

See energy in a new light » 1/2023

HELEN

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**Did you
know?**

Solar power will account
for at least 10% of
Helen's renewable
energy production
in 2030.

Rising sun

**Global solar power
capacity to grow sixfold
by 2050**
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We answer your questions about energy
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Will Finland become a big player in solar energy?

THE SUNNIEST DAYS of the year are approaching, and the nightless nights inspire people to enjoy summer to the fullest. Up until some years ago, it may have seemed inconceivable that building solar farms this far north would be a feasible notion. But now, the sun's role in Finland's energy system is increasing in importance from one year to the next.

THE GROWTH OF RENEWABLE ENERGY, including solar and wind, leads to greater fluctuations in the total production of electricity. Energy companies cannot make the green transition happen on their own. Consumption will also need to be increasingly allocated to the times when renewable energy is available. This requires flexibility from consumers as well. People should charge their electric cars and do their laundry when electricity is at its cheapest – and simultaneously at its cleanest.

IT IS A GOOD habit to monitor your electricity price and consumption with the help of the Oma Helen app. When you use electricity when it's cheaper and only when you need it, you save both money and the environment.

IT REMAINS TO BE SEEN how significant a role Finnish solar power will have in the future. Even if Finland would not become a solar superpower, we need energy production that balances the fluctuations in wind power and provides a source of clean energy even when there is no wind.

Olli Sirkka
CEO
Helen Ltd



Hydrogen is a hot topic

"Most of the major hydrogen projects in Finland will be completed before the end of the decade. Helen's first project is set to be completed in 2025," says **Tuukka Hartikka**.

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Solar panels for the summer cottage

"We felt comfortable with Helen's representative. We were given time to think about our options. Even the price was good," **Pekka Niemi** says.

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Join the adventure

"The new book *Ellen's Energy Adventure* is a fun adventure with characters who teach interesting lessons even for adult readers," **Seela Sella** says.

» PAGE 18



CUSTOMER SERVICE

Oma Helen app
helen.fi

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09 617 8020
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Electricity network: 09 617 8090
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FAULT REPORTS

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Disruptions in district heating and cooling distribution:
08001 60602
Real-time information on disruptions in distribution:
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Get the most out of your panels

– Credit calculation for energy communities offers savings to housing companies

1. What is it?

Credit calculation allows the residents of a housing company to take advantage of the energy produced by their solar power plant. This reduces the residents' electricity bills across various components: network service charges, energy charges and taxes.

2. How does it work?

The electricity produced by the solar power plant reduces the housing company's electricity purchasing. The surplus energy is divided between the residents. The amount of credited energy is shown on the invoice of the distribution system operator (DSO).

3. How do I get started?

The contractor notifies the DSO of the installation of the solar panels, and the property manager signs a credit calculation agreement. Helen Electricity Network is responsible for the service in the Helsinki region.

Learn more:
helensahkoverkko.fi/hyvityslaskenta

If you live outside Helsinki, you can ask your local DSO about the credit calculation service.



Changes in Salmisaari

Our energy production is rapidly becoming greener as we replace fossil fuels with renewable and carbon-neutral solutions. This transformation is also evident at the Salmisaari power plant, where we are building new electric boilers and an air-to-water heat pump plant to produce district heating and cooling. In addition, the old coal boiler will be converted so it is powered by pellets. Salmisaari is already home to a pellet heating plant that was completed in 2019, along with heat storage infrastructure and cooling production plants.

Vuosaari bioenergy heating plant provides heating to homes in Helsinki

At the turn of the year, we commissioned a new bioenergy heating plant in Vuosaari. The plant produces district heating. The plant replaces some of the production of the Hanasaari coal power plant that was closed in April, for example. Bioenergy heating reduces dependence on imported fossil fuels and represents a significant step on the path towards carbon-neutral energy production.

Renewable hydrogen is a hot topic

– Tuukka Hartikka from Helen explains why you should be interested

What is on the horizon for renewable hydrogen?

Renewable hydrogen can be used in the production of carbon-neutral solutions in aviation, the maritime sector and the steel industry, for example. The EU has set a target of producing 10 million tonnes of renewable hydrogen in 2030. Finland aims to produce 10% of that total and become a leader in the production of renewable hydrogen.

Why is it important?

Renewable hydrogen is needed particularly in industries where electrification is difficult. Hydrogen can be used to store wind and solar power, which supports the entire energy system.

How will it be visible to people?

The most visible aspect will be hydrogen trucks in heavy road transport. People's homes will be heated with waste heat generated in hydrogen production.

