingly important part of the energy system. Helen is making significant investments in renewable energy, such as wind and solar power. During periods of high winds, excess energy is stored in electricity storage infrastructure for use on days of less wind. Electricity storage increases the flexibility of the energy system.

“The smallest unit of electricity storage infrastructure is a battery, like the one in a mobile phone,” says **Kristiina Siilin**, Business Development Manager at Helen.

“Batteries are connected in series and in parallel in modules resembling shoeboxes. They are then connected together to store the desired amount of energy. When they are charged, the batteries’ state of charge increases. When they are used, the state of charge decreases, just like with a mobile phone.”

Helen currently has three electricity storage units that are mainly used for research and development purposes. In addition, a jointly-owned electricity storage unit is operational at the Lakiakangas wind farm, and a Helen-owned electricity storage unit will be built at the Lohja solar farm. Helen also helps its customers with electricity storage operations.

Fingrid predicts Finland’s electricity consumption will be 136 TWh in 2030. Some 76% of electricity production would be weather-dependent, such as wind and solar power.

“In that scenario, Finland would need electricity storage capacity of 40,000 MWh and regulating power capacity of 4,000 MW for electricity storage,” Siilin adds.

“Helen has plans to build hundreds of megawatts of electricity storage units.”

# District heating is reliable



“**T**he strengths of district heating include its delivery reliability, operational reliability and low maintenance needs,” says **Carl**

**Schauman**, Chair of the Board of Directors of the housing company Asunto Oy Saukonpaaden Merituuli.

The housing company was established in 2014 and is located in Jätkäsaari, Helsinki. The apartment building is located on its own plot of land, and it comprises 55 apartments on seven floors, divided between four stairwells.

“For us, district heating is a good energy raw material. It is heat in the form of hot water. When it reaches the heat distribution centre at our property, we process it further. We have five systems that derive their energy from district heat.”

TEXT GENERO PHOTOS PETRI MULARI

**1. HEATING TAP WATER.** The company ensures that the circulating water temperature and pump power are set correctly. The residents decide how much warm water they consume. They pay for their water themselves, as we have apartment-specific water meters in our housing company. We have installed a system that allows our residents to monitor their consumption of cold and hot water at the daily level. This allows them to save money.

**2. HYDRONIC UNDERFLOOR HEATING IN THE APARTMENTS.** With the data we obtain from the building automation system, we can fine-tune the automation to ensure that the pumps operate correctly and the heating control curves are appropriately configured. The more transparent the data in the

**“When district heat reaches the heat distribution centre at our property, we process it further.”**

**Carl Schauman has a good handle on energy.**



District heat is delivered to the heat distribution centre for processing. Yritys Helen provides an overview of its total consumption.



system, the better we can address any deviations. Our efforts to adjust the systems to increase energy efficiency benefits everyone: the environment and our residents.

**3. HYDRONIC UNDERFLOOR HEATING IN WET ROOMS.** It operates on its own circuit. The automation ensures that the underfloor heating in the apartments turns off when the outside temperature rises above a pre-set limit. However, wet rooms need to be heated all year round because they need to be dried. With district heating, their underfloor heating is more controllable and more cost-effective than electric comfort heating.

**4. HEATING COMMON AREAS.** Conventional water-circulating radiators are used for this.

**5. POST-HEATING OF SUPPLY AIR FOR VENTILATION MACHINES.** When cold air enters the ventilation machine in winter, it passes through the heat recovery unit. It utilises the heat from the exhaust air. Even after that, the temperature of the supply air is not high enough, so it goes through post-heating before being blown into the apartments. District heat is used for the post-heating.

**“MONITORING IS KEY.** We have two tools for it. Yritys Helen gives us an overview of energy consumption. We use the building automation system for internal monitoring to see how efficiently we use energy. It shows us how the systems are working and whether any intervention is needed,” Schauman concludes. ✕

### 3 × fact

The pricing of district heating will change in 2024. Going forward, the price will consist of a basic price and an energy price.

You can check the basic price in the forecast report sent at the beginning of October. The basic price replaces the water flow charge.

The energy prices for 2024 will be announced at the end of November. In the future, they will be updated at six-month intervals for one year at a time. The energy price replaces the seasonal price used previously.

Read more: [helen.fi/en/district-heating/product-renewal](https://helen.fi/en/district-heating/product-renewal)

**Are you wondering how district heat will be produced in the future? Will we have enough electricity for EVs? Don't worry! We want to help Finns see energy in a new light.**

For more questions and answers, check out our Instagram: @energiahelen



## You asked, we answer

**If all of the cars in Finland were electric vehicles, would the supply of electricity be sufficient?**

— Tuomas, 27.

