SoliTek

Sustainability Report



2023

Content

Social Impact 07

Environmental Impact 15

Supply Chain Assessment 25

Sustainability & Other Awards 29

Sustainability Goals Set for 2023 32

Analysis of 2022 and 2023 Sustainability KPIs 39

Sustainability Goals for 2024 40



Word from CEO

I am pleased to present our Sustainability Report 2023, a testament to our unwavering commitment to building a more sustainable future. This year, we again have made significant efforts to integrate sustainable practices into our operations even in the face of a challenging industry landscape.

Our actions have resulted in measurable achievements across various domains. We have once more become the first and so far the only ones, the sustainability pioneers, **to receive the long-awaited Cradle to Cradle Gold certificate**, for which we have been working consistently for a whole year.



Julius Sakalauskas
CEO of SoliTek

SoliTek also became the **first PV manufacturer in the world to sign a cooperation agreement with solar panel recyclers** in Germany. We are pleased that our sustainability initiatives are inspiring. Even in 2023, other PV manufacturers followed in our footsteps and announced cooperation with solar panel recyclers.

Additionally, our solar modules have been recognized for use beyond solar power plants. In 2023, they received DIBt approval, officially certifying them for safe and reliable use in overhead solutions such as carports, in-roof PV solutions, terraces, pergolas, solar facades, etc. across Germany and beyond.

Yet, that's not all. SoliTek is no longer just a solar panel manufacturer! In 2023, we launched our production line of **smart LFP batteries – SoliTek NOVA** for the Lithuanian market. I, along with the entire team, am delighted and hopeful that this product will further contribute to Europe's transition to clean, carbon-free energy.

Looking ahead, we remain dedicated to driving continuous improvement and fostering a culture of sustainability within our organization. We believe that by working together, we can create lasting value and make a meaningful impact on the world around us.

Thank you for your continued support and commitment to our sustainability journey.

Sincerely,

Julius Sakalauskas
CEO of SoliTek

Governance

SoliTek, a family-owned solar module manufacturing company based in Lithuania, is a proud member of the BOD Group. Besides solar modules, the BOD Group produces lithium iron phosphate (LFP) batteries and eye lenses.

SoliTek also provides the installation of photovoltaic (PV) systems and solar parks in Lithuania. With a highly organized and knowledgeable team, the company group is dedicated to delivering premium quality high-tech products and services.



At the end of 2023, the BOD Group employed 260 employees, while SoliTek had 56 employees. The company group is governed by a board comprising six members, whose diverse experience spans technical knowledge to expertise in EU commission plans for the energy transition.

Vidmantas Janulevičius



serves as the Chairman of the Board and also holds the position of President at the Lithuania Confederation of Industrialists. This confederation serves as the representative voice for various business associations.

Žygimantas Vaičiūnas



the former Minister of Energy in Lithuania from 2016 to 2020, brings valuable experience in EU commissions and Lithuania's energy-related projects.

Julius Sakalauskas



the CEO of SoliTek Cells, holds responsibility for the company's strategic growth. With his extensive product management, logistics, and finance background, he enables the SoliTek team to maintain a clear vision and follow it.

Mantas Rimkus



the CFO/COO of the company group, possesses extensive expertise in finance and banking.

Vladas Sakalauskas



oversees and manages real estate, incorporating high-quality standards from his experience working and volunteering in the army.

Nerijus Pačėsa



brings vast experience in strategic management and entrepreneurship from various organizations. He utilizes his sales and marketing skills within the company group.

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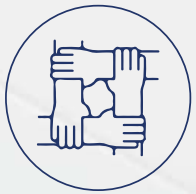
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Social Impact



The problem:

The PV industry in the EU faces a shortage of skilled workers. However, the EU has the potential to tap into the talents of refugees, immigrants, individuals with disabilities, and other underrepresented groups and integrate them into various industries. At our company, we are committed to creating an inclusive environment that welcomes people from diverse backgrounds.



Diversity
of backgrounds
& perspectives



Equity
in teams, management &
subordinates, no hierarchy



Inclusion
via empowerment,
organizational culture

Sustainability assessed by Ecovadis

To ensure that our social strategy aligns with international standards, we have engaged the services of EcoVadis, an independent organization specializing in assessing sustainability documents.



Their expertise ensures that our sustainability documents are valid, accurate, and adhere to high-quality standards. By working with EcoVadis, we are dedicated to upholding our commitment to sustainability and social responsibility.

Methodology & Assessment Model



Environment



Labor & Human Rights



Sustainable Procurement



Work Ethics

Workforce Demographics

Solitek provides equal opportunities regardless of disabilities, origin, race, gender, etc. At the end of 2023, we had 8 employees with disability (that makes 14% of our total workforce!).

