



A ray of ☀️ sunshine  
travels 93 million miles  
to reach the Earth.  
Let's make it count.



powering a better tomorrow



# Powering the future.

As pioneers of the solar energy industry we've been providing the tools that allow people to decide for themselves where their energy comes from since 1993. We have long recognised the need for perfectly coordinated, well-designed and reliable products that are easy to use. With premium German quality, our solar panels come with comprehensive guarantees that assure smooth operation and consistently high energy yields for decades to come.

We offer the many advantages that come from dealing with a manufacturer with a large network, more than just installation. With Solarwatt, you get clean electricity, clean heat, and clean electromobility, from your own roof. You also massively reduce your costs and emissions. We all benefit from that. Discover how we can all start working for a better tomorrow, today.



Yours,  
Detlef Neuhaus,  
CEO

# Designed for you. Designed for the future.

## With the big picture in mind.

Each of our products is part of a finely tuned system that offers clean electricity, clean heat and clean mobility. SOLARWATT Manager forms the brain and nervous system. It keeps track of all components and energy consumed, optimizing the system to achieve a range of outcomes. For example, you can use it to power your electric car with solar energy – free of charge and without CO<sub>2</sub> emissions.

## With you in mind.

In addition to our products, our various services also make it easier for you to start generating your own energy.

Whether it's financing, meter operation, tax assistance, green energy grants, financing or something else, we're right with you from the very start, assisting you through the decades.

## With tomorrow in mind.

We are on a mission to deliver high performing and reliable German quality solar panels. We follow specific standards to ensure that our panel range is environmentally friendly and work continuously to mitigate our carbon footprint. We carefully scrutinize our use of natural resources and design our products to be recyclable.



1 **SOLARWATT Panel vision**  
reliably generates clean energy.

2 **SOLARWATT Manager**  
is the brain of the system.

3 **SOLARWATT Battery flex**  
stores your clean energy for later use.

4 **Inverter**  
turns solar energy into home electricity.

5 **Heat pump**  
generates heat from clean energy.

6 **EV charger**  
charges your EV with clean energy.



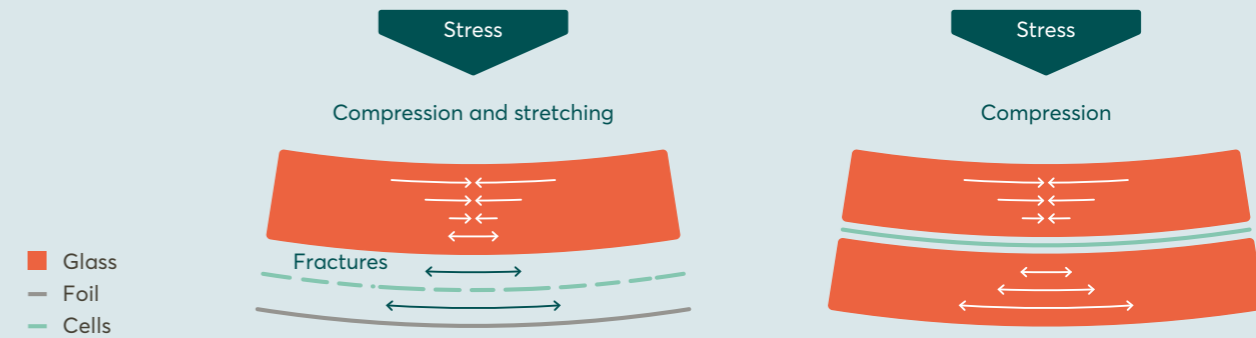
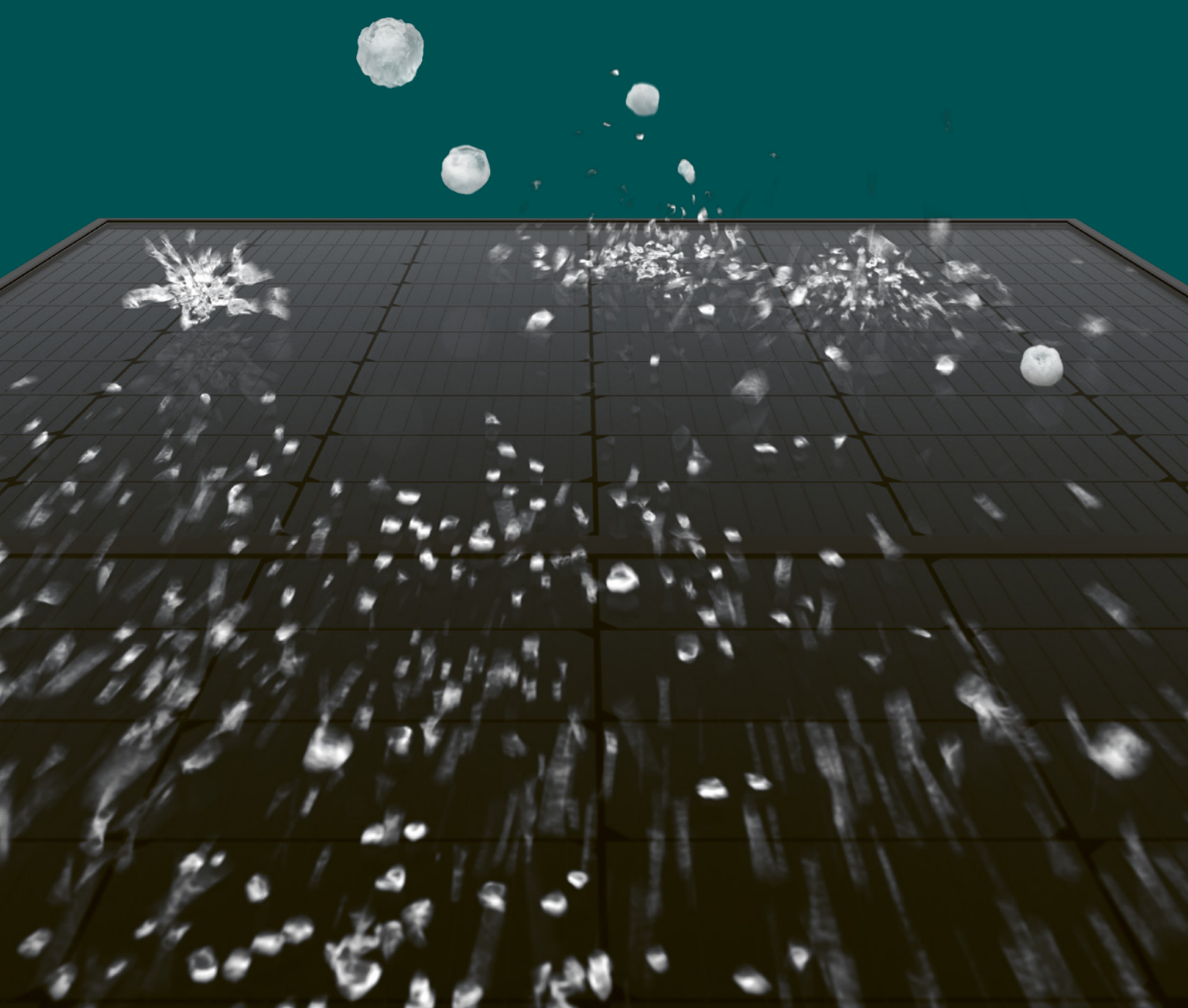
# For you. Your children. And their children.