When will renewable hydrogen become part of daily life?

The first hydrogen projects will be completed as early as next year. Most of the major hydrogen projects in Finland are scheduled to be completed before the end of the decade. Helen's first project is set to be completed in 2025.

What else should I know?

Renewable hydrogen is an important, as yet missing piece of the carbon-neutral energy system. Its implementation will require extensive partnerships and cooperation between different industries.

Business Lead Tuukka Hartikka from Helen connects industries through renewable hydrogen and Power-to-X solutions.

Did you know?

Renewable hydrogen is produced from water using renewable energy, such as wind or solar power. Hydrogen is the missing piece of the carbon-neutral energy system.



3 × the right electricity contract for you

FOR THE ENVIRONMENTALLY AWARE

Environmental Electricity

When you choose Environmental Electricity, you can rest assured that the energy you consume is produced from 100% renewable sources. It is a combination of solar, wind and hydro power, with certificates of origin. The ratios vary monthly depending on production conditions. Environmental Electricity contracts are valid until further notice and the price follows the electricity market price trend.

FOR THE FRUGAL USER

Helen Smart Electricity

A one-year or two-year fixed-term electricity contract that offers you price stability and the opportunity to influence your electricity bill by managing consumption. It's a good choice if you're concerned about the large fluctuations in spot prices, but you're also interested in keeping an eye on the hourly prices and managing your consumption accordingly. The total price consists of the basic charge and a fixed price component that is adjusted by the monthly consumption effect. It can reduce or increase the fixed price component depending on when you consume energy.

DID YOU KNOW?
You can manage
your electricity
contract conveniently via the
Oma Helen app.



FOR THE ACTIVE CONSUMER

Exchange Electricity

If you actively keep an eye on the hourly prices of electricity and have the ability to schedule your consumption to take advantage of the cheapest hours of the day, Exchange Electricity may be the right choice for you. The price of electricity varies hourly based on the Nord Pool spot price and is therefore always subject to competitive bidding. The margin and basic charge are added to the spot prices. The hourly prices for each day are published by 15:00 the previous day, allowing you to plan your electricity consumption in advance. Exchange Electricity contracts are valid until further notice.



These tips were
shared by Product
Development
Manager Kiti Ryytty
from Helen.



A SOURCE OF PRIDE

Energy education

Helen has a long history of energy education. It is again a big priority for us this year. We published a children's book that talks about energy in a fun and easy-to-understand style. We have also published a Minecraft challenge for children, to be followed by a website and learning materials.



HOW IRRESPONSIBLE IS IT...

...to cool your home in hot weather?

It's not irresponsible. A hot home is unpleasant and can even be hazardous to health. High temperatures are particularly risky for the elderly. Cooling your home is a good idea when the temperature exceeds 25°C. Remote work is more productive if you're not sweating when you're just sitting still, and you sleep better in a cool room.

5×

Solar power

Solar power is projected to account for as much as 25–30% of global electricity production in 2050. Let it shine!



1

A fallow field is in productive use throughout the year in Nurmi-järvi, about 40 km from Helsinki, with 2,800 solar panels covering a two-hectare area of the field. Helen's 1.5 MW solar farm generates 1.5 GWh of solar power per year, which corresponds to the annual electricity consumption of 80 single-family houses or 250 two-room apartments.

The solar farm became operational at the end of March. When you drive north on national road 3, the solar farm is just to the right of the road.

This is Helen's first solar farm, and likely the first of many.

