Pioneering Sustainability. Shaping tomorrow.







### In a nutshell



#### PFAS-free / Pollutant-free

Meyer Burger modules are free of toxins

PFAS declaration	$\downarrow$
REACH declaration	.↓.
RoHS declaration	<b>↓</b>
PoP declaration	



#### Low carbon footprint

49% lower  $CO_2$  emissions possible than with a PERC module produced in China\*.

Fraunhofer ISE LCA summary	<b>↓</b>
Analysis environmental impact	<b>↓</b>



#### **GRI** standards

Continuous sustainability reporting since 2020

Sustainability report
-----------------------



#### Regional value creation

Short transport routes, secure and transparent supply chains

Fraunhofer ISE LCA summary



#### 100% renewable energies

Cell and module production run exclusively on renewable energies

DIN ISO 5001 certificate  $\downarrow$ Sustainability report



#### Monitoring & Improvement

LCA carried out, EPD in preparation

Fraunhofer ISE LCA summary

EPD certificate in preparation



#### Recycling

Recycling rate of 100 % targeted, cooperation with recycling partners

More information

Sustainability report



#### Abandonment of lead

Meyer Burger modules are completely lead-free (thanks to SWCT®)

Fraunhofer ISE confirmation



#### **Conserving resources**

Use of very thin wafers, up to 65 % less silver consumption

More information



<sup>\*</sup>Life Cycle Assessment of the Meyer Burger Glass Module Fraunhofer-Institute for Solar energy systems ISE, Aug 2023



### Preface

#### Dear partners,

We imagine a future where we use the challenges of global warming to make positive changes. At Meyer Burger, we are ambitious to promote clean energy and speed up the shift to renewable resources. We want Meyer Burger to be a leader of sustainability, and we invite everyone to join us in improving our planet and fighting against climate change. Because we know that the climate crisis is time-critical, we are working hard to turn problems into opportunities by supporting clean energy.

We are committed to pushing the world towards a greener and more sustainable future. As we reach a critical point for the environment, Meyer Burger sees this as a chance to inspire change. Guided by "Pioneering Sustainability. Shaping Tomorrow" we move ahead, determined to lead the way with our sustainable products, production, and organization for a cleaner, and brighter future.

Katja Tavernaro

**Katja Tavernaro**Chief Sustainability Officer





# This is Meyer Burger

#### With the right energy, anything is possible.

Meyer Burger is a globally established technology company specializing in innovative systems and production equipment for the solar industry.

With almost 70 years of company history and 40 years of experience in photovoltaics, Meyer Burger forms the technological backbone of the industry and has set significant standards over the past decades – from diamond wire saws and industrial PERC solutions to precision measurement technology for solar modules. The vast majority of solar modules produced worldwide today are based on technologies developed by Meyer Burger.

The transformation of the traditional Swiss company from a pure equipment and technology provider to an integrated manufacturer of solar cells and modules marks the beginning of a new era – the renaissance of the solar industry in Europe, characterized by sustainability, innovation and future viability. "With the right energy, anything is possible" – this is the narrative with which Meyer Burger is relaunching in Germany.

In May 2021, the production site of heterojunction solar cells was opened in the Solar Valley of Saxony-Anhalt, followed closely by the opening of the production of high performance SmartWire modules in Freiberg, Saxony.

Starting with an annual capacity of 0.4 GW at the outset, rapid expansion at all sites is part of the process. By 2027, Meyer Burger

plans to increase capacity to 7 GW in cell and module production.

Heterojunction-based solar cells have the advantage over conventional PERC cells that they can convert more sunlight into energy. SmartWire cell interconnection technology, developed and patented by Meyer Burger in Switzerland, further enhances the performance of the modules and ensures an above-average lifespan. In addition, compared to competitor products, Meyer Burger modules are completely lead-



Willy Burger (left) and Hans Meyer (right) who founded the company back in 1953 as a machine manufacturer.

free and are recycled in line with the circular economy. The aim is to play an active role in shaping the energy transition to make climate crisis a climate opportunity.

The company currently employs more than 1,300 people at research facilities in Switzerland, development and production sites in Germany and the USA, and sales locations in Europe, the USA and Asia.

Company presentation





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"I would like to make a small contribution here to help bring greener energy forward."

Silke Kränert

Expert coordinator solar cells, Thalheim



### Proof on the roof

Our customer wanted modules with good performance, warranties, and a good price-performance ratio and had a lot of questions about ethics and the working environment.

Meyer Burger was the only option for us.

It's a company you simply want to work with.



Location	Strängnäs, Sweden
Product	Meyer Burger Glass
Capacity	17.4 kWp
Application	Residential rooftop installation
Installer	Energy Effective Solutions Mälardalen AB



# Our supply chain

Meyer Burger is committed to keep ensuring highest social and environmental sustainability standards in our own PV production as well as throughout our supply chain. To meet the legal requirements of the German Supply Chain Duty of Care Act (LkSG) as well as our ethical and moral standards, as a manufacturing company we screen all of our global vendors. Thus, we conduct regular audits and ensure that every new supplier signs the Meyer Burger Supplier Code of Conduct before entering into business with us. This procedure is revised at defined intervals. In addition, with the introduction of a new software solution based in Germany, we ensure that we know and can continuously monitor the ownership structure and business relationships of all our suppliers worldwide. This ensures that our global supply chain is as secure and sustainable as possible.