Compared to the other parts of a photovoltaic system, modules must be the most resilient: they must be built to withstand temperature differences of up to 50°C, mechanical stresses from snow build-up or strong winds, UV radiation, steam and more. We have been using glass-glass technology for more than 20 years, creating modules that offer lasting value with reliably high yields guaranteed for 30 years.



# Panels that top every test. Even the test of time.

Powerful PERC cells are sensitive by nature – so, in our state-of-the-art manufacturing processes, we enclose them on both sides with thermally tempered glass. This makes our glass-glass modules significantly more robust than traditional glass-foil modules. With this protection, mechanical stresses caused by hail, harsh weather or snow won't lead to microcracks and the cells are generally less susceptible to damage. Steam and other highly aggressive agents such as salt spray or ammonia are also unable to penetrate the glass. And because glass doesn't really age like other materials, even time itself would struggle to take its toll.

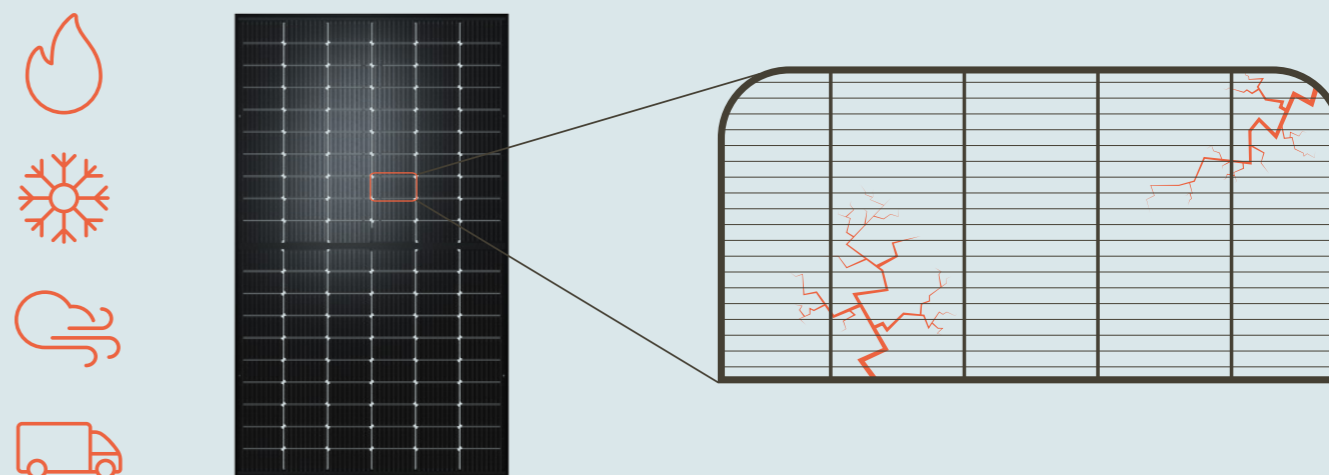


## Glass-foil modules

When glass-foil modules are subjected to mechanical stress, such as wind or snow, cells can crack. These cracks permanently reduce the module's energy yield.