In 2023, SoliTek provided job positions for 1 Ukraine war refugee ensuring their integration in Lithuania is as fast and smooth as possible. In the end of 2022, we had 10 Ukrainian refugee employees working at our company. Most of them already went back to Ukraine.

Our female-male ratio is 32%F, 68%M. The change in the gender ratio is related to the extremely challenging situation in the solar energy sector and the decrease in production volumes, which led to the reduction of our staff.

Integration of employees with disability

1 of 6 our employees has disability



Equal opportunities

Employee gender ratio

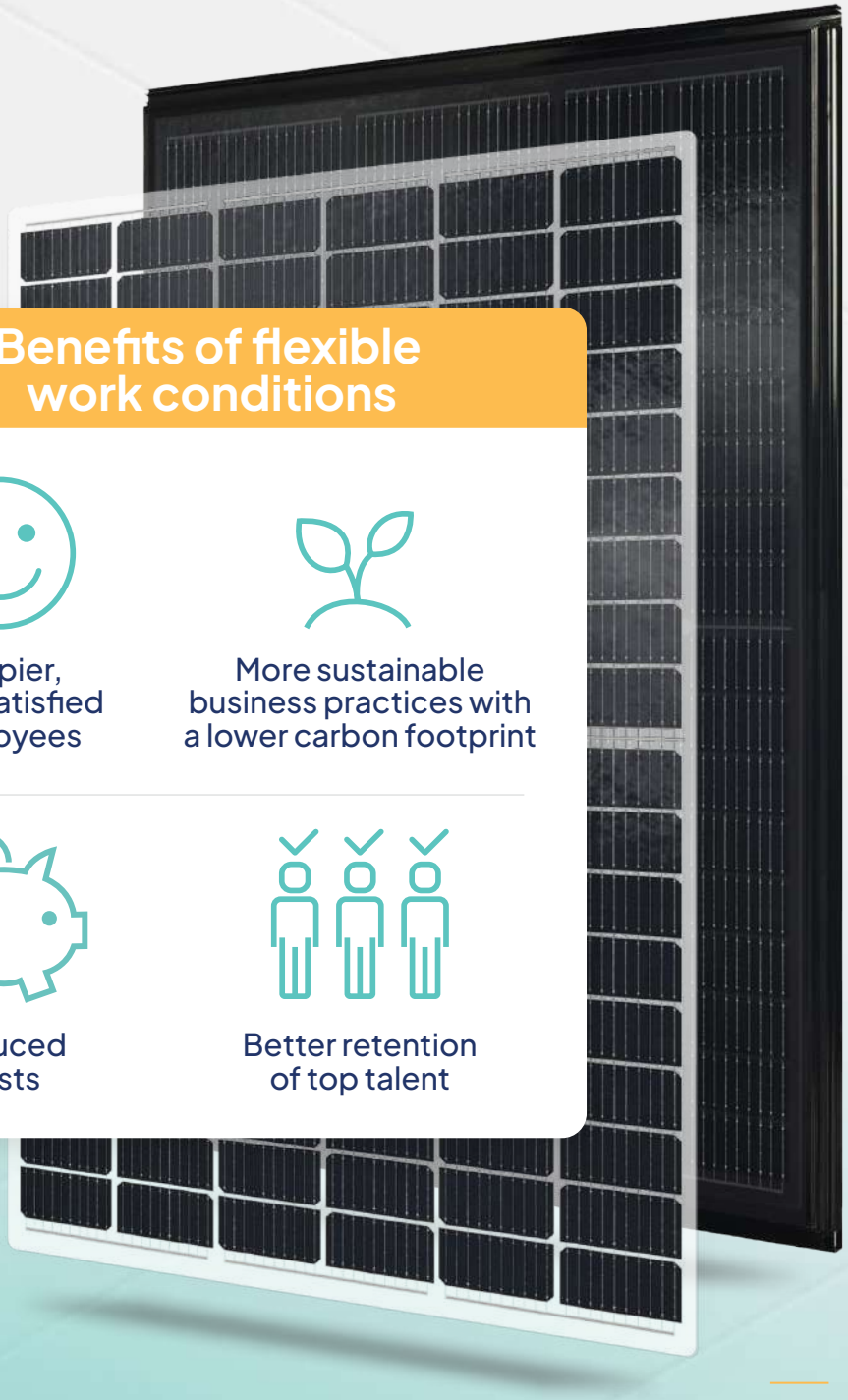
32% females

68% males

Extra flexible work conditions

SoliTek provides flexible working conditions that provide employees the freedom to work from home, work from different locations, or have non-traditional working hours outside of the standard 40-hour workweek.

This flexibility enables employees with diverse differences in age to balance work and personal life to manage work, studies, parenting, etc.