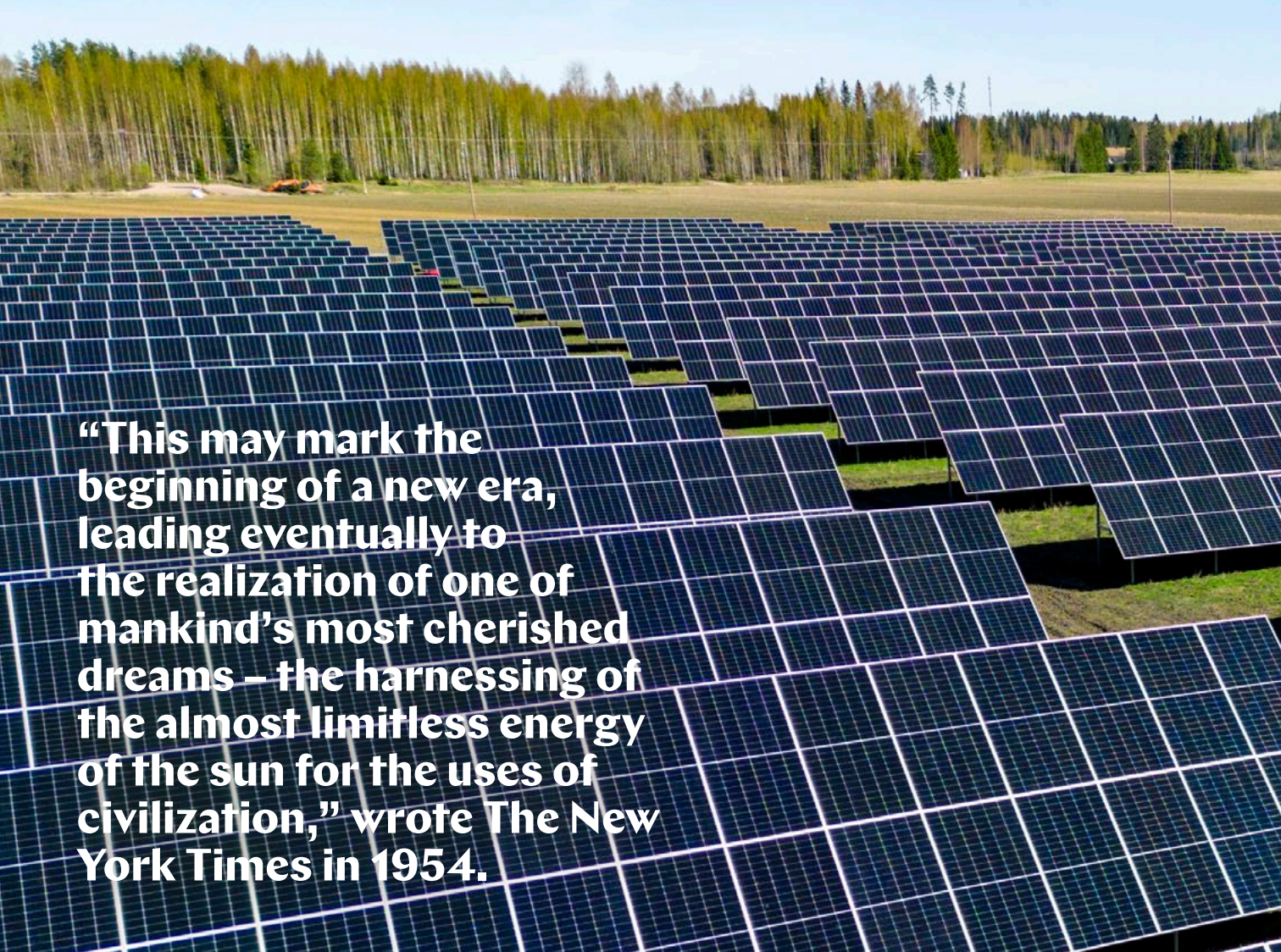
What is the world's total solar power capacity?

The world's total annual electricity consumption is 25,000–26,000 TWh, with Finland's share being 82 TWh. Less than 1% of Finland's total consumption is covered by solar power. Globally, solar power currently represents just under 4% of the total consumption of electricity.

The solar power market got going in earnest in the early 2000s, when an inflection point was reached and steady growth turned to a sharp increase.

“Nearly 270,000 MW of new solar power was installed last year. That refers to the peak output, as the sun does not shine all the time,” says **Peter Lund**, Professor of Engineering Physics at Aalto University.

»



“This may mark the beginning of a new era, leading eventually to the realization of one of mankind’s most cherished dreams – the harnessing of the almost limitless energy of the sun for the uses of civilization,” wrote The New York Times in 1954.

» The sun is an immense source of energy. In 1.5 millionths of a second (0.0000015), it produces as much energy as the entire world consumes in one year. Why are we not extracting more energy from the sun?

“Solar power is still in the early stages of development, even if it is trending upwards. Healthy industrial growth sets the boundaries for progress.”

How did the story of solar power begin?

Things began to heat up on 25 April 1954 at Bell Labs, a research and scientific development company in the United States.

Having worked for months to improve the attributes of the silicon solar cell, engineer Daryl Chapin, chemist Calvin Fuller and physicist Gerald Pearson were ready to present their invention. They had put several cells together to create a solar panel that powered a toy Ferris wheel and a radio transmitter.

Their solar panel’s conversion efficiency was 6%, which was a groundbreaking achievement at

the time. The conversion efficiency indicates what percentage of incident solar energy is converted to electricity.

The New York Times wrote that the silicon solar cell heralded “the beginning of a new era, leading eventually to the realization of one of mankind’s most cherished dreams – the harnessing of the almost limitless energy of the sun for the uses of civilization”.