For the production of our high-performance solar modules, we source the key raw materials along the following supply chain, in reverse order:

#### 1. Solar modules:

Since the start of our PV production in 2021, we have been manufacturing 100% of our modules at our Freiberg site in Germany. From Q2/2024, we will also start producing modules in our first international manufacturing site in Goodyear (Arizona), USA

#### 2. Solar cells:

Same as for our modules, since 2021 we have been producing 100% of our cells at our Thalheim site in Saxony-Anhalt, Germany. From Q4/2024, we will start producing cells in our first international cell manufacturing site in Colorado Springs (Colorado), USA.

#### 3. Ingots and wafers:

The ingot and wafer manufacturing is carried out by a few qualified suppliers in Asia and Europe. The Asian suppliers do not produce in regions affected by forced labor practices. To strengthen the European supply chain, Meyer Burger has also signed a supply agreement for silicon wafers with the Norwegian manufacturer Norsun.

#### 4. Polysilicon:

A few qualified suppliers in Asia and Europe carry out the polysilicon manufacturing. Among other sources, Meyer Burger uses polysilicon from Wacker. Wacker operates polysilicon production facilities in Germany as well as in the United States.

#### 5. Metallurgical silicon:

Our polysilicon suppliers have given us written assurances that they do not source their input materials from suppliers and/or regions where there might be a presumption of forced labor.

Furthermore, Meyer Burger is very active on political level in Germany as well as in Europe. We try our best to support creating a healthy environment for more producers along the solar supply chain to increase their capacities in Europe.

Supply chain letter



# Our supply chain

#### **Questions and answers**

Do you have facilities in the Xinjiang region? No, we do not.

Do your suppliers (Tier1, Tier2, Tier3) have facilities in the Xinjiang region?

No, they do not.

How can you ensure that these materials/ components used for wafer production are not mixed with materials/components from other sources?

A significant portion of the polysilicon comes from Europe and Korea, where the risk of non-agreed materials entering is lower. Currently, selected Asian suppliers cover wafer and ingot production in our supply chain due to insufficient capacity in Europe. We have contracts with all suppliers that stipulate the use of polysilicon. Additionally, we conduct audits to trace the supply chain. So far, no deviations have been found.

Do your suppliers (Tier1, Tier2, Tier3) receive subsidies from the Xinjiang Production & Construction Corps?

No, they do not.

#### Can you confirm that your company cannot be associated with any form of forced labor in the Xinjiang region?

Yes, we cannot be associated with any form of forced labor in the Xinjiang region.

#### What type of energy is used for the production of polysilicon, ingots, and wafers?

Our suppliers use the energy mix of their respective countries/regions for production. Some of them operate their own PV power plants to reduce CO<sub>2</sub> emissions.

#### Is the supplier code of conduct of your company presented to all suppliers in Asia?

Yes, all contract partners for direct manufacturing requirements in cell and module production must sign the code of conduct.

#### What measures does your company take to ensure responsible supply chains?

We assess suppliers according to country-specific sustainability risks. Since July 2023, a reporting system has been implemented, allowing employees and external individuals to report risks. Regular supplier audits are conducted on-site, incorporating sustainability criteria.

Specific measures are established when issues are identified, including:

- Update of the assessment
- Risk assessment
- Training
- Follow-up audits

The effectiveness of the measures is regularly reviewed.

#### Does your company have a supplier code of conduct or similar requirements for its suppliers?

Yes. You can find it on our website.

#### Does your company commit to monitoring sustainability and compliance with its suppliers?

Yes, through the signing of the Supplier Code of Conduct, audits, and our reporting system.

Are your sourcing decisions influenced by your suppliers' compliance with the following points: environmental protection, human and labor rights, occupational safety, anti-corruption and antibribery?

Yes, these issues are of high importance to Meyer Burger and are incorporated into all sourcing decisions.

#### Lead-free modules

Our solar modules are designed with innovation and sustainability in mind. We utilize our patented SmartWire Technology (SWCT®) in conjunction with advanced hetero-junction solar cells, allowing us to completely eliminate the need for lead in our solar modules.

This commitment to lead-free design aligns with the EU Directive on the 'Restriction of the use of certain hazardous substances in electrical and electronic equipment' (RL 2011/65/EU - RoHS), which has prohibited the use of lead in electronic and electrical equipment since 2006. Interestingly, solar modules were granted an exemption from this restriction (Article 2, point 4 (i)).

Lead, a toxic substance, is commonly found in crystalline modules due to its use in solder. When these modules sustain damage, the lead can leach out from the edges or exposed surfaces, posing a potential environmental and health hazard. Our commitment to lead-free solar modules ensures that such risks are mitigated.

Moreover, we recognize that replacing lead is not only necessary but also technologically feasible with minimal effort. This viable alternative is not only in line with environmental regulations, but is also a responsible choice for the industry, demonstrating our dedication to sustainable and environmentallyfriendly practices.

Fraunhofer ISF confirmation





#### **PFAS-free modules**

Our commitment to environmental safety extends to our modules being entirely free from PFAS, or per- and polyfluoroalkyl substances. PFAS are a group of synthetic chemicals widely used in various industries for their water- and stain-resistant properties. In our modules, specifically, we refrain from using PTFE (a type of PFAS) for backside insulation, ensuring a PFASfree construction.

