

# The Northern-European Solar Energy Leader

MANUFACTURER OF GLASS GLASS SOLAR PANELS



# It's all about innovation

Implementing innovations into all products is DNA of SoliTek. In 14 years we have matured to offer the European market exceptional new products, that will please even the most refined and demanding customer.

## Our latest products have 3 major elements:

- Bifacial monocrystalline solar cells
- Premium tempered glass to glass lamination
- Flawless industrial design





- 1998 ● CD replication business is born
- 2002 ▬ CD factory opened in Vilnius
- 2006 ▬ CD/DVD factory opened in Tallinn
- 2009 ● Solar energy business is born
- 2011 ▬ Blu-ray Disc production line aquired
- 2013 ▬ High-tech center and factory L.I.G.H.T. WING opened in Vilnius  
Solar cells and modules production starts
- 2014 ● Eyeglass lenses business is born
- 2015 ▬ RX eyeglass lenses laboratory opened in Vilnius
- 2020 ▬ New Solar modules production line
- 2021 ▬ CD replication business was sold  
Construction of Innovation and business canter started
- 2023 ▬ Energy storage production launch

## Partner in researches

### Cerificates:



PRODUCED USING 100%  
RENEWABLE ENERGY

### Memberships:



Svensk  
Solenergi



### Programs:



2015.06 – 2018.06  
partner



2015.10 – 2018.10  
partner



2018.05 – 2022.10  
coordinator



2018.06 – 2022.11  
partner



2019.10 – 2022.09  
partner

### Universities:



kauno  
technologijos  
universitetas



International Solar Energy  
Research Center Konstanz



Vilniaus  
universitetas

Danmarks  
Tekniske  
Universitet



Fraunhofer



Ines  
INSTITUT NATIONAL  
DE L'ENERGIE SOLAIRE



SINTEF



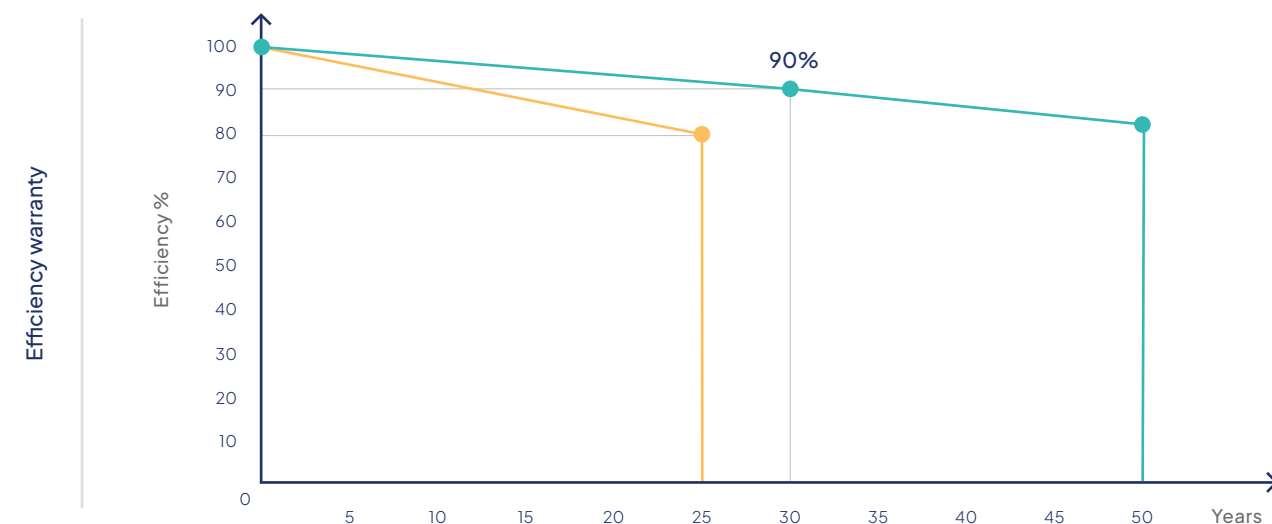
# Certified by Cradle to Cradle

The Cradle to Cradle certification defines  
5 components for circular economy  
compatible product:

Cradle to Cradle Certified® Product scorecard	
Material health	Gold
Material reutilization	Gold
Renewable energy & carbon management	Gold
Water stewardship	Platinum
Social fairness	Gold