Benefits of flexible work conditions

- Happier, more satisfied employees
- More sustainable business practices with a lower carbon footprint
- Reduced costs
- Better retention of top talent

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Incident-free production

Our incident rate is

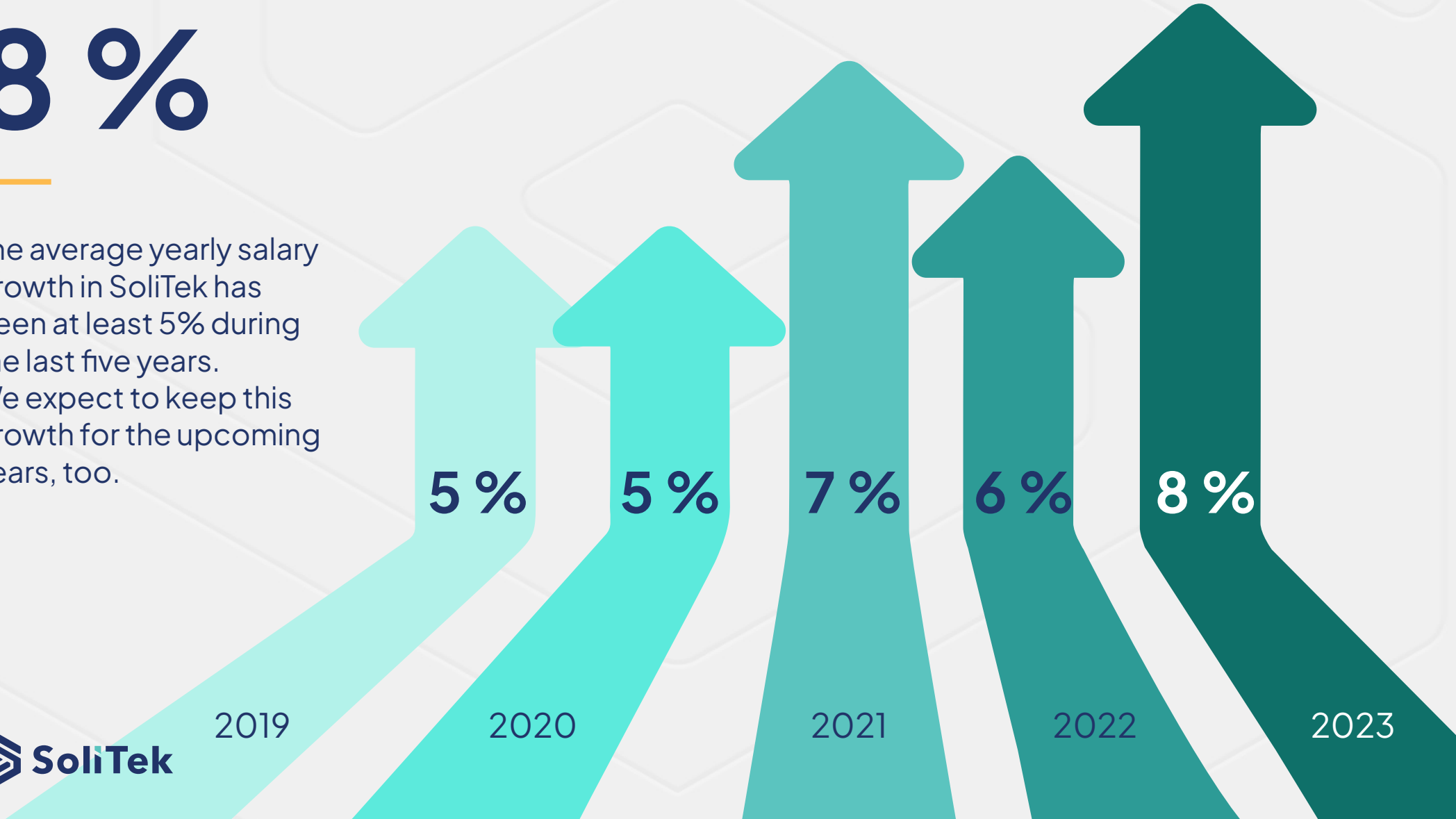


0

It has been calculated using the formula below: Incident rate = Total incidents (0) * 200 000 (average number of hours worked per hundred employees worldwide) / actual number of hours worked (196448)

Yearly salary growth – 8 %

The average yearly salary growth in SoliTek has been at least 5% during the last five years.
We expect to keep this growth for the upcoming years, too.