PFAS are concerning due to their persistence in the environment and their potential adverse effects on human health. These substances do not break down easily and can accumulate in the environment over time, posing risks to wildlife and ecosystems. Moreover, PFAS exposure in humans has been linked to health issues like developmental problems, liver damage, immune system disruption, and certain cancers.

A significant stride towards sustainability is marked by Meyer Burger's decision to change entirely to glass/glass modules. This shift makes the need for back sheet foils obsolete, a move that significantly enhances the modules' recyclability and minimizes environmental impact.

PFAS declaration





#### Solar module recycling

One key aspect of sustainability is the focus on the circular economy. All activities revolve around reducing, reusing, recycling and most of all, rethinking. Foremost, as a producer, we try to make the solar cells and modules even more efficient to extend their durability and performance. Additionally, the engineering department focuses on reducing the amount of raw material and waste generated by optimizing product design and production processes. Thus, we also make sure, that all our solar modules can be comprehensively recycled at the end of life. Compliance with legal recycling standards is a top priority for Meyer Burger. The law mandates an 85% recycling quota based on the module's weight. This meticulous process encompasses the recycling of glass, the disassembly, and recycling of aluminum frames as well as recycling the laminates, ultimately recovering silicon and silver.

To recycle solar modules and waste from PV production in line with the circular economy, Meyer Burger has concluded a cooperation agreement with LuxChemtech. The clean-tech start up from Freiberg, right next to Meyer Burger's module production, came up with an innovative process that utilizes mechanical techniques and environmental-friendly chemicals to recover all materials from the laminate and return them to the material cycle.

More information







# Production

"Photovoltaic is cool because it is the cleanest, cheapest, and lowest maintenance form of electricity available."

Andreas Waltinger

Head of line processes, Hohenstein-Ernstthal



### Bitterfeld-Wolfen

#### **Sustainable Production Process**

Meyer Burger's commitment to mitigate climate change is evident in their growing production of solar modules that in the end produce renewable energy, minimizing the emission of CO<sub>2</sub>. Moreover, the PV production itself is a rather clean and resource-saving process. Set in Bitterfeld, which was once said to be the dirtiest city of the former GDR, the solar cell production of Meyer Burger is nowadays a perfect symbol for a green production right in the heart of the so-called Solar Valley.

The PV production itself is run based on 100% renewable energy. Moreover, the Heterojunction and SmartWire-Technologies are both low-energy processes as proven by a study of Fraunhofer Institute for Solar Energy Systems (ISE), stating that Meyer Burger's solar modules have a significantly lower carbon footprint than the Asian made Passivated Emitter and Rear Cells (PERC) reference modules. The main reason for this is the production process that manufactures a HJT solar cell in only four steps, using none high-temperature at any point. This leads to a reduction of the overall energy consumption. In terms of saving raw materials and resources, Meyer Burger



Bitterfeld gained notoriety for its chemical industry complex during the East German (GDR) era, which resulted in severe pollution levels, exceeding even the GDR's standards.

seeks to reduce the thickness of wafers as well as the amount of silver paste used in cell production, thus making manufacturing even more efficient. This is a goal that our R&D team is mainly focusing on by cooperating in scientific research and industrial development with renowned European research institutions and universities. To make sure PV production is as sustainable as possible – now and in the future.

As the production as a whole is rather lean, Meyer Burger also saves on space, thus minimizing negative impacts on biodiversity and sealing of the landscape. All the investments in PV production were based on the re-use of already existing production sites in industrial areas, realizing exclusively brownfield investments.

### Bitterfeld-Wolfen

In terms of environmental pollution, Meyer Burger is committed to meeting all legal requirements in accordance with Technical Guideline for Air Pollution Control (TA Air). To ensure compliance with current standards, the concentration of emissions is closely monitored hroughout the engineering and production processes, also by installing additional equipment, such as filters and washers in the production lines.

Meyer Burger is proud to report zero incidents of non-compliance concerning health and safety regulations. This demonstrates Meyer Burger's commitment to providing a healthy and safe environment for its employees, customers, and the surrounding community. Additionally, Meyer Burger is in the process of deve-loping a CO<sub>2</sub> accounting system to set their focus on components and materials with a high potential for CO<sub>2</sub> savings. Together with our suppliers, we are assessing activities to even further reduce emissions, e.g., searching for and evaluating regional or European suppliers to reduces emissions caused by transpor-tation and increasing resilience in the solar supply chain.

Concerning the withdrawal, discharge, and consumption of Water Meyer Burger has been aware of the

need to ensure sustainable procedures in terms of water as a shared resource since our PV production is located in designated arid regions. Therefore, a range of measures has been implemented. To protect production pro-cesses and local wastewater treatment, Meyer Burger has implemented a continuous monitoring system to maintain water quality.



As of July 1st, 2007, Bitterfeld has been incorporated into the town of Bitterfeld-Wolfen. Despite its history as one of Germany's most polluted areas, it has since become the epicenter of the European solar industry.

So Meyer Burger installed at the very beginning of production its water treatment facility to produce process water with a quality far beyond drinking water standards. The company ensures that the water they discharge is processed so that it is safe to be inserted into the public sewage treatment plants.