## Glass-glass modules

In glass-glass modules, the sensitive cells are situated within the neutral fiber of the composite, where they are only bent and never stretched or compressed. This prevents any cracking of the cells.



## Microcracks

Microcracks are tiny hairline cracks in a solar cell that are invisible to the naked eye. Even though you cannot see them and adverse effects are unlikely to be produced immediately, microcracks are broken solar cells held in place by the solar module laminate.

After a time, the solar modules will be affected by various pressures such as bending and flexing, caused by external pressure and fluctuating temperatures. During the day, solar panels expand because of higher temperatures. Small imperfections in the silicon cell can lead to larger microcracks. The length of microcracks can vary; some span the whole cell, whereas others appear in only small sections.

Microcracks not only lead to significant loss of yield in a solar panel, the performance of panels without microcracks in the same string is also likely to be affected, which consequently affects the lifetime of a solar PV system.

Solar cells are very fragile and unless they're properly protected, microcracks can develop quickly. The chance of microcracks occurring in a glass-glass panel is nil, provided it leaves the factory without them. A manufacturer can verify this with an electroluminescence (EL) test, similar to an X-ray. Solarwatt's high factory quality standards ensure that any solar panel with microcracks is rejected.

With glass-foil panels, solar cells are much less protected. During transport, installation or, for example, a major hailstorm, microcracks can occur faster. Their effects, however, are not noticed until much later, due to reduced performance following continued deterioration. Microcracks are always outside guarantees provided by manufacturers.

Microcracks in glass-glass panels are covered by Solarwatt's FullCoverage all-risk insurance.

# Building for the future.

Most photovoltaic modules are constructed using glass on the front and foil on the back. This foil becomes increasingly susceptible to external influences over time. In contrast, glass hardly shows any signs of aging or wear and tear over time. Taking full advantage of this, we fuse two thermally tempered glass plates and two layers of foil to form a composite that optimally protects the sensitive solar cells within.



## Thinking long term means long-term savings.

Their robust construction means our modules last longer. And because they last longer, they can deliver a consistently high output for longer, too. This means that over time, you'll achieve a significantly higher yield.

Investing in glass-glass modules makes good financial sense. While they are more expensive than glass-foil modules to start with, that difference is offset by the significantly better investment vs. yield ratio over the product lifetime.

\* based on a 10 kWp system, on a south-facing roof at a 30° angle in Munich (Germany), for a 4-person household with a heat pump and electric vehicle charger. Calculation via PV Sol.

Anti-reflective glass

Embedding material

Cross-connector cover

Highly efficient cells

Embedding material

Thermally tempered glass

Aluminum frame

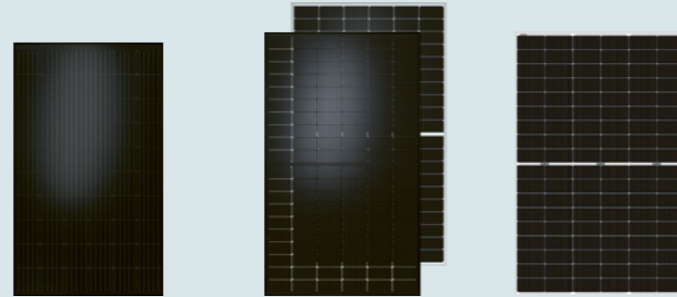
# Panels that adapt to your needs.

Get to know our modules and find exactly the right solution for your requirements. The following applies to all glass-glass panels from Solarwatt:

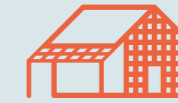
- ✓ Designed in Germany
- ✓ 30 years warranty
- ✓ 5 years FullCoverage included (optional 10 years possible)



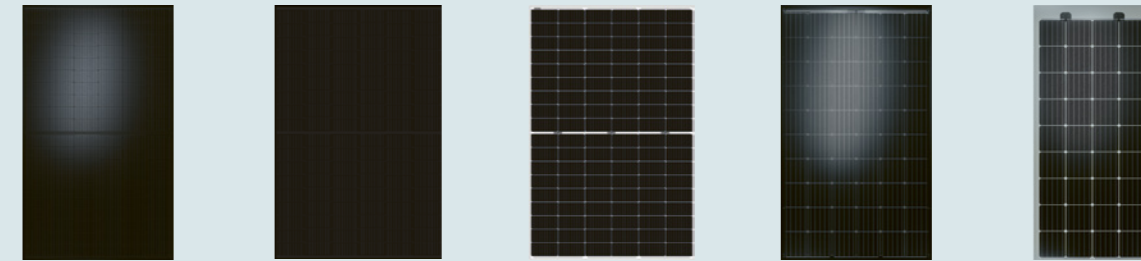
## On the roof and in the roof. Framed








	Compact	High performance M6	
	Vision 60M style (black edition)	Panel vision H 3.0 pure & style	Panel vision AM 3.0 pure
			