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Environmental Impact



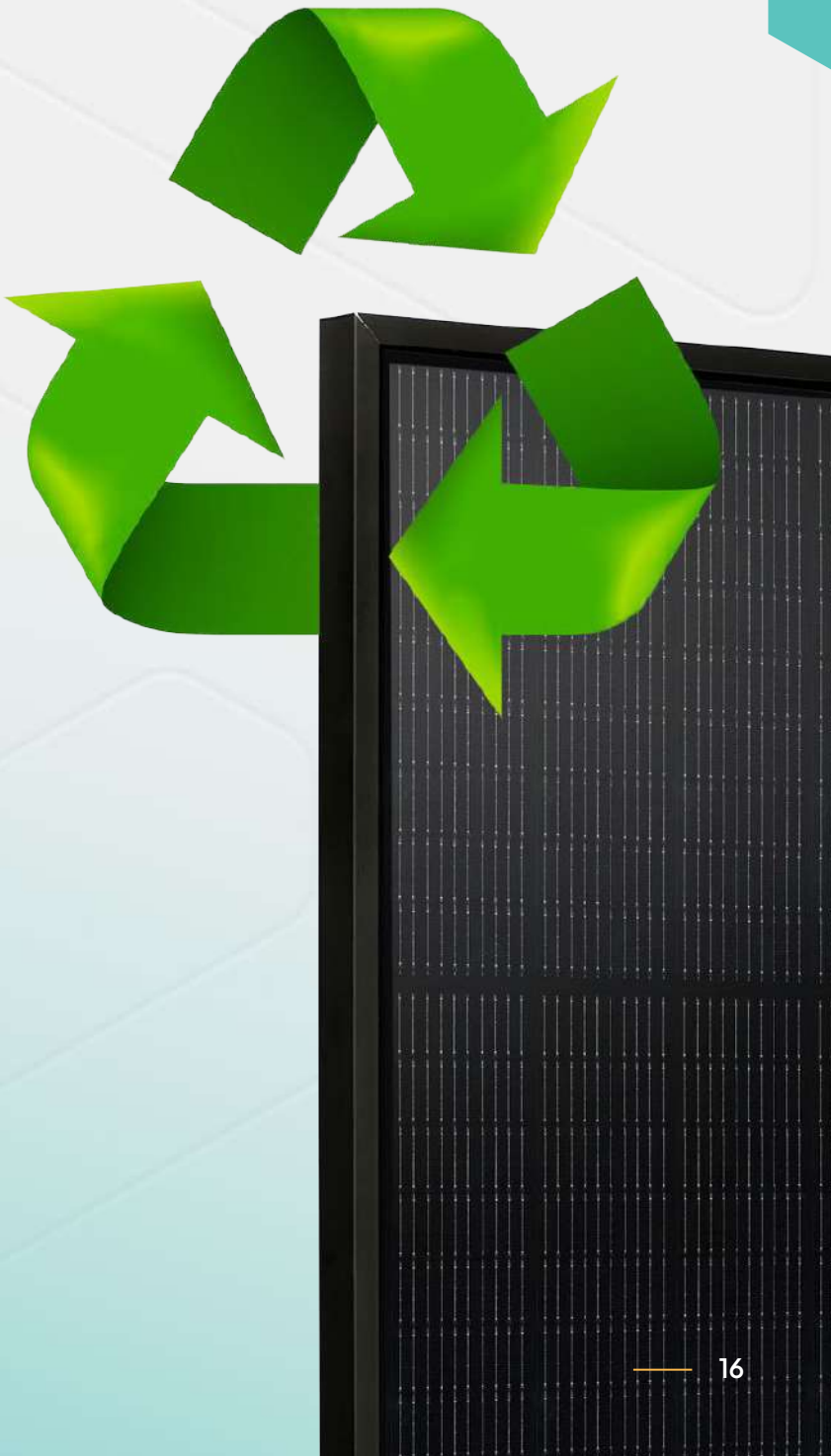
The problem:

The PV industry's extensive use of materials, including environmentally unfriendly ones, poses a significant risk of environmental pollution. Additionally, the lack of clarity surrounding PV recycling creates concerns about the accumulation of PV waste that is difficult to manage.

Based on our sustainability manager, who is studying for a PhD in PV sustainability, between 30% and 90% of PV waste that is supposed to be recycled in each EU country ends up disappearing from the EU. Due to a lack of regulations and traceability, PV module waste is sold for second-hand applications without proper testing in African and Arab countries. For more information, please refer to the original publication text.

ScienceDirect

pv magazine



Our approach:

Solitek chooses a completely different path. In 2023, we became the first solar module manufacturer globally to sign a cooperation agreement with LuxChemtech, a leading solar module recycler in Germany. One of our achievements is that in 2023, we became the first solar module manufacturer in the world to sign a cooperation agreement with the solar module recycler LuxChemtech in Germany.

For our LFP batteries, we have planned to establish a battery recycling line in Italy by 2027.



100%
Renewable energy

98,8 %

98.8 % Recyclable
Solar Panels

Less CO2 &
Waste

Cleaner Air

Cleaner Water

Our sustainability efforts also bring direct benefits. By choosing safe & non-toxic SoliTek solar modules, our customers can earn:



7 extra points in the LEED program



5 extra points in the WELL program



2 credits in the BREEAM program

Sweden-based SundaHus material health assessment

LEVEL A

– the only PV manufacturer in the world

We had achieved the highest rating of level A, setting SoliTek apart as the sole PV manufacturer to receive such an esteemed evaluation among over 10 other industry counterparts.