## Longer warranty for higher efficiency



Product warranty

Market standard

SOLITEK Glass / Glass

Lifetime

Market standard

SOLITEK Glass / Glass

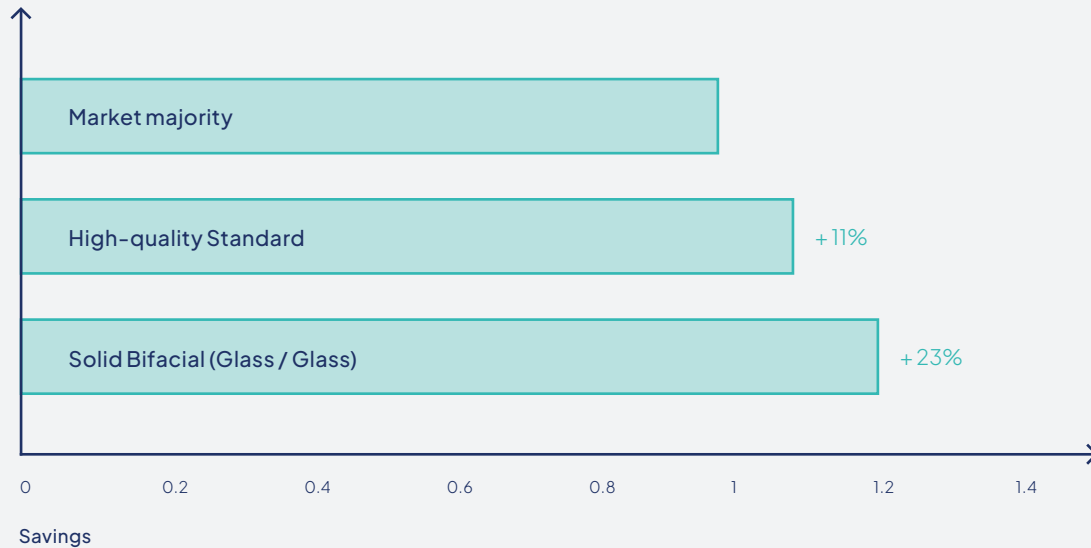
Market standard of 12 year product warranty and 25 year efficiency warranty sounds good only on paper. This means that if the panel fails completely after 13 years it is not covered by any warranty.

- 30 years product warranty
- 30 years of 90% efficiency warranty
- 50 years predicted lifetime

# Best choice for your wallet. 30 year savings

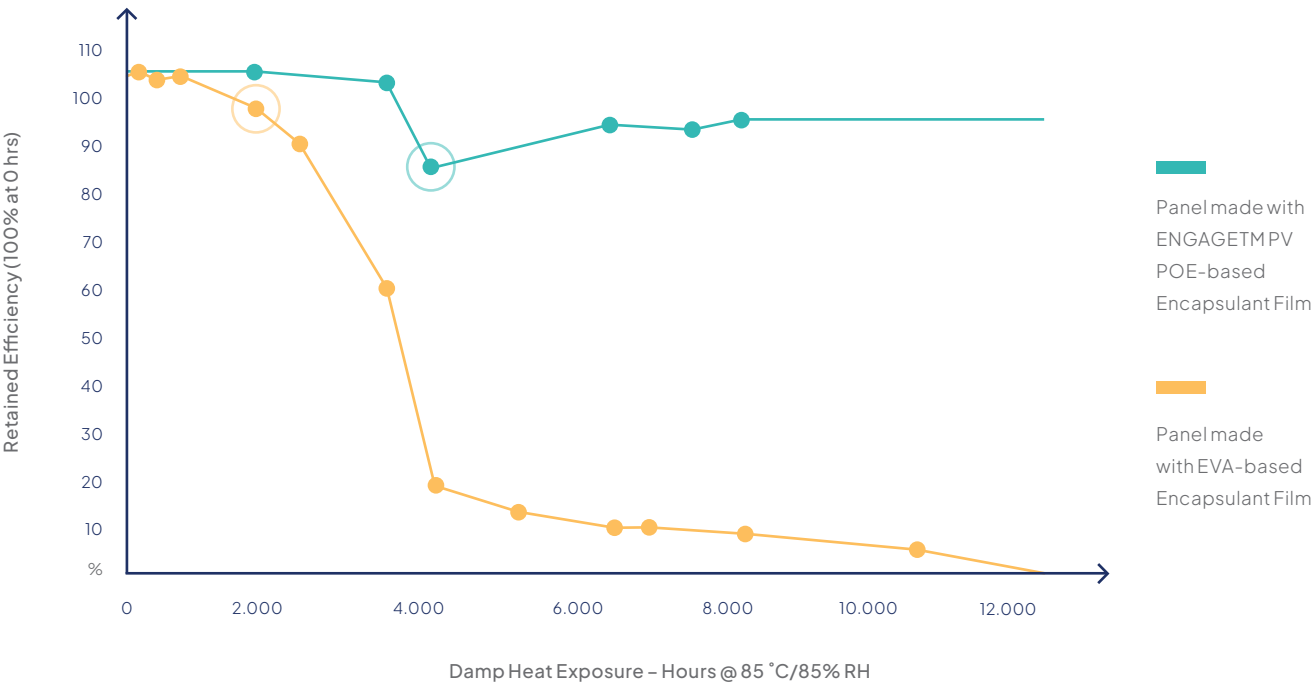
A house with a solar power plant system increases by ~3% in value and sells 20% faster! It makes sense to invest in a PV system that lasts!