For more information on water and processes concerning environmental pollution and carbon footprint see the current Meyer Burger sustainability report:

Sustainability report 2022

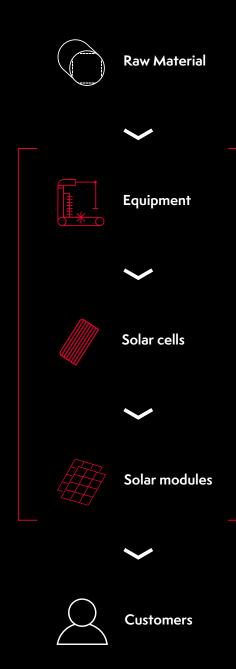


# The C in chain stands for change

#### Sustainable business transformation

At Meyer Burger, sustainability is not just a concept; it's the cornerstone of our transformation. Through a comprehensive sustainable business model, we have embarked on a journey driven by strategic decisions. One of these decisions includes the utilization of equipment and cutting-edge technology exclusively designed and tailored for our own operations.

This deliberate choice is a strategic move that safeguards our invaluable intellectual property, providing us with a competitive edge that sets us apart in the industry. It is about more than mere efficiency; it is about strategic independence. By cultivating an ecosystem that prioritizes strategic independence, we are charting a course that allows us to define our future, ensuring our sustainability goals are met while shaping a landscape where innovation and progress walk hand in hand.



The new Meyer Burger business model. Production equipment for our solar cell production (Bitterfeld-Wolfen, Germany) and solar module production (Freiberg, Germany) is manufactured in Hohenstein-Ernstthal, Germany. Meyer Burger's R&D for equipment, cells, and modules is located both in Switzerland and at the German site of Hohenstein-Ernstthal.

### Production

#### Water consumption

Meyer Burger is committed to responsible water management. In 2022, we utilized nearly 200,000 m³ of water, with a significant portion allocated to cell production in Thalheim, Saxony-Anhalt. Employing a sustainable approach, we recycle this water through effective wastewater treatment, enabling multiple uses within the production cycle. The wastewater discharged into the sewer system undergoes treatment, ensuring a purity level suitable for further processing in biological treatment plants.

Continuously striving for improvement, our research department achieved a remarkable 40% reduction in water consumption during cell production in 2023 through process optimization. We maintain stringent monitoring of water and wastewater quality, underscoring our dedication to sustainability and responsible resource usage.

Meyer Burger is deeply conscious of our cell production location being situated in an arid region, emphasizing the critical need for prudent water management. We are dedicated to implementing robust measures to conserve water, recognizing its immense value in such regions. Moreover, we underscore the sustainability advantage of repurposing existing infrastructure; relocating to a factory that was already built significantly aligns with our commitment to minimizing environmental impact. This approach mitigates the resource-intensive nature of constructing a new facility, reinforcing our holistic sustainability ethos.



# Living Circular

#### Towards greener horizons

At Meyer Burger, we remain steadfast in our commitment to sustainable practices and responsible resource management.

#### Silver recovery

We actively recover silver paste residues generated during the cell printing process. This approach trims costs and salvages a valuable raw material, embodying our dedication to efficient resource utilization.

#### **Eco-friendly packaging**

Prioritizing sustainability, we have eliminated the use of Styrofoam in our packaging. Instead, we employ reusable boxes for the safe transportation of cells.

#### In-house cleaning

The PVD trays find a second life in our solar module plant in Freiberg, Germany, post-delivery. They are cleaned in-house for reuse, reducing waste and promoting efficiency.

#### Water conservation

We have reduced water usage by 40% and returned 95% of purchased water purified, showcasing our commitment to responsible practices. These efforts highlight our dedication to a greener future.



# **Quality Lab**

#### Well done.

At Meyer Burger, we ensure a 25 to 30 year product lifespan by employing certified materials and maintaining stringent quality control. Our IEC-certified testing center subjects our modules to rigorous testing series thrice, ensuring optimal performance and higher yield efficiency over time.



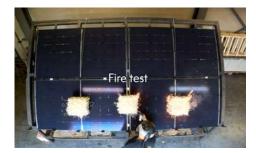






















# Organization

"For me, Meyer Burger is a premium manufacturer of solar modules that has the energy to bring the solar industry back to Europe."

Sandra Schweigel

Quality management commissioner, Freiberg



# Sustainable Entrepreneurship

#### Sparking change and brightening futures in global sustainability efforts

Therefore, Meyer Burger has committed itself to sustainable entrepreneurship and introduced a code of conduct that makes its business practices transparent and quality-conscious. The economic dimensions of the company include procurement practices as well as employment relationships and concrete working conditions.

Meyer Burger's positive impact on the environment is significant. For example, emissions have been reduced through local production in Germany; and the use of state-of-the-art technologies entails a reduction in overall energy consumption.

The company has set itself high sustainability goals and pursued them intensively throughout 2022. With the goal of becoming a world-leading solar cell and module producer, Meyer Burger is a relevant player in global sustainability efforts.

#### **Environment**



We address critical environmental concerns through strategic initiatives. From tackling climate change and curbing environmental pollution to reducing CO<sub>2</sub> emissions and implementing effective water management, we commit to sustainable practices, ensuring a positive impact on our environment.