We had also received a material passport from SundaHus. This material passport serves as a product lifecycle document, containing detailed information about the materials used in a product's manufacturing process. SundaHus had reviewed and identified the composition of the materials down to the level of chemical compounds (CAS numbers).

At SoliTek, we had disclosed the complete material composition of our products in the SundaHus database in Sweden. This information is readily accessible to users of the database. The SundaHus process involves collecting information on the module's material composition, assessing their recyclability, and evaluating the toxicity of the materials involved.

From Silver to Gold

Cradle to Cradle certification journey

SoliTek advanced from Silver to Gold status in 2023.

It took a full year to upgrade our material health category from Silver to Gold, enabling us to achieve an overall Gold score. **The process involved:**

- Changing two suppliers
- Conducting laboratory tests on components and materials
- Investigating over 20 topics, including the source of renewable energy from the grid, establishing agreements with PV recyclers, and assisting suppliers in setting targets to reduce water consumption, among others.



Our product scorecard:

Material health	Gold
Material reutilization	Gold
Water stewardship	Platinum
Social fairness	Gold
Renewable energy & carbon management	Gold

Cradle to Cradle Certified® is the leading multi-attribute standard used globally across industries by designers, brands and manufacturers for designing and making products that enable a healthy, equitable and sustainable future. C2C standard evaluates products in 5 categories: Material Health, Material Reutilization, Renewable Energy, Water Stewardship & Social Fairness. The standard has different levels of certification (basic, bronze, silver, gold, platinum).

We did not stop exploring

Here are SoliTek R&D projects that we continued and initiated new participation:

PROJECT ACRONYM	DURATION	SOLITEK PART
GREENEST	2021-2024	Establishment of 350 MWH LFP battery modules production line
SMARTECOTECH MISSION FOR LITHUANIA 10	2024-2027	Development of up to 1 MWH battery system solution
SMARTECOTECH MISSION FOR LITHUANIA 9	2024-2027	Testing production of tandem PV modules
EXTENDED	2023-2026	Improving battery energy management system
HAVEN	2024-2027	Establishment of an innovative laboratory to test the quality of battery systems
BIG LEAP	2024-2027	Next-generation battery testing at SoliTek, up to 1 MWH
EXPLOIT4INNOMAT	2023-2027	Development of PV + thermal PV module
QUASAR	2023-2027	Establishment of traceability for PV modules & development of 100% recyclable PV modules
RETRIEVE	2023-2027	Establishment of traceability of PV modules with increased recycled content (silicon & glass)
SOLINDARITY	2024-2027	Development of PV system with trackers (1 axis) on roof solution
SUPERNOVA	2024-2027	Development of End-of-Life PV modules testing solutions second-hand applications

Measuring our environmental impact

Our key 4 environmental KPIs that we follow:

Electricity Consumption:

SoliTek's electricity consumption encompasses both manufacturing and office spaces. In 2023, our electricity consumption amounted to:

2022*	2023
17,37 MWh/MW	21,4 MWh/MW

***Important Note:** We identified an error in our electricity consumption calculation model for our 2022 report. This report reflects the corrected kWh consumption for 2022.

Water Consumption:

Hot and cold water is exclusively used within our office facilities. In 2023, the total water consumption reached:

2023
3,73 m^3/MW

Waste:

The amount of production waste in 2023 amounted to:

2022	2023
4,04 kg/kW**	4,75 kg/kW

****Important Note:** for the 2022 report we have calculated waste accumulation in the wrong manner. In this report, the correct 2022 waste accumulation is added.

CO_2 emissions:

As part of our commitment to sustainability, we do not own any conventional cars, except for one diesel-based forklift. All other forklifts in our fleet are electric, minimizing emissions:

2023
0,02 $kgCO_2$/kW

CO_2 emissions (Scope 1-3)

Consistently cutting CO_2 emissions: both in production & supply chain

2 times lower CO_2 emissions than in 2022

0,02
KG/KW CO_2

Scope 1-2 emissions:

The only source of emissions is from the use of a diesel forklift. In 2023, 487.47 liters of diesel were consumed. Since each liter of diesel produces 2.68 kg of CO2 (according to the GHG Protocol), SoliTek Cells' CO2 emissions for 2023 amounted to 1.306 tons, or 0.02 kg CO2 per kW.

Scope 3 emissions (for sold PV modules)

The emissions are calculated from cradle to gate, covering the entire process from materials production to the final PV module, based on the France CRE4 method. This method considers emissions based on the location of PV component production.