23% more savings!



\* Levelized cost of electricity (LCOE) calculated for a 30 year period.

# POE is the key



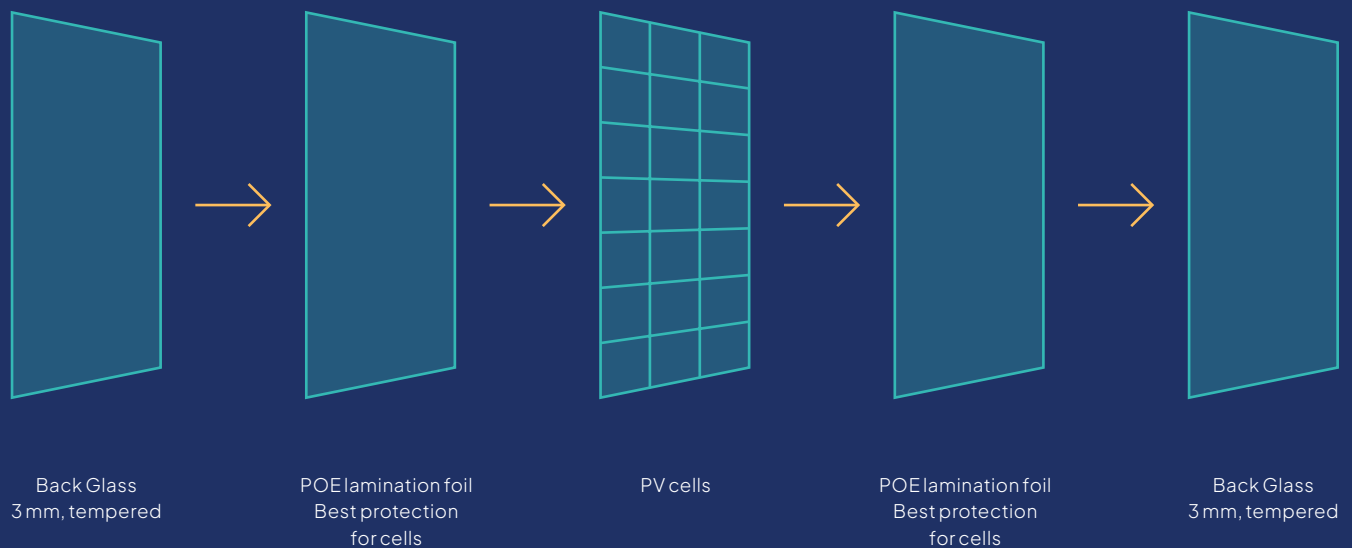
- Glass leaching caused drop in Short Circuit Current; no film or panel degradation.
- Following 1000 h Damp Heat, both panels underwent 50 Thermal Cycles and 10 Humidity Freeze Cycles. Both panels were then placed back into Damp Heat.

Most manufacturers are using EVA encapsulants.  
We use POE.