<b>Power</b>	Up to 325 Wp	Up to 375 Wp	Up to 375 Wp
<b>Properties</b>	Lightweight Small roof use Dark appearance	White back sheet, silver frame (pure) Transparent, bifacial gain, black frame (style)	White cell background Bifacial gain
<b>Cell Type</b>	Cell format G1 158.75 mm 60 full cells	Cell format M6 166 mm half-cut + multiwire	Cell format M6 166 mm half-cut + multiwire
<b>Dimensions (mm)</b>	1,700 × 1,000 × 35	1,780 × 1,052 × 40	1,755 × 1,038 × 35
<b>Weight (kg)</b>	22	25	24



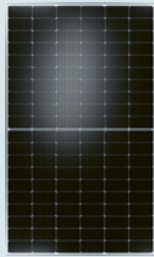
## As a building material. Frameless



	High performance M10			Construction	
	Panel vision AM 3.0 black	Panel vision AM 4.0 black	Panel vision AM 4.0 pure	Vision 60M construct	Vision 36M glass
					
<b>Power</b>	Up to 370 Wp	Up to 400 Wp	Up to 405 Wp	Up to 310 Wp	Up to 185 Wp
<b>Properties</b>	Bifacial gain Full-dark appearance	Bifacial gain Full-dark appearance Low-carbon optional	Bifacial gain Low-carbon optional	Certified building material Can be used without substructure n.e.g. carports or parking decks or on façades	20 % transparent frameless 2 × 4 mm laminate ideal for overhead placement in e.g. carports and canopies
<b>Cell Type</b>	Cell format M6 166 mm half-cut + multiwire	Cell format M10 182 mm half-cut + multiwire	Cell format M10 182 mm half-cut + multiwire	Cell format M2 156 mm 60 full cells	Cell format M2 156 mm 36 full cells
<b>Dimensions (mm)</b>	1,755 × 1,038 × 35	1,722 × 1,134 × 35	1,722 × 1,134 × 35	1,680 × 990 × 40	1,550 × 710 × 9
<b>Weight (kg)</b>	24	25.4	25.4	22.8	25



**On the roof and in the roof.**  
**Framed**



Classic



**SOLARWATT Panel classic**  
**H 1.1 pure**



<b>Power</b>	Up to 375 Wp
<b>Properties</b>	Salt mist and ammonia resistant
<b>Cell type</b>	120 monocrystalline PERC high-performance cells
<b>Technology</b>	Glass-foil laminate
<b>Dimensions (mm)</b>	1,755 x 1,038 x 40
<b>Weight (kg)</b>	22
<b>Quality</b>	Focus on durability and quality 15-year warranty, 20 years optional FullCoverage optional

**SOLARWATT Panel classic AM 2.0**  
**black & pure**



<b>Power</b>	Up to 405 Wp (pure) / 395 Wp (black)
<b>Properties</b>	Full-dark appearance (black) Low-carbon optional
<b>Cell type</b>	Cell format M10 182 mm half-cut + multiwire
<b>Technology</b>	Glass-foil laminate
<b>Dimensions (mm)</b>	1,708 x 1,134 x 30
<b>Weight (kg)</b>	20
<b>Quality</b>	Focus on durability and quality 15-year warranty, 20 years optional FullCoverage optional



1



2



3

- 1 Church roof with in-roof modules, Georgensgmünd, Germany
- 2 Family home with on-roof modules, integrated into the roof and cladding, Doberschütz, Germany
- 3 Farm with on-roof modules, Kadesjö, Sweden

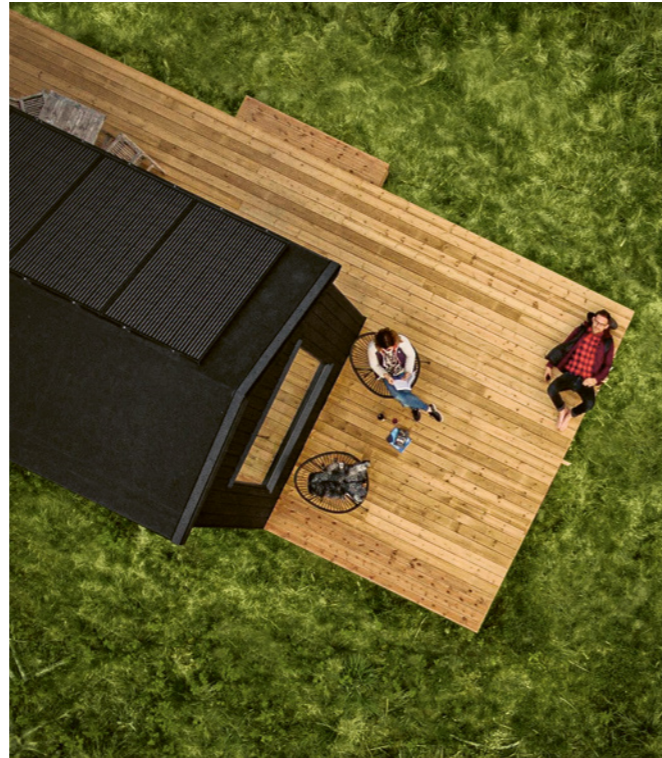




1



2



3

- 1 BMW Welt in Munich, Germany, with modules integrated into the roof structure
- 2 Villa with rooftop modules, Sweden
- 3 Tiny house with rooftop modules, Tidaholm, Sweden
- 4 Typical Nordic wooden frame eco villa with rooftop modules, Sweden