Yes, it would. However, it is possible that some parts of the local grid would need reinforcement. The local grid load can be balanced by using smart charging devices, allowing the restriction or scheduling of charging as needed.

**How will district heat be produced in the future?**

— Julius, 25.

Without coal, of course! We shut down the Hanasaari power plant last spring, and we will discontinue the burning of coal in Salmisaari in 2025.

Going forward, we will produce district heat by taking advantage of waste heat, environmental heat, electric boilers and bioenergy, for example. Our long-term plan is to completely phase out combustion-based heat production.

**What is waste heat and what steps could be taken to utilise it?**

— Heidi, 30.

In buildings, waste heat typically refers to heat escaping from the building through ventilation. At home, waste heat can be effectively utilised with an exhaust air heat pump, which recovers heat from exhaust air.

At the industrial scale, waste heat refers to heat recovered from industrial processes, waste water or data centres, for example. It is recovered, processed and routed into the district heating network. It is used to heat homes, offices and commercial spaces.

At Helen, we recover waste heat at facilities such as the Katri Vala heat pump plant, which utilises the thermal energy in purified waste water and waste heat from buildings connected to the district cooling network.

**Why are electricity distribution fees so expensive?**

— Aurora, 25.

It is true that electricity distribution fees may seem expensive. The underlying factors include electricity tax, which is collected in connection with electricity distribution, and the Electricity Market Act, which obligates distribution system operators to guarantee the reliability of electricity distribution in all weather conditions.

Distribution fees fund the maintenance of thousands of kilometres of electricity networks. They also fund investments in new electricity networks, maintain the metering of electricity consumption, and cover compensation for national electricity distribution.

Electricity tax has increased more than threefold since the turn of the century. Today, taxes represent approximately one-third of the electricity bill. Electricity tax is collected as part of electricity distribution, with the distribution system operator remitting it to the state.



CUT HERE

## Tips for quick services

Are you choosing a new electricity contract but finding it confusing? Do you need to update your billing address? We want to make it as easy as possible for you to find answers to your questions, along with clear instructions and shortcuts for managing your electricity contract. The most convenient way to use our services is online. You can use the services at a time that suits you.

Find help and advice online at [helen.fi/en/self-service](https://helen.fi/en/self-service)



## Expert assistance on heating for a housing company

Is heating a current topic for your housing company? Invite our expert to discuss the energy-efficient heating of your property at a general meeting, for example.

During the visit, you will get the latest updates on the condition of your district heating equipment and future maintenance or replacement needs. We will also provide information on Helen's heating solutions and valuable tips for saving energy.

The service is available for housing companies located in Helsinki.



REQUEST A FREE VISIT!

## Exercises for energy experts

Want to learn more about the energy transition and different energy sources? These exercises are for energy experts of all ages.



Hi!

I am Ellen. These are my friends Posi and Neg.

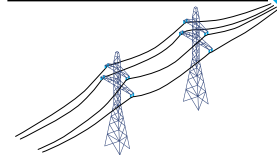
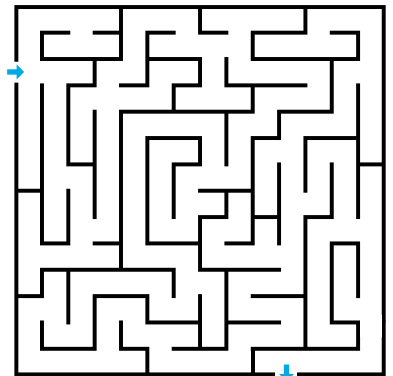
Posi and Neg are lost energy. I will help them get back onto the grid.

Join us, and you will also learn about different energy sources and ways to save energy.



### EXERCISE 1

Help Posi and Neg get back to the electricity grid through the maze.



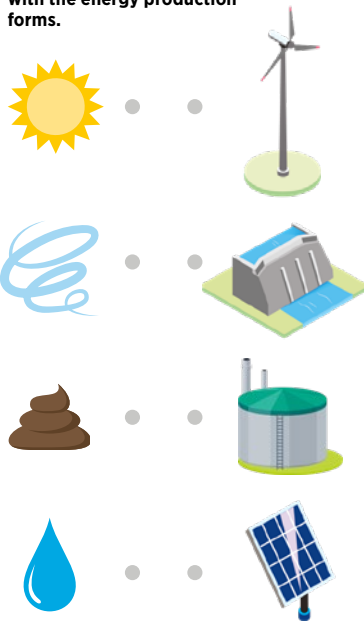
Look for more exercises on the next page.