	No Acetic acids	100% Waterproof	No browning	Eliminates PID	Maximum Lifetime	Maximum Lifetime
POE	+	+	+	+	+	50 years
EVA	-	-	-	-	-	25 years



## Glass Glass anatomy

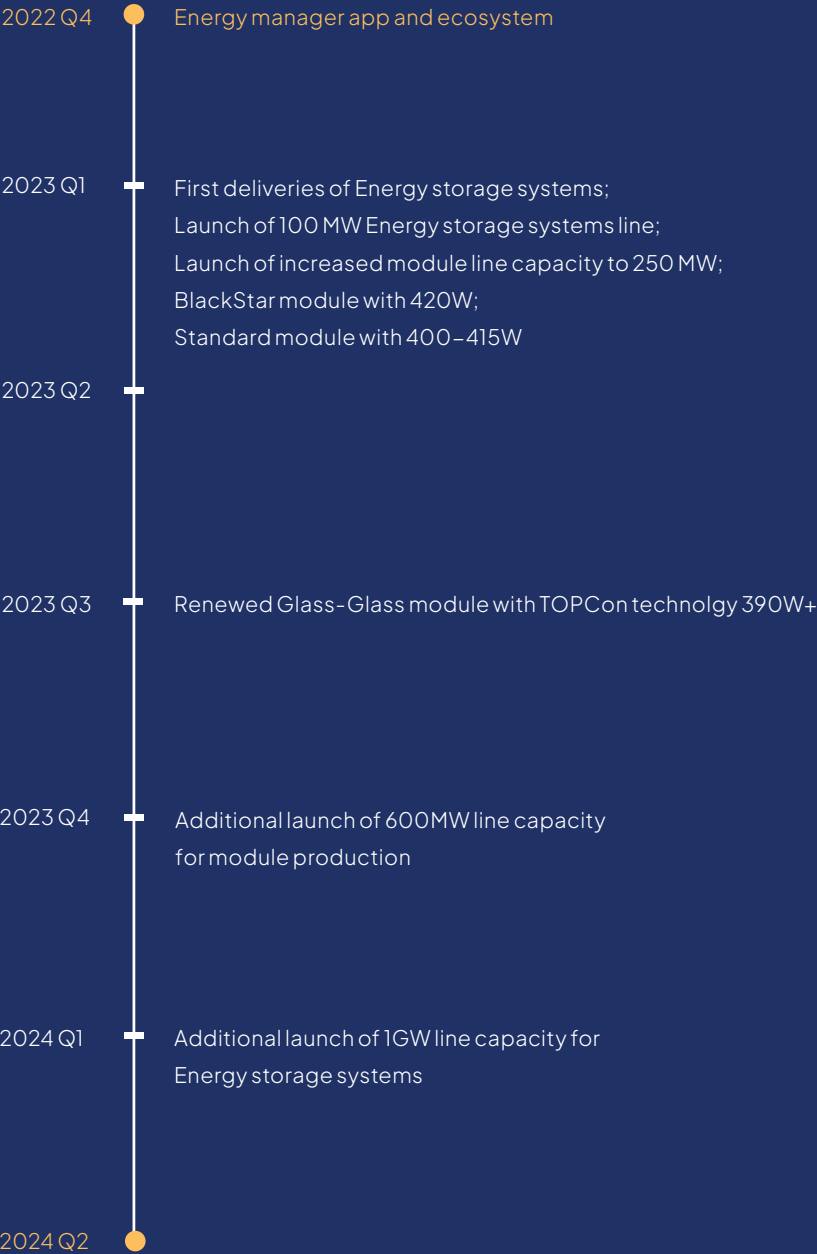


### Highest grade materials

Each component plays an important role in the lifetime and performance of our panels. By using only the **highest grade materials** we are able to offer industry-leading product warranties.

### No backsheet - no weak spot

Backsheet is a 0.4 mm plastic sheet used in most of the panels on the market today. By eliminating this we are able to dramatically reduce the rate of the panel failure.



## Facts & Figures

### SoliTek production, 2022

**500 k** 

Of solar panels

**180 MW** 

Total produced capacity

### SoliTek production forecast, 2023

**650 k** 

Of solar panels

**250 MW** 

Total produced capacity

### Our customers

**60 %**

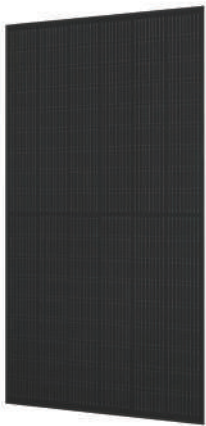
Of our solar panels are exported to Sweden, Finland and Benelux.

**85 %**

Of our solar panels are exported to EU markets.

Our main clients are PV installers, distributors, and project developers in the EU.