**SOLARWATT®**  
Battery flex

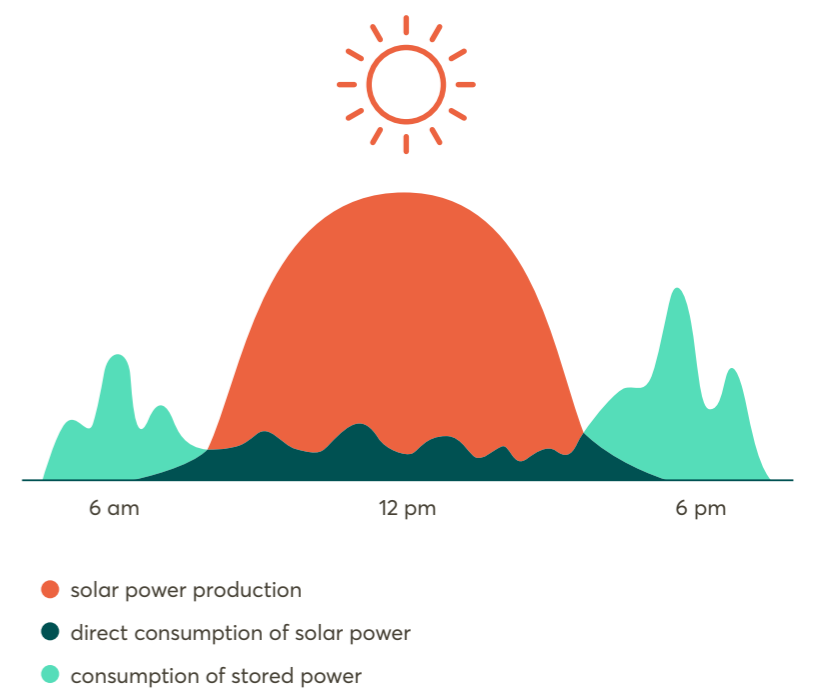
in cooperation with



## All the energy, flexibility, and independence you need.

Our energy storage system developed in collaboration with BMW gives you more flexibility in how you use your clean energy. The Battery flex is an optional component of the Solarwatt system that can increase your self-sufficiency to over 70%, allowing you to maximize your consumption of the energy you generate, with even greater flexibility and peace of mind. Store your surplus energy and use it when needed. You might use it during the day as a buffer on a sunny but cloudy day with fluctuating sunlight or power consumption levels. You might also use it at night to charge your electric car, or power your home movie night. And you'll still have enough power left to make your coffee the next morning. A storage system allows you to maximize your use of clean energy – great for the planet, and great for your wallet.





## The sun shines for you day and night.

The majority of households consume the most electricity in the morning and evening: turning on lights, making hot drinks, listening to music, charging electric vehicles, cooking, watching TV, and using an increasing array of modern devices. But most of the time, the sun won't be shining at all, or at least not brightly enough to power all your needs at these times. That's where the expandable Battery flex energy storage system comes in – storing solar energy during the day for when you need it.

## Flex your freedom: with the tailor-made and modular Battery flex.

Our modular storage system offers you maximum freedom of design. Modularity means flexibility. Whatever the type or size of your desired photovoltaic system, we can match it with the appropriate storage capacity to maximize your independence from the grid. This ensures you won't pay for too much storage, nor lose out on any valuable solar energy because your storage is too small or your usage is too high. And if your household ever needs more storage capacity, for example, because your family circumstances change or you acquire a new electric car, it's easy to add more.