How did the solar power market get started?

The era of solar power began, but progress was slow. At the Cherry Hill Conference in 1973, it was decided that the United States needed a separate government agency to develop renewable energy. This meant more funding for renewables, including solar power.

Active research efforts continued. There was also a lot of R&D activity on modern solar power technology in Japan. However, solar panels were too expensive to produce. There were cheaper ways to get electricity.



2

Helen is searching for new solar farm locations

Along with wind, solar power is one of the basic pillars of a sustainable energy system. Solar energy is a clean way to produce electricity and an excellent way to increase energy self-sufficiency and meet the increasing demand for electricity. Helen aims to increase the solar energy capacity of Finland by several hundred megawatts in the next few years.

Helen builds, owns and operates solar farms and sells the electricity they produce. We act as the developer and invite tenders from contractors for the various subsections of the projects. We have international procurement and contracting networks as well as technical design competence for solar energy. The capacity of an individual solar farm may range from 5 to 200 MW, depending on the location and the opportunities it provides.

If you'd like to offer us your land for solar power production, please fill in the form on our website. We will contact you as soon as possible.

Find out more:
helen.fi/aurinkovoima

“Things picked up in Germany in the late 1990s with a programme aimed at electrifying 100,000 roofs with solar panels,” says Peter Lund.

The Federal Government introduced significant incentives for investing in solar power. Demand grew. Companies got involved. Industrial production began.

“Germany received positive feedback for its subsidy programme. The second incentive programme supported the use of solar power rather than investments in it. In the early 2000s, Germany introduced a feed-in tariff for solar power.

Solar power producers received a fixed price for each kWh produced.

“At first, the feed-in tariff was very generous. People felt that it would be stupid not to invest in solar power. In one year, the solar power capacity increased by nearly 8,000 MW, which was an inconceivable figure at the time.”

The market developed, things got out of hand, the market overheated and the government had to reduce the feed-in tariff.



3

Timeline

Many famous scientists have contributed to the development of solar power.

1839

19-year-old French physicist **Alexandre Edmond Becquerel** discovers the photoelectric effect.

1883

American inventor **Charles Fritts** uses selenium cells to build a solar panel with a conversion efficiency of 1%.

1905

Albert Einstein publishes a theoretical explanation of the photoelectric effect, demonstrating how solar cells can be used to capture energy from the sun.

1954

Bell Labs researchers **Gerald Pearson, Daryl Chapin** and **Calvin Fuller** present the first high-power silicon solar cell with a conversion efficiency of 6%.



» Still, the feed-in tariff did a lot to open the market. Major players got involved and large solar panel factories were built. They could reduce the prices of the panels by 20–30% while keeping profit margins at 40%.

“Then, China recognised the market potential of solar. This was in 2008–2009. China benefited from economies of scale that allowed it to efficiently increase production while reducing costs. This started a price competition, with China coming out on top. Chinese solar panel factories were 10 times larger than their German counterparts.”

What are solar cells made of?

Silicon is the most common material used in solar cells. It is a semiconductor that conducts electricity. It is the second most abundant element in the Earth's crust. Some 90% of solar cells are made from silicon.

While most cells used to be made from polycrystalline silicon, today's market is dominated by monocrystalline silicon. Polycrystalline panels are

SOLAR CELL

- A photon is absorbed by a silicon atom in the cell and its energy is transferred to an electron.
- The electron is ejected from the silicon atom. Its movement creates electricity.
- The most commonly used material is the semiconductor silicon due to its low cost and abundance in the Earth's crust.

SOLAR PANEL

- Consists of dozens of solar cells connected in series.
- Produces solar electricity when there is sunlight.
- Light cloud cover and cool weather improve output.
- The highest output is achieved by pointing the panels south.
- Electrons travel through a cable into an inverter.



usually blue and their structure is visible in the form of crystals of different sizes on the surface of the cell. Monocrystalline panels are darker, or completely black. Their conversion efficiency is currently the highest at 21–22%.

Crystalline silicon cells are composed of two different types of semiconductor material: P-type and N-type.

N-type semiconductors are doped using an element that has more electrons than silicon, such as arsenic. P-type semiconductors, in turn, are doped using an element that has fewer electrons than silicon, such as boron.

Solar cell technology is being continuously developed. Thin-film cells have already taken a small slice of the market. The next step may be perovskite solar cells, which are currently in development.

How do solar cells work?