Significant for energyor emission-intensive companies

#### Social



We prioritize staff well-being, diversity, and fair working conditions, upholding human rights as integral values.

Our commitment to staff satisfaction and fostering diverse representation, alongside improving working conditions, forms the cornerstone of our operational ethos.

Significant for companies with a labor-intensive business model

#### Governance



We prioritize fiscal transparency, fair remuneration, and stringent anti-corruption measures.

Our commitment extends to robust risk management practices, ensuring ethical conduct, and fostering responsible, sustainable business operations.

Significant for all companies

# The ESG pioneer

Jörg Liebschner, a highly experienced graduate engineer, was initially responsible for the circular economy and recycling topics in module production project management at Meyer Burger. Since November 2022, he has been working as an ESG Coordinator, which is a broader area of responsibility than his previous role.

#### Jörg, what exactly are your tasks as ESG coordinator?

One aspect is the coordination of sustainability initiatives among the responsible officers at Meyer Burger, the Board of Directors, and external partners, emphasizing the importance of networking. Of course, Meyer Burger has plenty to offer on this topic. It's inspiring to see other companies and scientific advancements tackling challenging issues with smart solutions, all of which I can apply to my work.

Currently, at Meyer Burger, I prioritize process optimization and ESG project support while addressing improvements in sustainability across all aspects such as process description and software implementation. An important task on my agenda is to assist in compiling the sustainability report and reporting to CSO Katja Tavernaro. I offer support to teams in production and sales colleagues in recycling and  ${\rm CO_2}$  management both nationally and globally throughout Meyer Burger.

My primary role involves creating an interface and developing ESG structures for the company.



Sustainability is considered one of the focal points for future development at Meyer Burger. Numerous of its subjects are currently undergoing a significant process of advancement on a global scale. Together with my colleagues, I'm all for shaping this path of orientation, status evaluation, and goal setting on my own.



#### Why are you particularly well qualified for this job?

I have already covered part of my current tasks on an interim basis as a project manager, such as recycling, CO<sub>2</sub> analysis, lifecycle analysis. I am now picking up where I left off with a consistent continuation of activities.

#### What are your objectives?

In my role at Meyer Burger, we're actively advancing our CO<sub>2</sub> analysis with the explicit goal of comprehensive accounting akin to financial principles. This analysis forms the basis for strategic decision-making within our sustainability efforts. Simultaneously, we have identified new focal points for our company, accompanied by clear Key Performance Indicators (KPIs) and targets.

These priorities are directly tied to our sustainability strategy, aiming to generate a measurable value from the sustainability context for Meyer Burger.

One of the primary focuses is the gradual integration of sustainable initiatives and diligent monitoring of their effectiveness. This encompasses measures to reduce CO<sub>2</sub> emissions, optimize resource utilization, and promote socially responsible business practices. We place significant emphasis on quantifying the impact of these actions to maintain transparent and measurable progress tracking. Our sustainability endeavors not only reflect societal responsibility but are firmly ingrained in our corporate strategy. We recognize the need to establish sustainable business practices as an integral part of our operations. This not only positively impacts

our environment but also paves the way for long-term value creation and resilience in an evolving market landscape.

#### What aspect of your responsibility area are you most enthusiastic about?

Sustainability is considered one of the focal points for future development at Meyer Burger. Numerous of its subjects are currently undergoing a significant process of advancement on a global scale. Together with my colleagues, I'm all for shaping this path of orientation, status evaluation, and goal setting together with my team.

# No risk, much fun

#### **Tracking Sustainability**

Corporate engagement that addresses sustainability is nothing less than risk management. Business is no longer just about strategic competitive advantages, but actually and quite profoundly about the 'license to operate' of every company.

The yardstick for the consistent implementation of the sustainability strategy is therefore not the competition, but facts and figures as a basis and entrepreneurial action within the planetary boundaries. Because without concrete data, a company cannot assess its impact, formulate its goals or report its progress transparently.

Meyer Burger therefore works with experienced partners such as Ecospeed to collect its data. With over 20 years of experience, Ecospeed is one of the leading international software manufacturers and service providers in the field of Corporate Carbon Footprint (CCF) and Product Carbon Footprint (PCF). Across Europe, more than 3,000 companies and municipalities prepare their carbon and climate footprint using the web-based software of the Swiss IT and sustainability service provider. It forms the basis for the ecological part of our Meyer Burger sustainability reporting.



# Sustainability report

We want to turn climate change into a climate opportunity by enabling the generation of clean energy and speeding up the energy transition. We want everybody to internalize that Meyer Burger is about sustainability and that we are pursuing a common goal, which means we want to do something good for this Earth and limit climate change.



Katja Tavernaro, Chief Sustainability Officer of Meyer Burger

Meyer Burger is committed to sustainable entrepreneurship and has been implementing regular sustainability reporting as an integrated part of its annual reporting since 2020.

The Sustainability Report 2022 provides an overview of Meyer Burger's business model and products with a clear focus on environmental, social, and governance (ESG) issues. In this context, it describes the company's approach to sustainable management, which is located at the top management level with the function of the CSO.

Meyer Burger's sustainability reporting is based on the standards of the Global Reporting Initiative (GRI) and thus enables a clear and transparent assessment.