**30%\***  
self-sufficiency

**0** kWh (without storage)

**55%\***  
self-sufficiency



**4.8** kWh

**65%\***  
self-sufficiency



**9.6** kWh

## Energy for everything and everyone.

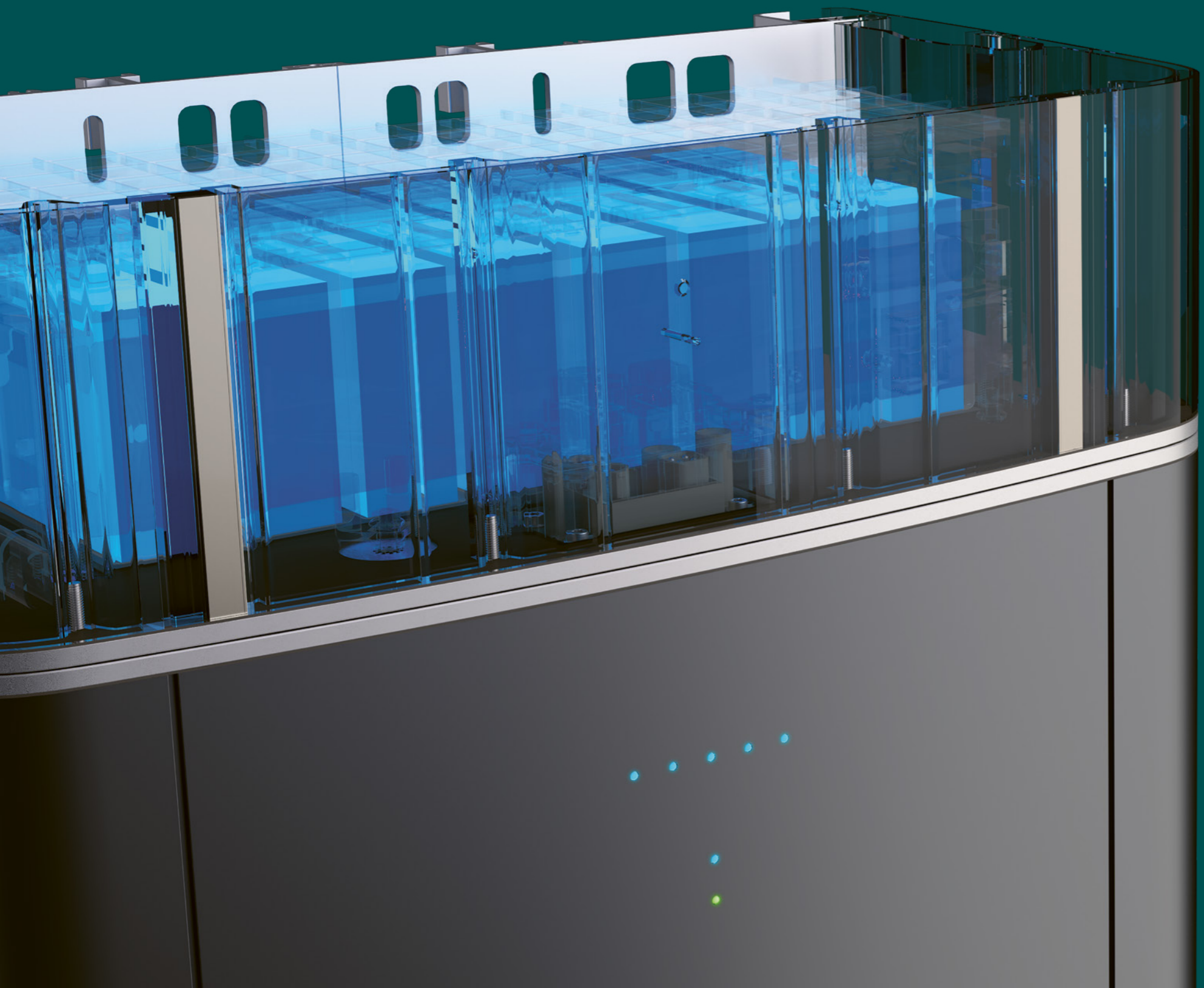
The combination of the Battery flex storage system and the smart SOLARWATT Manager energy management system ensures the best possible distribution of energy across all components in your system.

**72%\***  
self-sufficiency



**14.4** kWh

\* based on a 10 kWp system, on a south-facing roof at a 30° angle in Munich (Germany), for a 4-person household with a heat pump and electric vehicle charger. Calculation via PV Sol.



## Technology partnership.

In BMW we have found our perfect technology partner. Solarwatt acquires original components from BMW and applies its own expertise honed over many years to install BMW cells in Solarwatt's in-home energy storage systems. You benefit from the reliably high quality, maximum efficiency and safety that comes with using state-of-the-art components. BMW, like Solarwatt, prides itself on meeting these high expectations.

Our energy storage systems use the same parts as those found in BMW's electric vehicles. The BMW cell modules we use are manufactured in the most environmentally friendly way possible. Great care is similarly taken to assure high ethical standards throughout the entire supply chain. We then compile and assemble all components at our Dresden site. The SOLARWATT Battery flex is seamlessly integrated into the photovoltaic system via our battery management software (BMS) and the SOLARWATT Manager flex. We provide the very best, so that you can enjoy greater independence and flexibility with your own clean energy.

**SOLARWATT®**  
Manager flex

- Status
- Internet
- Connection



## The center of our solar system.

The SOLARWATT Manager is the brain at the center of the Solarwatt system. Our particular approach to energy management allows you to track all of your energy flows and devices at a glance. You can control your devices while also saving money and decreasing CO<sub>2</sub> by reducing the energy you buy from the grid. And unlike many other suppliers, whose energy management systems are usually optimized for a specific application, the SOLARWATT Manager always optimizes usage for every compatible energy-consumer in the system.



## Everything in view. Everything under control.

The SOLARWATT Home app and the SOLARWATT Manager portal provide easy access to all your data. You can check the status of all your connected devices, such as the inverter, Battery flex, heat pump, EV charger, and smart sockets. Always in view, always under control – no matter where you are.

Regular software updates ensure everything is always up to date. Security is covered, too: the connection uses the same encryption systems as used in online banking and all data is safely stored on servers in Germany.