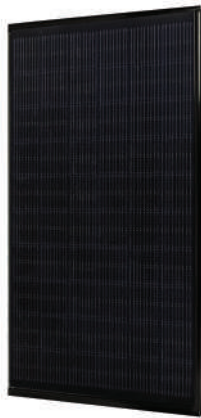
# Product Portfolio



BLACKSTAR  
(Solid framed) 420W



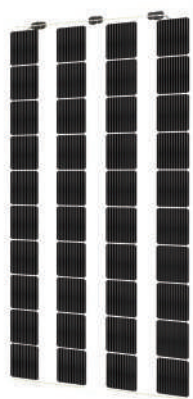
SOLID Bifacial  
370W



SOLID Solrif  
370W



Glass - Glass  
SolidWall 370W



Solid AGRO  
245W



Glass - Foil Standard,  
Half-cut cell 400-415W

30

Years

Product warranty

30

Years

Efficiency guarantee

90%

Power Guarantee  
after 30 years

## Certifications

## Strong from very beginning

### Factors causing 88% of panel failures:

- Delamination
- Cell breakage / Microcracks
- Glass breakage
- Backsheet failures
- Frame failures
- Corrosion

Glass / Glass panel is immune to all these factors.

### Our panels are (almost) indestructible!



Self-cleaning effect



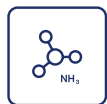
Extreme load resistance



Fire class A



Salt mist resistance



Ammonia resistance



35% of recycled glass content



98,8% recyclable



Hail resistance



# SOLID Solrif® – solar power plant as a roof

It became possible when we connected our fire class A Glass-Glass solar module SOLID Pro with Solrif® system from Ernst Schweizer AG. We call this system SOLID Solrif®.

SOLID Solrif® is valued for its ability to generate electricity, for its simplicity of mounting and design.

House owners save money twice: at first on roof tiles, and later - on smaller bills for electricity at least for 30 years. All we need to provide the offer is building location and roof dimensions.

## Solrif® frame – Ernst Schweizer AG

- 2 decades of development and improvement
- 1920: Company founded
- 1999: Launch of Solrif® frame and mounting system





## SOLID Wall – smart and environment friendly solution for facade

Modern outlook of the building

Sustainable and effective

Shows your point of view to environment and global warming issues

Increases the level of energy efficiency of the building

Decreases temperature inside the building on hot season

And generates electricity as well!





## Carport with integrated solar panels

Carports eliminate the need for a surface on which solar panels could be mounted. Dependent on the number of places of parking required, carports are typically one, two or three places wide. Installing a solar carport can power your home, or it can turn a wide-open stretch of pavement into a major electricity generator.

Wood construction

With bifacial panels

**5.92 kW**

One car



**11.84 kW**

Two cars



## Ground mounted solar plants

Electricity delivered to  
1100 homes

**4.6 MW** ✓

Turkey

Solar park with Solid Bifacial modules, single axis sun tracking system and white covering on the ground - 40% more effective solar park.

**2 MW** ✓

Ukraine

**3.4 MW** ✓

Lithuania

**1.7 MW** ✓

Lithuania



# AgroPV – the future of agriculture

Agrivoltaics or agrophotovoltaics is the simultaneous use of areas of land for both solar photovoltaic power generation and agriculture.

Combining food and energy production together, dramatically increases the net revenue output from the same piece of land – additional annual financial benefit up to 80%.