- In 2022, emissions were 80,640.4 tons, averaging 965 kg CO2 per kW.
- In 2023, emissions dropped to 62,385.8 tons, averaging 943 kg CO2 per kW.
- This represents a 2.3% reduction in CO2 emissions per kW.

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Supply Chain Assessment



The problem:

The global PV supply chain is exposed to various risks, including concerns such as forced labor and unsafe working conditions for employees. At SoliTek, we recognize the importance of addressing these risks and have implemented a proactive approach to analyzing and monitoring our suppliers to mitigate such risks.



We audited 8 first-tier suppliers of our components using over 60 ESG-related questionnaires. Here are the identified risks:

1. Only 1 out of 8 suppliers has measured the CO2 emissions of their products.
2. Only 3 out of 8 suppliers have KPIs for water consumption and targets to reduce it.
3. 4 out of 8 suppliers have KPIs for electricity consumption per product and targets to improve it.
4. 1 out of 8 suppliers does not have ISO14001 certification.
5. 4 out of 8 suppliers do not have policies regarding slavery and human trafficking.

To address these issues, we plan to:

- Assist suppliers in measuring their CO2 emissions per product.
- Help suppliers set KPIs for water and electricity consumption with targets to reduce them.
- Request that suppliers obtain ISO14001 certification or an equivalent standard.
- Assist suppliers in establishing policies on slavery and human trafficking.



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Sustainability Report 2023

Sustainability & Other Awards



List of sustainability awards for 2023

In 2023, sustainability was also our top priority, which is reflected in the certificates and awards we received.

Cradle to Cradle Gold

Thanks to a comprehensive assessment of the PV module material content (complete, 100% inspection) showed no negative effects on humans or the environment.

EcoVadis Silver

Because we integrated new policies & procedures in the company activities.

Smart Energy 2024, Lithuania, winner

Rewarded as the most innovative energy industry company in Lithuania.

SolarPower Europe Diversity Champion contest, Silver award

Recognized as the second-best in the EU PV sector for successfully integrating people with disabilities and Ukrainian refugees into the workforce.



Other accomplishments in 2023

Certified Safety: Officially Approved by DIBt for Overhead Solutions

Just like our commitment to sustainability, our dedication to quality has been recognized this year in Germany, where thousands of solar power plants have already been installed. From now on, our solar modules can be installed not only for solar power plants but also in other applications across Germany and other European countries. Our modules have become one of the few in the world to receive DIBt certification.

The approval from the German organization, Deutsches Institut für Bautechnik (DIBt), proves that our solar modules can be used not only in solar power plants. Having passed numerous safety tests, they are deemed completely safe and reliable and therefore can be used in overhead glazing solutions such as carports, in-roof solutions, terraces, pergolas, and solar facades.



The Launch of Smart Home Battery SoliTek NOVA

Due to the existing grid overload problem, we realized that we needed to find a solution for storing the energy generated by solar power plants. After three years of development, the energy storage solution - the smart home battery SoliTek Nova - saw the light of day in 2023, and production for the Lithuanian market began. With the introduction of this product, we are no longer just solar module manufacturers; we can now offer our clients a full package of sustainable and autonomous solar energy solutions.

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Sustainability Report 2023

Sustainability Goals Set for 2023

1. To obtain Cradle to Cradle Gold certificate — ACHIEVED
2. To develop a comprehensive code of conduct — ACHIEVED
3. To kick off 3 brand new EU Horizon projects that we received funding for — ACHIEVED
4. Use our own PV park to fully supply our operations with our own generated electricity instead of green electricity from the grid — PARTIALLY ACHIEVED
5. To obtain a gold certificate from Ecovadis — PARTIALLY ACHIEVED
6. To further reduce our CO_2 emissions by testing recycled polysilicon — NOT ACHIEVED

1.

To obtain Cradle to Cradle Gold certificate

ACHIEVED



2.