Solar radiation consists of photons, which carry the sun's radiant energy. A solar cell converts the sun's

radiant energy into electricity through the photo-electric effect. In it, the photon is absorbed by the solar cell's doped semiconductor, causing an electron to be ejected. At the same time, the photon's energy is transferred to the electron.

The ejected electron moves to an external circuit. There, the electrical current is converted into alternating current in an inverter, to be used in electrical devices or stored in batteries.

A single solar panel can have as many as over 100 solar cells.

How much solar power is produced around the world?

The total solar power capacity installed around the world is 1.2 TW, or 1,200,000 MW.

China has by a large margin the highest capacity of installed solar power, representing over a third of the world's total capacity. It is followed by the United States (12%), Japan (9%), Germany (7%) and India (7%). Next come the countries with a share of 2–3%: Italy, Australia, Vietnam and Spain.





“Fingrid projects Finland’s solar power production capacity to be 7,000 MW in 2030. This would correspond to about 6% of Finland’s electricity production,” says Minna Junnikkala from Helen.

» In Finland, the total solar power capacity was 600 MW at the end of 2022, and the 1,000 MW milestone will be approached this year. This is about 0.1% of the world’s total capacity.

In China and the US, solar power covers about 4% of total electricity consumption.

They are not among the leading countries in that regard.

Australia tops the list at 16%, followed by Spain (15%), Greece (14%), the Netherlands (12%), Germany (12%), Chile (11%) and Japan (11%).

The corresponding figure in Finland is under 1%.

What is the role of solar power at Helen?

“Helen has nearly 10 years of experience as a solar power pioneer in Finland. We’ve built solar power plants at thousands of single-family homes and hundreds of businesses and housing companies,” says **Minna Junnikkala**, Head of Solar and Wind Energy at Helen.

In addition to the Nurmijärvi solar farm, Helen has three designated panel power plants in

Suvilahti, Kivikko and the Helsinki Expo and Convention Centre.

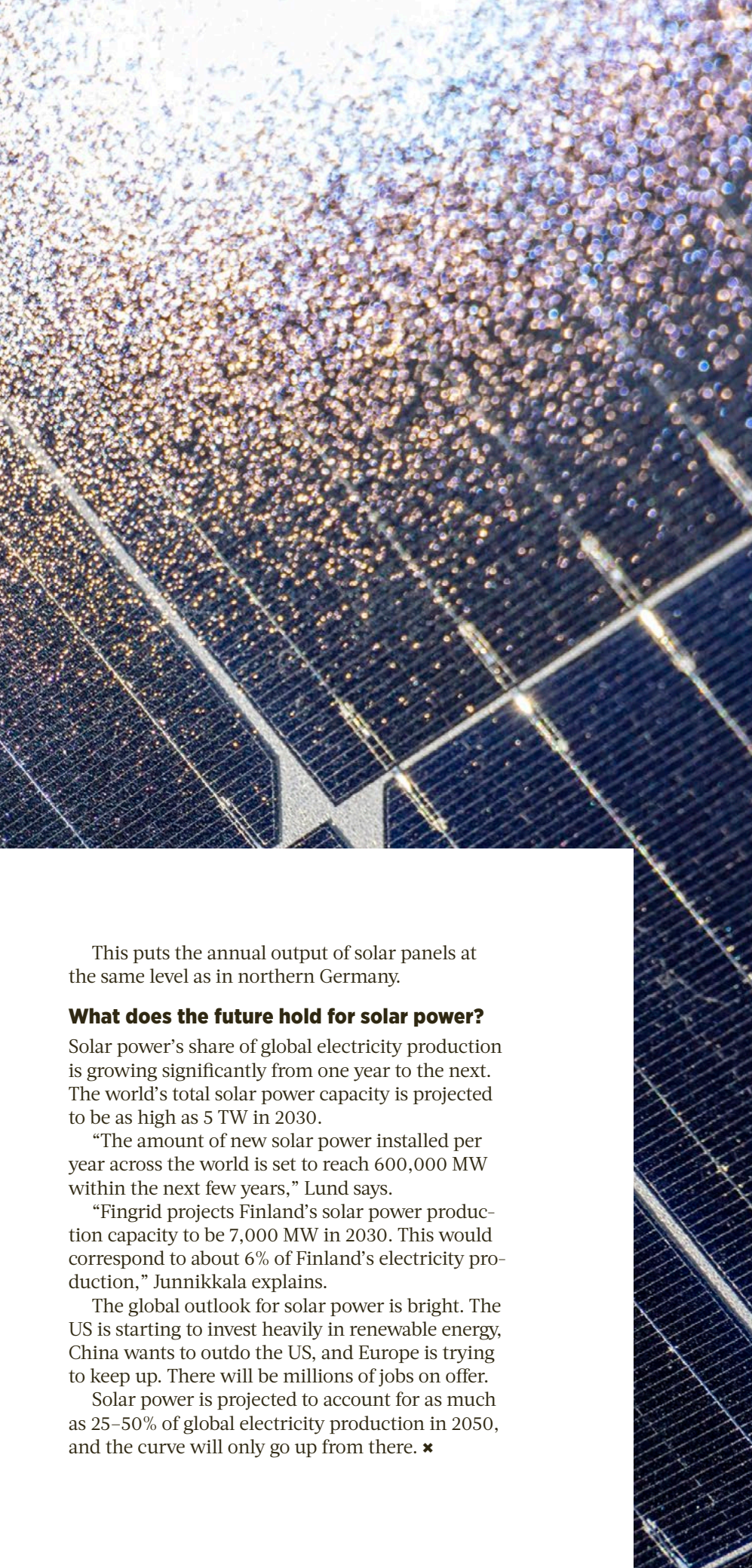
Two new solar farms are already under construction and will be completed in 2024: a 10 MW farm in Virkkala, Lohja, and a 206 MW farm in Kalanti, Uusikaupunki.