### ANSWERS TO THE QUESTIONS ON PAGE 18:

Exercise 2: sun-solar panel, wind-wind turbine, excrement-biowaste plant, drop of water-hydropower plant.  
Exercise 3: Do not waste energy.

**EXERCISE 2**

Match the energy sources with the energy production forms.



CUT HERE



**GETTING TO KNOW DEVICES**

# I am steaming here!

**What is a steam mop?**

It is a useful tool for Christmas cleaning. A steam mop is a cleaning tool that cleans surfaces without detergents. All you need is water. First fill the water tank with tap water. Switch on the steam mop. In about 30 seconds, the water will be hot enough to form steam. You can now start cleaning.

**What makes a steam mop effective?**

Steam opens the pores of surface materials and loosens dirt from deep within that traditional cleaning tools cannot reach. Steam kills up to 99.9% of bacteria. You can clean for up to 20 minutes with one tank of water. Then simply refill the tank and continue.

**A steam mop's sweeping function removes dirt, dust and crumbs simultaneously while the steam cleans the surfaces.**

**What can a steam mop be used for?**

It can be used for all types of hard floors: stone, tile, laminate, and parquet flooring, and plastic mats. For the best results, vacuum floors before using the steam mop. You can also use a steam mop to clean sinks, toilet seats, the joints between tiles, the sauna, and even windows and mirrors. Check the user manual of your steam mop to find out what it can be used for.



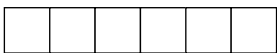
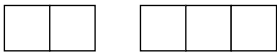
Hi!

I'm Smarti. I'm a computer program that helps the energy system operate smarter. I keep the electricity network in good shape and in balance. I don't want energy to go to waste. I predict how much electricity will be produced and choose the right energy sources. I direct energy to your home when you turn on the lights or switch on the TV, for example.



**EXERCISE 3**

Solve the code created by Smarti.



A	D	E	G	N	O
R	S	T	W	Y	

**READER CONTEST**

**Send us feedback on Helen magazine and win a prize!**

Which of the stories in this issue did you like the most? Enter our contest for a chance to win a steam mop.

Enter the contest by 11 January 2024 at [helen.fi/magazine-feedback](https://helen.fi/magazine-feedback) or by sending a postcard to Helen Helen magazine 00090 HELEN

Don't forget to write your contact details and customer number on the card.

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					1	7	3	
1	2				5		9	
7			6					
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	6		5				1	7
	5	9	1					
					6	2		

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						2	8	4	
7	5					9		3	
6			4						
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						6			5
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	6	3	2						

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				4	9	3		

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REMEMBER THIS?

Energy education

We want to make energy understandable to people of all ages. This year, we organised a family event at the Olympic Stadium in Helsinki, where children and their parents had the opportunity to learn about energy through play. We have a long track record in energy education, and we have guided children for decades on how to save energy.

Schoolchildren used to be a common sight in the Sähkötalo building.



# Oma Helen

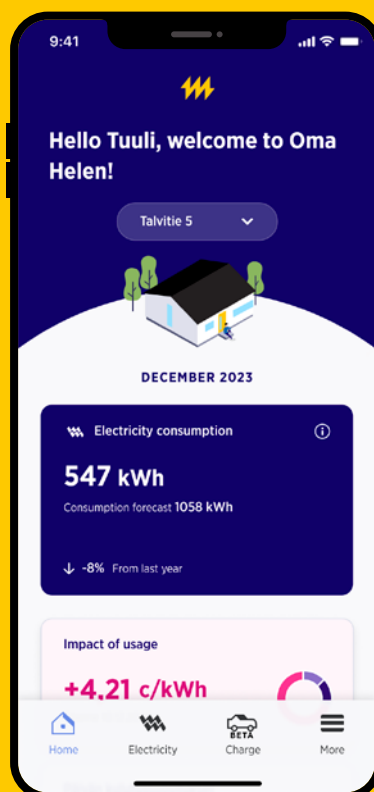
Have you downloaded Oma Helen from your application store? It gives you a convenient overview of your electricity use.

## Download the Oma Helen app

- » Download the free app from the App Store or Google Play.
- » When you launch the app for the first time, use your banking credentials or mobile authentication for identification.
- » The app is ready to use!

## Monitor your consumption

You can monitor your electricity consumption in kWh or euros at the daily, weekly, monthly or annual level.



## Use our services

A virtual assistant helps you with questions concerning electricity contracts and bills, among other topics. You can use it to move your electricity contract to a new address, for example.

## New!

You can renew your fixed-term electricity contract directly in the app, without any intermediaries.



Oma Helen is available for Android devices on Google Play and for iOS devices on the App Store. Oma Helen is free of charge.