To develop a comprehensive code of conduct

ACHIEVED

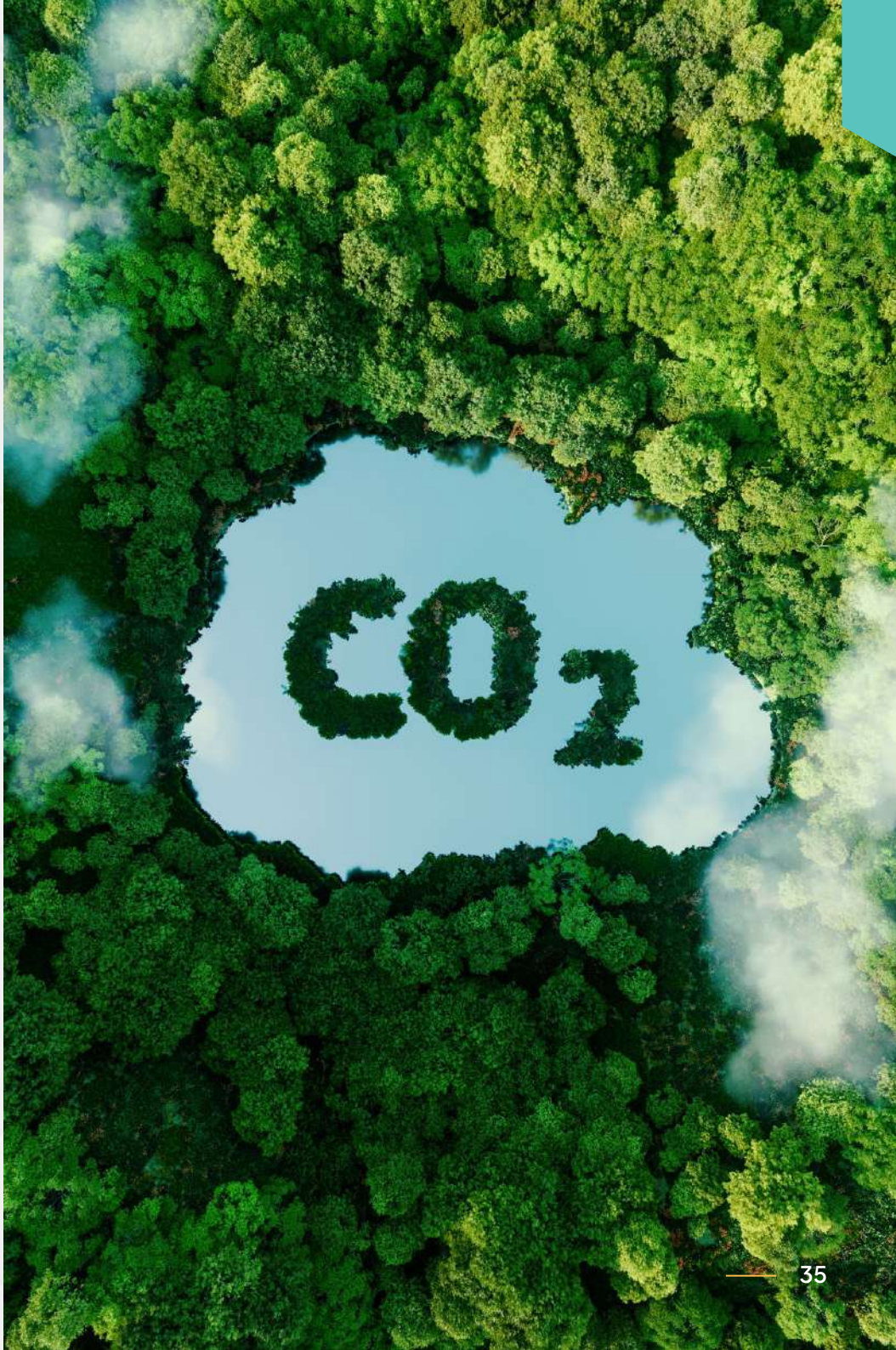


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3.