The annual output of the Kalanti solar farm corresponds to the annual electricity consumption of 11,000 single-family homes or 34,000 two-room apartments.

“Helen’s target for 2030 is to produce 60% of its electricity from renewable sources, i.e. wind and solar, with solar making up at least 10%.”

To achieve this goal, Helen will build new solar farms across Finland. Helen is particularly interested in low-yield land that it could lease for its solar farms. The farms generate rental income for landowners and property taxes for municipalities.

“Solar power is a feasible investment even in Finland. Our summers are bright and cool, giving solar panels much higher efficiency than in hot conditions where temperatures exceed 30°C.”



This puts the annual output of solar panels at the same level as in northern Germany.

What does the future hold for solar power?

Solar power's share of global electricity production is growing significantly from one year to the next. The world's total solar power capacity is projected to be as high as 5 TW in 2030.

"The amount of new solar power installed per year across the world is set to reach 600,000 MW within the next few years," Lund says.

"Fingrid projects Finland's solar power production capacity to be 7,000 MW in 2030. This would correspond to about 6% of Finland's electricity production," Junnikkala explains.

The global outlook for solar power is bright. The US is starting to invest heavily in renewable energy, China wants to outdo the US, and Europe is trying to keep up. There will be millions of jobs on offer.

Solar power is projected to account for as much as 25–50% of global electricity production in 2050, and the curve will only go up from there. ✕

5

Quiz

How much do you know about solar power?

1. What is the world's largest solar power plant?

- A. Benban Solar Park, Egypt
- B. Huanghe Hydropower Hainan Solar Park, China
- C. Bhadla Solar Park, India

2. What is the largest solar power plant in Europe?

- A. SunEdison Photovoltaic Power Plant, Italy
- B. Francisco Pizarro Photovoltaic Plant, Spain
- C. XXL (Weesow-Willmersdorf) Solar Park, Germany

3. When was Helen's solar power plant in SuviLahti commissioned?

- A. 2015
- B. 2018
- C. 2021


4. When did people learn to use solar power to start a fire using a magnifying glass?

- A. 600 BCE
- B. 200 BCE
- C. 200 CE

5. How much electricity does a 1 kW solar power system produce in one year in southern Finland?

- A. 80–100 kWh
- B. 800–1,000 kWh
- C. 8,000–10,000 kWh

ANSWER KEY:
1 C, 2 B, 3 A, 4 A, 5 B.



A carefully planned solar power system at the Niemi cottage

The Tampere-based Niemi family has a cottage in Maisansalo, to the north of Tampere. They upgraded their solar power system to a 13-panel system provided by Helen.

The cottage had four solar panels when they bought it in the early 2000s. They started thinking about adding new solar panels in connection with roof renovations and ultimately decided to replace the system.

The installation of the new solar panels was incorporated into the planning of the roof renovation. The old panels were removed and the slopes of the roof were changed to face north and south to suit the solar panels. A conduit for cables was also put in from the distribution board to

the roof to support the installation of the solar panels.

THE CONCRETE buying process started last year with Pekka Niemi requesting quotes from a number of suppliers online. One of the suppliers tried to pressure them to sign the contract quickly, which made Niemi uncomfortable. He decided to get in touch with Helen.

“We felt comfortable with Helen’s representative right from the start. There was no pressure. We were given time to go over the offer and think about our options. Even the price was good,” Niemi says.