# Green proof

#### Life cycle assessment (LCA) of Meyer Burger

This document highlights Fraunhofer ISE's 2021 Life Cycle Assessment (LCA) of Meyer Burger's n-Type HJT photovoltaic modules (Meyer Burger White/Black, Meyer Burger Glass). Despite lacking an Environmental Product Declaration (EPD) for these modules, critical LCA figures resembling an EPD are presented in the tables of the detailed analysis of environmental impact that are hyperlinked below.

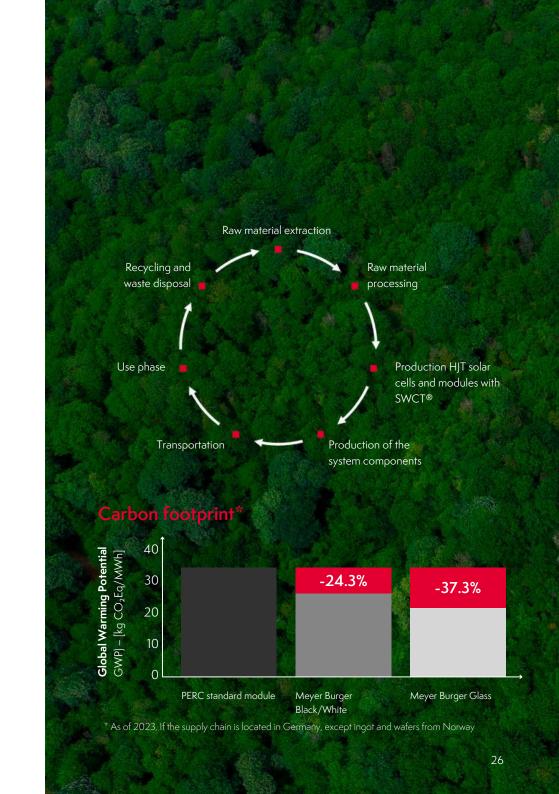
#### Comparability and Benchmarking

Comparing LCAs among different companies demands caution due to variations in databases, assumptions, and assessment tools adhering to ISO standards. The influence of these factors on LCA results might lead to misleading comparisons, hence requiring careful interpretation.

#### LCA assumptions and limitations

Meyer Burger's LCA assumptions entail a 25-year lifespan (30 for Meyer Burger Glass) and a 15 kWp rooftop system yield. Adhering to DIN EN ISO 14040-4, DIN EN 15804, IEA PVPS guidelines, and EU Product Environmental Footprint Category Rules, it utilizes Meyer Burger's production data and ecoinvent Version 3.7.1 (2020). Umberto Version 11 software facilitated this LCA process.

Fraunhofer ISE LCA summary	
Detailed analysis of environmental impact	



### Our contribution to a better world

#### Meyer Burger is pursuing these SDG's

As a company, Meyer Burger is currently committed to implementing nine specific sustainability goals (5, 6, 7, 8, 9, 11, 12, 13, 17). The focus is on energy and the environment.

With the implementation of the SDGs, Meyer Burger wants to ensure that the share of renewable energies in the global energy mix is significantly increased, that the availability of electricity is feasible worldwide with new PV technologies, and that a large part of the raw materials used are recycled as completely as possible and further processed in a way that conserves resources. We are setting new standards in sustainability and thus growing together into a livable and peaceful future.

"Sustainability essentially means ensuring prosperity and environmental protection without jeopardizing future generations in meeting their needs. A sustainable world is one in which all people have access to clean energy and climate change is halted."

This is how former UN Secretary-General Ban-Ki Moon formulated the core message of the global development goals in 2015. In 17 categories, the Sustainable Development Goals (SDGs) point the way to a fairer world. The target horizon is 2030, which is not that far away.



More information



# Global Compact for global impact

#### We are part of UN Global Compact

Meyer Burger has joined the United Nations Global Compact initiative — a voluntary leadership platform for the development, implementation, and disclosure of responsible business practices.

The UN Global Compact is a call to companies everywhere to align their operations and strategies with ten universally accepted principles in the areas of human rights, labor, environment and anti-corruption, and to take action in support of UN goals and issues embodied in the Sustainable Development Goals (SDGs). Launched in the year 2000, the UN Global Compact is the largest corporate sustainability initiative in the world, with more than 15,000 companies and 3,800 non-business signatories based in over 160 countries, and more than 69 Local Networks.

As a Participant of the initiative, we encourage you to visit the UN Global Compact website and learn more on sustainability work and progress.











More information

### Good work

#### Crafting a workplace symphony

As a globally active and listed company, Meyer Burger ensures that all employees, all products and services fully comply with applicable international, national and local laws, regulations and standards. Reliability, loyalty and respect are Meyer Burger's key values for all interactions inside and outside the company. The Meyer Burger Code of Conduct outlines the company's vore values and provides guidelines for business ethics, compliance, corporate governance, stakeholder engagement and fostering a stimulating work environment.