To kick off 3 brand new EU Horizon projects that we received funding for

ACHIEVED

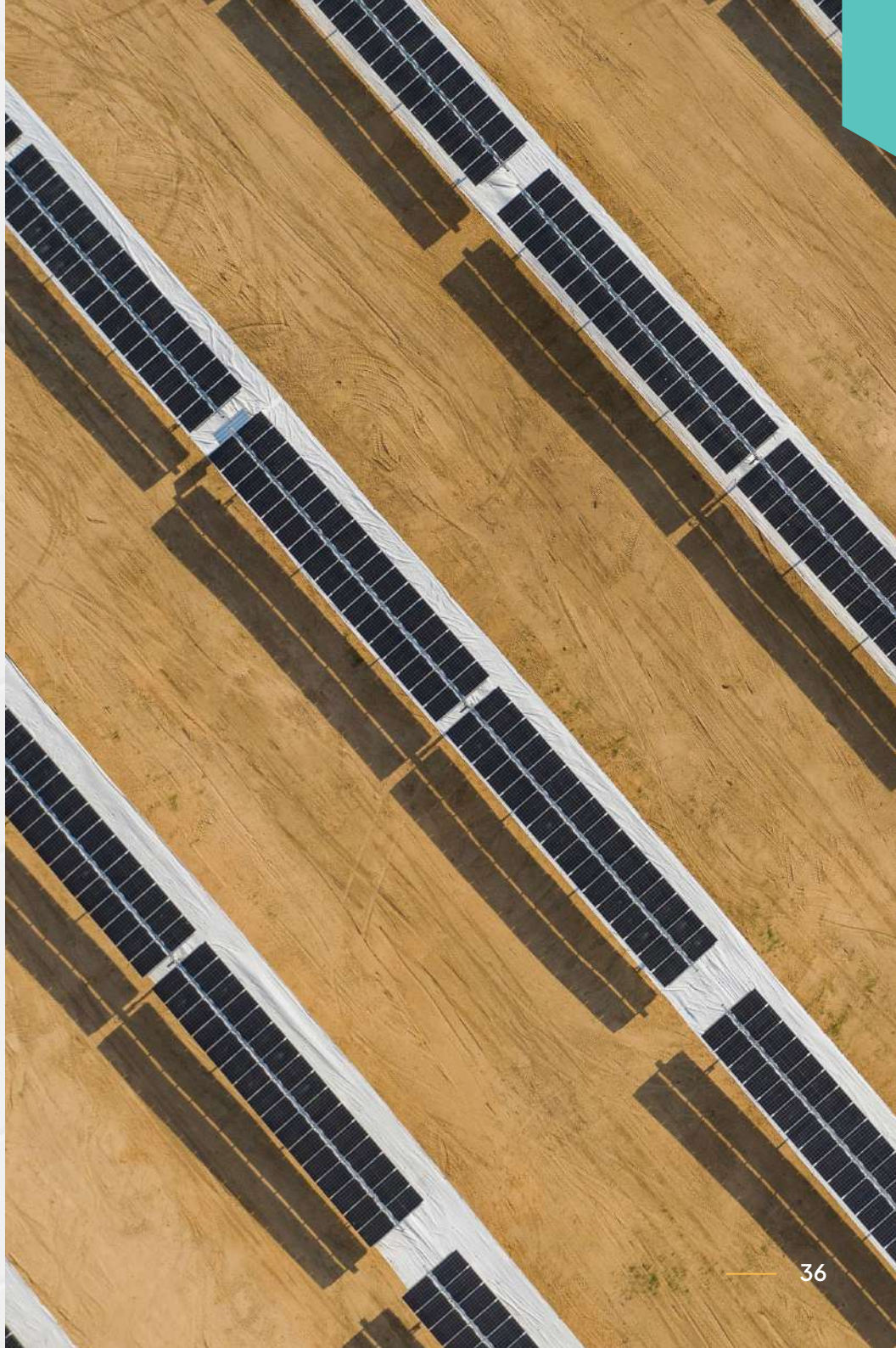


4.

Use our own PV park to fully supply our operations with our own generated electricity instead of green electricity from the grid

The 7 MW park has been built, and we are currently working on supplying the electricity to our facilities.

PARTIALLY ACHIEVED



SoliTek

5.

To obtain a gold certificate from Ecovadis

A document that is integrated into our business through policies and action-based approaches. This will involve implementing procedures, establishing KPIs, and setting targets that align with our code of conduct.

PARTIALLY ACHIEVED

The aim was to move from Bronze to Gold, but we reached a middle ground by receiving a Silver level.



6.

To further reduce our CO_2 emissions by testing recycled polysilicon

Our partner with whom we formed a consortium & received funding to recycle PV waste to new polysilicon went bankrupt (REC Solar Norway).

NOT ACHIEVED



Analysis of 2022 and 2023 sustainability KPIs

KPI	2022	2023	2022–2023 CHANGE	COMMENT
Workforce	100	56	-44%	Decrease of production due to challenging industry situation.
Workforce male/female ratio	42% F / 58% M	32% F / 62% M	-24% F / +6%.	Decrease of production staff due to challenging industry situation.
Incident rate	2,02	0	-100%	We managed to achieve this positive change due to the implementation of new safety procedures.
Yearly salary growth	6%	8%	+2% (absolute)	
Electricity consumption	17,37 MWh/MW	21,4 MWh/MW	+19%	Lower production volume leads to reduced efficiency, requiring more electricity per kW.
Water consumption	6,79 m^3/MW	3,73 m^3/MW	-55%	We significantly reduced our water use. Fewer employees means less demand for our facilities.
Waste	4,04 kg/kw	4,75 kg/kw	+15%	Lower production volume also leads to more defects, as the equipment is starting, operates for a short time, is turned off, and then turned back on shortly again.
Scope 1-2 emissions	0,04 kc CO_2/kW	0,02 kg CO_2/kW	-50%	Mainly caused by the reduced use of the diesel forklift due to decreased production volumes.
Scope 3 emissions	965 kW CO_2/kW	943 kW CO_2/kW	-2,30%	Higher panel energy efficiency - lower emissions. In 2023, we sold more efficient panels than in 2022.

Sustainability goals for 2024

To Prepare a Product Circularity Datasheet

Our goal is to create a product circularity datasheet for our PV modules, detailing material content and providing guidelines on recycling and reuse.

To Achieve EcoVadis Gold Rating

We aim to achieve the EcoVadis Gold rating by 2024. We have identified the bottlenecks that prevented us from reaching gold in 2023, and we are investing in further developing our ESG policies and procedures.



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Thank you

for making a green choice