THE ORIGINAL PLAN WAS TO INSTALL 14 panels, but after measurements were taken with Helen’s representative, it turned out that the posi-

“Now that we can sell our surplus electricity, we can monitor our output via the Oma Helen app.”

Pekka Niemi bought solar panels from Helen for his cottage.



“The location of the chimney was difficult, so we left out one of the solar panels,” Pekka Niemi says.



tion of the chimney meant having to leave out one panel. The installation of the solar panels was scheduled for March 2023.

As the day of the installation approached, there was still a lot of snow on the roof, which made Niemi concerned.

“Two young men showed up on the day we had agreed on. They said the snow is not a problem. It was a long day’s work, but they finished the job as it started to get dark. Now we’ve got 13 panels on the roof,” Niemi says with a smile.

THE OMA HELEN app provides a comprehensive overview of the output of solar panels. The Niemi family can use the app to see how much electricity the solar panels at their cottage are generating.

“Having a mobile app to go with this equipment is nice, especially now that we can sell our surplus electricity,” Niemi points out.

All in all, Pekka Niemi and his family have been very satisfied with their decision to buy solar panels from Helen. There have been no problems at any stage of the process.

“I’m really pleased with the delivery process. Helen’s representative visited the location on several occasions,” Niemi says.

They’ve kept their promises throughout the process. Everything went smoothly and we have no complaints.” ✕

3 × fact

With solar panels, you can produce electricity on the roof of your summer cottage or home.

You are part of the green transition and the transformation of the energy sector.

Helen is a convenient and reliable option for getting a solar power system that suits your needs.

Worried about coal? Do you want to be an ecological energy consumer, but you don't know how? 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

Is solar power feasible in northern Finland?

— Minna, 79.

There's no denying that solar power production during the Finnish winter is minimal. At the same time, we have very long days in the summer, which means that solar panels produce electricity from early morning to late at night, and almost around the clock in the north.

Finland also has cooler temperatures than southern Europe, which means that solar panels here operate at a better conversion efficiency. Due to these factors, the annual output in Finland is comparable to northern Germany.

To answer your question, yes, it makes sense to take advantage of solar power even in northern Finland.

What is the transformation of the energy sector about?

— Oskari, 24.

The transformation of the energy sector refers to the ongoing transition and change in energy production. Fossil energy production is being replaced by renewable and low-emission energy. This transformation is driven by climate change, which affects us all.

The transformation will lead to more diverse energy production, with electricity and heat being produced from various sources – including solar, hydro and geothermal – and from various forms of waste heat and environmental heat. The transformation also includes drastic changes in roles in energy production, with energy consumers increasingly becoming energy producers by having solar power plants of their own, for example.

What concrete measures will Helen take in the future production of district heating after coal-powered plants are shut down?

– Olli, 37.

Last year, we opened a new bioenergy heating plant in Vuosaari. Its main fuel is wood chips obtained as a by-product of forestry. We will also convert one of our existing district heating boilers to use wood pellets produced from sawdust, which is a forest industry by-product.

We also have several electric boilers under construction, as well as numerous industrial-scale heat pump plants whose heat sources will include waste water, outdoor air and waste heat from data centres. Various types of waste heat and environmental heat will be an important part of our energy system in the future.

Our long-term plan is to completely phase out combustion-based heating production.



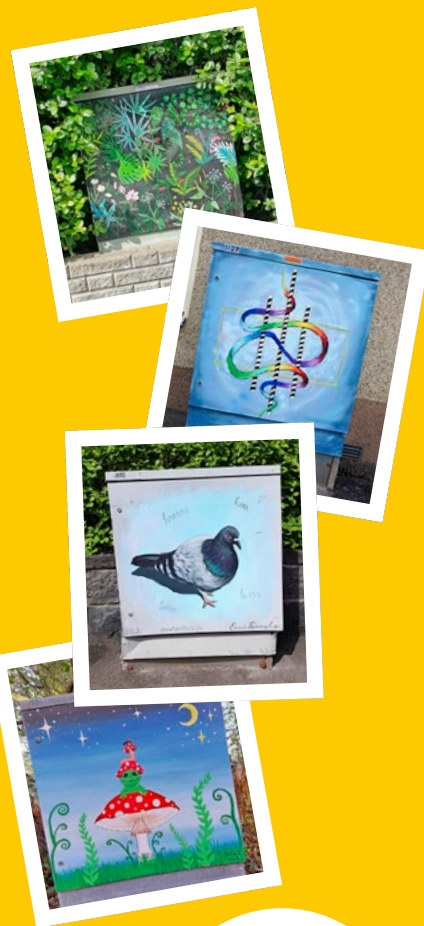
Donation to specialised pediatrics and child protection

In March, we donated €18,000 to the New Children's Hospital Foundation and Icehearts Finland. We also donated Helen's *Ellen's Energy Adventure* children's books, hot off the press, to the children's hospital. We collected the donated funds by selling items from our personnel clubs.