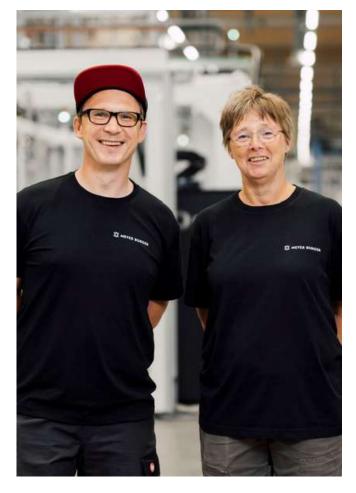
In 2022, Meyer Burger has taken measures to support worker's rights to exercise freedom of association and collective bargaining, such as establishing a new works council at the German cell production site and a group works council that coordinates the work of the existing work councils in Bitterfeld-Wolfen and Hohenstein-Ernstthal.

Moreover, Meyer Burger's Suppliers Code of Conduct explicitly states that supplier's employees shall have the right to form and join trade unions of their own choice and not be penalized for it.

Meyer Burger reaffirms its commitment to relevant international conventions, particularly the MNE Declaration of ILO that provides direct guidance to enterprises on social policy and inclusive, responsible and sustainable workplace practices. In order to ensure that workers' rights are never violated or put at significant risk, the company adheres to the Works Constitution Act, as well as the ILO regulations in Germany and Switzerland. For other countries and geographic areas, Meyer Burger keeps a close eye on the situation and has a Supplier Code of Conduct in place to transparently state their values and expectations.

An important tool for implementing legal compliance is the whistleblower protection system, which has been implemented at Meyer Burger on July 2, 2023 and can be reached via our website.

Code of conduct	لا
Supplier code of conduct	J



### Sustainable finance

#### Money talks, but green money acts

Climate-related issues can affect several important aspects of an organization's financial position, both now and in the future.

Since Meyer Burger is a publicly listed company on the SIX stock exchange, we know that investors have a major interest in ESG data. We are convinced that the publication of not only economical, but also ecological and social relevant facts and numbers creates added value for the company and its investors.

To serve this interest, Meyer Burger is now listed at CDP. CDP is a non-profit charity that runs the global disclosure system for investors, companies, cities, states, and regions to manage their environmental impacts. The world's economy looks to CDP as the gold standard of environmental reporting, with the richest and most comprehensive dataset on corporate and city action.

For over 20 years, Meyer Burger has been a pioneer in the development of photovoltaics along the entire value chain. The company is pursuing a vision of emission-free energy generation from sunlight and with a team passionate about contributing to a new era of energy. This aligns with the Green Financing Framework that was started in June 2021 with the launch of a 125 million EUR green convertible bond. Meyer Burger's Green Financing Framework was released in alignment with its legacy and its vision and mainly covers projects related to the manufacture of products and key components that are essential for renewable energy technologies (solar PV modules). The proceeds of the Bonds will be used in compliance with the Green Financing Framework. As both the Green Bond Principles, Green Loan Principles and the green financing market overall, as well as the EU Taxonomy, are evolving rapidly, this Framework may be updated or expanded in the future.

Any future updated versions of this Framework will either keep or increase the current levels of transparency and reporting disclosures. The external review of the Framework by ISS, as Second Party Opinion provider, is available, together with the Framework, on the Company's website.

Already at the opening of Meyer Burger's cell factory site in Bitterfeld-Wolfen the company was rewarded by the German state of Saxony-Anhalt with a commitment for an environmental protection grant of up to 15 mn EUR and an investment grant of up to 7.5 mn EUR. Earlier the Fraunhofer Institute for Solar Energy Systems in Freiburg had confirmed that the solar cell production in Bitterfeld-Wolfen has significant environmental benefits compared to conventional manufacturing.

### Green cradle

#### Pioneering Sustainable Legacies in Freiberg

The city of Freiberg hosts Europe's largest module production facility by Meyer Burger, celebrated as a sustainability haven. Hans Carl von Carlowitz, in 1713, highlighted the criticality of forest preservation in the Ore Mountains. The increasing shortage of wood and the exploitation of the forests were threatening the prosperity and the lives of the local people. Thus, Carlowitz advocated planned reforestation to sustain wood resources, laying the bedrock of material sustainability.

Modern sustainability aims to fulfill present needs without compromising future generations' opportunities. We focus on durability, high-energy efficiency on the smallest possible PV module surface as well as on comprehensive recyclability of all materials. To this end, we invest above-average amounts in research and development, as well as in product design and circular economy co-operations.

In Freiberg, LuxChemtech handles waste from Meyer Burger's solar module production. Soon, a plant will disassemble solar modules into glass, aluminum, silver, and silicon, championing the circular economy, aligning with Carlowitz's ethos, the pioneer of Freiberg's sustainability legacy.



# **Public policy**

#### Public policy and civil cooperation

Customers, shareholders, local politicians, and employees are all requesting more green and environmentally friendly energy. For this reason, Meyer Burger, is striving to increase the production of solar cells and modules in Europe to provide a safe and peaceful source of energy for the continent and its people. Actions taken by Meyer Burger include participating in relevant industry associations to support policies that denounce supply chain issues, publish media releases, give interviews and public statements, using narratives that focus on Europe as a leading technology provider for renewable energy, thus setting standards for high-tech PV production that is most efficient, resource-saving and climate friendly.

Moreover, Meyer Burger has been engaging in public policy on regional, national, and European level through memberships in industry and trade associations, as well as regular meetings with relevant stakeholders. Our aim is to revive the European solar industry and encourage public policy to speed up energy transition.