You can also authorize your installer to access your system remotely via a secure connection. This allows faults to be detected faster – and in most cases, even corrected, without ever requiring a site visit

You can even use the app to quickly generate a system report for your tax return. These are just a couple of the many useful functions you'll discover.

## Charge your storage when you want.

The SOLARWATT Manager allows you to prioritize whether your energy should go into storage or be used to power your devices. You decide when to charge your storage system and when to draw power from the grid. For example, you might use it to take advantage of cheaper night-time rates, or perhaps you'd like to store that cheaper grid energy for later use.

## Plug and play.

No matter whether it's a wall-charging station for your e-car or some other smart device – the smart SOLARWATT Manager flex quickly identifies any new smart device and adds it to the home network with a click of a button. Network issues or a change of location of the SOLARWATT Manager can also be fixed with a click of a button.

## Charge your car when you want.

An electric car is a great idea for the planet and your bank account – but even more so when you charge it using your own clean energy from your personal photovoltaic system. When charging your e-vehicle's batteries, you can choose between three practical options: instant charge – for when you're in a hurry, charge until departure time – when you're able to plan, or solar-optimized charging – when you're not on a deadline.

In any case, the SOLARWATT Manager will ensure that surplus energy is used to power your car and not fed into the grid. So in the best-case scenario, you'll almost always be able to charge at home using your own free energy, and rarely have to use public charging stations for a fee. If your household has a Battery flex, you can also charge your car overnight. The SOLARWATT Manager makes clean mobility significantly easier and more efficient for you – built with the user in mind.

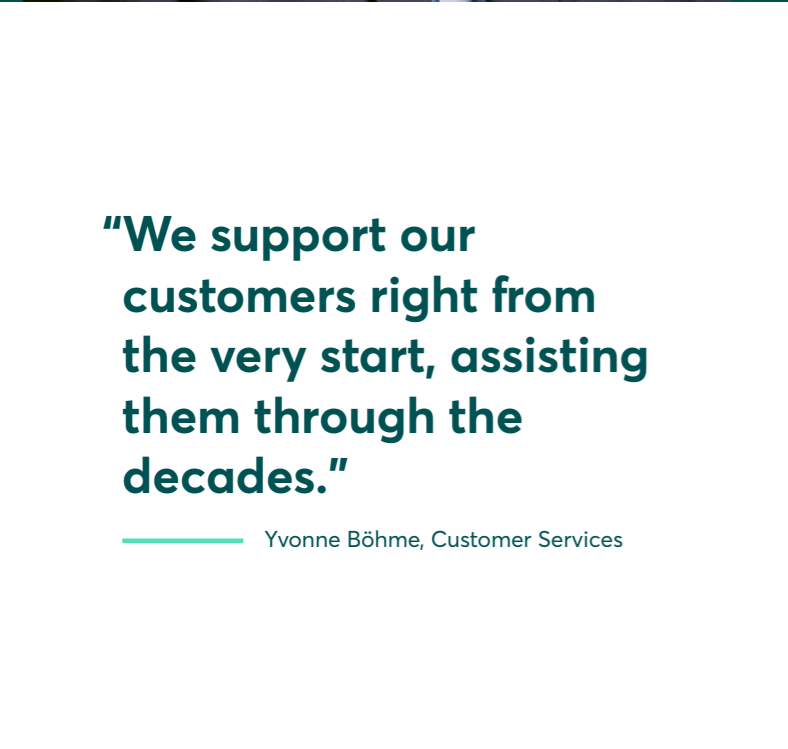
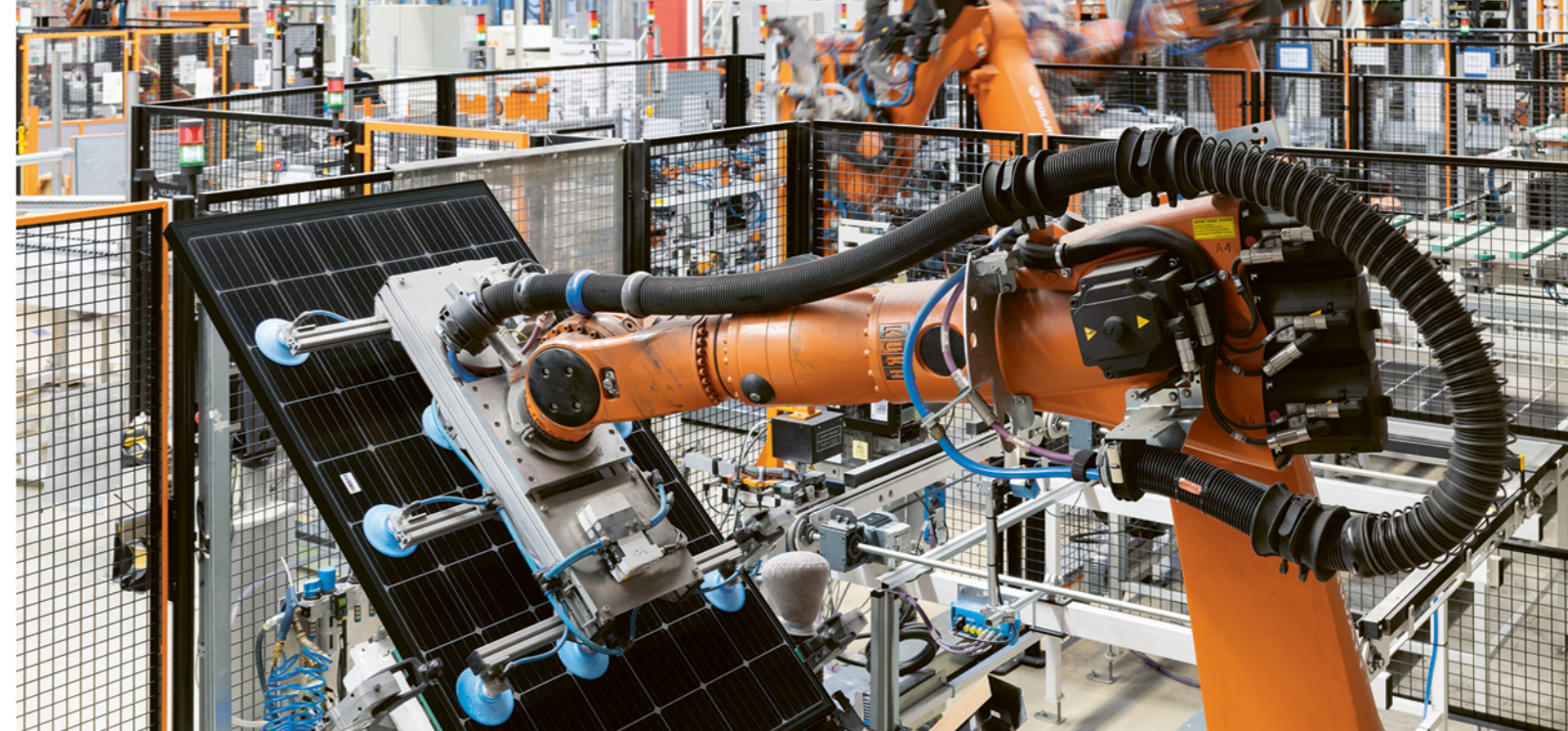