A fun family activity for the summer

Art and exercise are great sources of energy during the summer. Combine them by taking a walk to visit distribution boxes decorated with paintings by artists. We have carried out distribution box art projects in Helsinki for several years now. There are beautiful pieces of art on distribution boxes across the city.



Plan your route on the map and go on a summer walk for some positive energy.

Electricity rebate

The electricity rebate is one of the support measures introduced by the Parliament to help balance the record-high energy costs seen last year. People can receive the retrospective electricity rebate for a period corresponding to four months. The rebate applies to the consumption and price of electrical energy in

November–December 2022 and January 2023. For our customers, the rebate is taken into account automatically on the electricity bills, and no action is required on their part.

Learn more about the electricity rebate: helen.fi/compensation



Seela Sella makes learning fun

This spring, we have published a children's book that makes energy and the ongoing transition easier to understand.

Beloved actor **Seela Sella** believes in the power of curiosity and lifelong learning.

"The new book turns a challenging subject into a fun adventure with characters who teach interesting lessons even for adult readers," Sella says.

The delightful book takes the reader on an adventure into the world of various energy sources. Ellen helps lost energy, Posi and Neg, get back to the grid.

Join *Ellen's Energy Adventure*!



Download

the children's book
Ellen's Energy Adventure at
helen.fi/ellens-energy-adventure



CUT HERE



GETTING TO KNOW DEVICES

Take me on a picnic

What is a portable speaker?

JBL Charge 5 delivers rich and clear sound thanks to its optimised long excursion driver, a separate tweeter and dual JBL bass radiators. It provides up to 20 hours of playtime. The battery charges from empty to full in four hours.

This portable speaker will play your favourite tunes for as long as 20 hours.

What is PartyBoost?

You can use two JBL PartyBoost-compatible speakers together for stereo sound. You can also link multiple JBL PartyBoost-compatible speakers to improve sound quality even more. With the built-in powerbank, you can charge your devices without stopping the music.



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 JBL Charge 5 speaker.

Enter the contest by 10 August 2023 at 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.

What else?

The speaker's dimensions are 22 x 9.6 x 9.3 cm. It weighs 960 grams. It's dustproof and waterproof, so you can bring it to the park or the swimming pool. You can wirelessly connect up to two smartphones or tablets to the speaker and take turns enjoying JBL Pro sound.

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REMEMBER THIS?

Farewell to Hanasaari

Having served Helsinki residents for nearly 50 years, the Hanasaari B power plant was closed on 1 April. It was once a solution that removed the grey smoke hovering over the streets of Helsinki in the wintertime. Over the years, the iconic building and the coal heap next to it became part of the cityscape.

Instead of using coal, heat will be produced by means of heat pumps, among other solutions.



Oma Helen

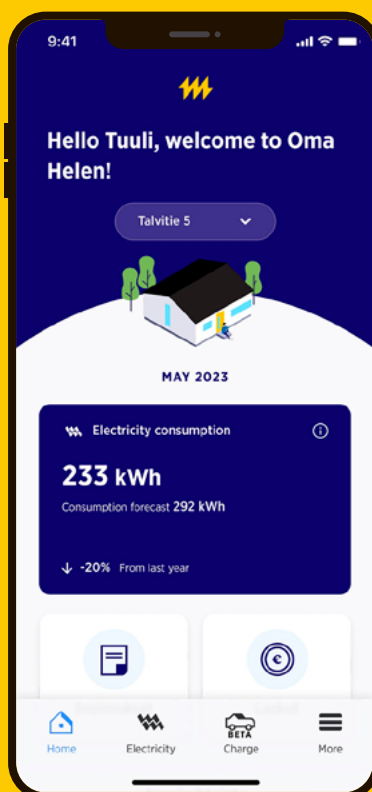
Use the Oma Helen mobile app whenever it suits you. Use the free app to manage your electricity contract and monitor your energy consumption down to the hourly level.

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 use it to move your electricity contract to a new address, for example.

Forecast your consumption

The electricity consumption forecast provides you with an estimate of your total monthly consumption based on your past consumption. The forecast becomes more accurate as the month goes along.



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