## 3 types of agro-solar power plants:

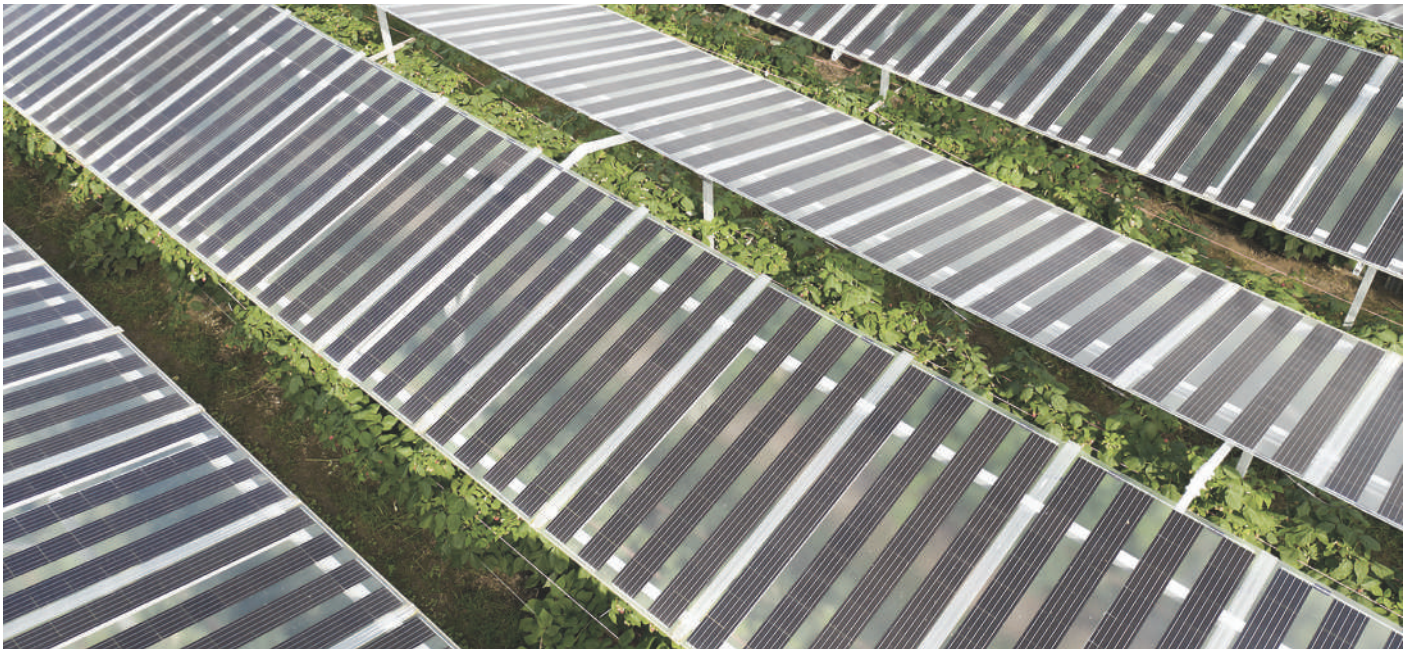
- Greenhouses
- Farming under the agrivoltaic system
- Farming between the agrivoltaic system





# The advantages of Agro-solar compared to traditional agriculture

- Growing fruit and generating green energy at the same time, at the same place.
- Durable and robust protection for your crops, resistant to all types of weather. No more worries about storms or hail showers and less affected by extreme heat.
- More stable microclimate - lower maximum temperatures and higher minimum temperatures.
- No labor to assemble and disassemble the plastic/foil.
- Conserves moisture in the ground - less irrigation, saving water resources.
- Smartly installed agro-power plant protects the soil from erosion.
- No investment in expensive (conventional) cultivation support facilities.
- Give your company a more sustainable look.



# Sound barriers with integrated PV solutions: saving the construction costs – producing energy – safeguarding the population

- Applicable to roads and railways.
- Currently the efficiency of the PV and integration modes offers competitive and saving costs solutions.
- Large surface areas are needed to generate electricity from PV modules. Therefore, PV Noise barriers offers additional area over and above the land on which PV modules can be installed and which can provide a better land use ratio for energy production than conventional solar PV farms.

Possible noise barriers height

**2.5 – 7 m** ↑↓

Year output

**200 – 800 MWh** ✓

PV modules per kilometer

**600 – 2400** 🏠

From 0.2 MW to 0.8 MW capacity





# Proud to be green and innovative from very beginning

Recognized as the “Greenest Industrial Building in Europe” in 2013 by the German Chamber of Commerce. All production is powered by 100% renewable energy.

Most of our power demand is satisfied by our own patented PV-Geothermal heating and cooling system, which consists of 1MW of Geothermal power and 150 kW of PV power.

Due to our use of renewable energy use in manufacturing, we save over 400 tons of CO<sup>2</sup> from emission each year. That's the equivalent of planting 2000 trees every year.



## Energy storage solution

SoliTek, Avesta Battery & Energy Engineering (ABEE) and IMECAR Elektronik have signed a joint venture agreement for the set up of a new battery pack production in Lithuania (Vilnius). The battery pack factory will be fully operational by June 2023.

The new factory will have a starting production capacity of 200 MW, which will later be scaled up towards 1 GW. The produced battery packs will be designed for home storage, industrial and renewable applications.

R&D Battery Equipment

2023 Vilnius Lithuania





## Strengthening market presence in Europe

SoliTek is set to expand its operations into Italy with its largest investment of nearly 50 million euros in Benevento. The project is expected to take three years.

The facility will have a solar panel production capacity of 600 MW and a residential battery line of 1 GW. The production line will focus on agro-installations (AgroPV), which is ideal for Italy's favourable climate.

50 million Euro investment

300 jobs created

3 years project

Fully Solar powered