**"We work tirelessly every day to ensure our products meet even the most exacting quality expectations."**

Neal Goddard, Sales Director UK & Ireland



**"We support our customers right from the very start, assisting them through the decades."**

Yvonne Böhme, Customer Services

## Our story

Solarwatt was founded in 1993 with a clear objective: to make clean energy easily accessible to as many people as possible. Five years later, we developed the first glass-glass module on the market. Today, the company employs 550 people, with new talent joining us all the time. Our staff are located in Germany, Australia, the UK, Sweden, Italy, Belgium, the Netherlands and Spain. We have development teams and a state-of-the-art production facility in Dresden and an innovation center in Hürth, Germany. We've also gained a strong technology partner in BMW.



**"We are constantly searching for innovations and ways to make our products even better."**

Dr. Philipp Kratzert, Research & Development

Each product is developed with maximum consistency and quality in mind. The result is sophisticated products that can be trusted to function extremely reliably for a long time to come. After all, it's only with time that we reap the full benefits – benefits enjoyed by each individual user, the environment, and our wider society. We do what we do not just because we love this planet, but also because we need to do it, to give ourselves and our children a chance of a better tomorrow. A brighter future cannot be built overnight, but we can get there in small steps. And so each day, system by system, we gradually work to create the cleaner, better world we envisage. As veteran pioneers, we have already experienced and achieved plenty. But there is still so much more to do.

# All-round experts: Better for you, better for the planet.

At Solarwatt, we offer you a complete package to enable your new life with clean solar energy.

## Premium products.

Our products are designed as components of a broader ecosystem from the outset. And our goal is to enable you to start cleanly generating your own clean energy – with smart management tools to make this as easy and efficient as possible. All our products come with guarantees of up to 30 years. Even future generations will reap the benefits.

## Premium partners.

In addition to our own products, we also offer solutions from other high-quality providers. We trust each of these partners to deliver products with similarly high quality and functionality. Each of these products – whether it's an inverter, EV charger, or heat pump – can easily be integrated into the Solarwatt system.

## Full range of services.

We offer you 5 years of free FullCoverage insurance. As all-risk insurance, this premium coverage goes beyond the standard. You are even covered against reduced yield, vandalism and other damage. You can also take advantage of other services to support you with financing, tax advice, meter operation, green energy grants, and more.

## Extensive guarantees.

We offer an unrivaled package of warranties, including a 30-year product and performance guarantee on our glass-glass modules. Our modules still maintain at least 87 % of their original performance after 30 years.

Where our battery storage is concerned, we guarantee that these will still have at least 80% of the original storage capacity after 10 years. Should this not be the case, we'll take care of any repairs or exchange at no cost to you.



## Be part of a greener future.




We want to make it as easy as possible for you to be part of a positive change in the way we generate energy. No matter whether you'd like a general and no-obligation chat or have specific questions, we'd be happy to talk. We look forward to your call or email.

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**We at Solarwatt  
are the lifelong  
companion for people  
wanting to supply  
themselves with  
clean  energy.**