We ask politicians to support the European solar industry as part of the European Green Deal. Despite these activities, Meyer Burger has not made any financial or in-kind contributions to political parties, politicians, or causes. Furthermore, Meyer Burger adheres to its Code of Conduct, which states that they do not make political donations and are not a member of a political party. Employees are, however, allowed to engage in political activities as private individuals.

Meyer Burger has memberships and board positions on various national, European and US solar associations to engage in multiple areas and maintain contact with the major players both in the industry and in politics.

In 2022, the CEO of Meyer Burger, Gunter Erfurt, was elected to the board of directors for Solar Power Europe and re-elected to the board of directors for the Federal Solar Industry Association (BSW).

























## Let it bee!

#### Corporate bees

Embracing a commitment to sustainability and environmental responsibility, Meyer Burger initiated an impactful project at our Hohenstein-Ernstthal site in the spring of 2023.

In collaboration with a local beekeeper and one of our own dedicated employees, we established two bee colonies. This endeavor not only bolsters corporate bonding but also exemplifies our dedication to environmental protection and the promotion of biodiversity. Our employees actively engage in the care of these colonies, nurturing a deeper connection with nature while contributing to our broader environmental objectives.

The success of this initiative is palpable—during the first season, we harvested an impressive 40 kg of honey. To put this into perspective, it's equivalent to the weight of two solar modules. This honey, a sweet reward for our dedication to environmental stewardship, is now thoughtfully used as a special gift for meaningful occasions and is available for purchase in our company's canteens.

Meyer Burger is proud to seamlessly integrate sustainability into our daily operations, championing initiatives that not only resonate with our values but also leave a positive impact on the environment and the community we serve.











### Win-win

#### Racing with the sun

Meyer Burger spends more than 1/3 of its revenues on research and development, which is, in comparison to other tech companies, a rather high number. Usually, companies spend about 5% on R&D. Resourcesaving projects, the reduction of certain raw materials, or the recycling of production waste are some of the things that Meyer Burger considers to be sustainable in an ecological sense. One of the most fun cooperatives in this context are the international student solar enthusiasts who take part in the biennial Bridgestone World Solar Challenge in Australia.

This year, Meyer Burger sponsored two teams in the world's largest solar challenge. Both the Swiss team aCentauri from Zurich and the Dutch solar enthusiasts of the Brunel Solar Team received a pack of the high-performing HJT solar cells from Meyer Burger to build a PV deck for their cars. The self-built racers, optimized with the highest level of engineering and innovative spirit, drive the more than 3,000-kilometer route through Australia using only the energy of the sun.

The Meyer Burger research department greatly appreciates the cooperation with the student solar teams. The feedback and experience gained from the race also flowed into the further development of cell and module technology at Meyer Burger. To make the most of the sun.



# Glossary

#### **CSR (Corporate Social Responsibility)**

CSR refers to a holistic corporate concept that integrates all dimensions of sustainability. It encompasses a company's voluntary contributions to society beyond compliance with legal requirements (compliance). These contributions cover social, environmental, and economic aspects.

#### **CSRD**

#### (Corporate Sustainability Reporting Directive)

The CSRD is a directive from the European Commission that replaces the previous Non-Financial Reporting Directive (NFRD) from 2014. The CSRD mandates sustainability reporting, especially for large companies (with 250 or more employees).

#### **Corporate Sustainability**

Corporate Sustainability refers to the sustainable responsibility of companies of all industries and sizes for climate, the environment, and society, coupled with good and fair corporate governance. It simultaneously encompasses ecological, societal (social), and economic goals.

#### **Ecology**

The term Ecology, originally from biology, is increasingly used to describe the overall environmental situation. The adjective "ecological" is colloquially used predominantly as an expression of an attitude or action that conserves environmental resources.

#### ESG (Environmental, Social, and Governance)

The abbreviation stands for Environmental, Social, and Governance (ESG) and is often used as a synonym for the term Sustainability.

#### ESRS (European Sustainability Reporting Standards)

The abbreviation "ESRS" stands for European Sustainability Reporting Standards. They represent a milestone in European sustainability reporting. On 22nd November 2022, 12 draft standards were submitted to the EU Commission for approval by the European Financial Reporting Advisory Group (EFRAG).

#### **GRI (Global Reporting Initiative)**

The Global Reporting Initiative (GRI) is an independent international organization with the aim of harmonizing

all essential standards with the GRI Standards framework (since 2016). The GRI Standards are the most widely used standards for sustainability reporting worldwide and can be used by any company and organization as a set of indicators to report on their impact on the environment and society and take responsibility for it. Sustainability reporting based on the GRI Standards informs about the positive or negative contributions of an organization to sustainable development.

#### Governance (Corporate)

Governance refers to the legal and factual framework for the management and supervision of companies. The design is the responsibility of corporate management or the supervisory body (e.g., the supervisory board).

#### **Materiality Analysis**

Materiality analysis refers to a procedure for determining relevant ecological, economic, and social issues and content of sustainability reporting, taking into account the company and stakeholder perspective.

# Glossary

#### Sustainability

Sustainability is often used as a translation of the term Sustainability, which, in turn, can be equated with the term Sustainability. Sustainability can be defined as "using all material and immaterial resources in a way that they will be available in the same quantity and quality for future generations."

#### **Sustainability Strategy**

The sustainability strategy involves harmonizing the ecological and social challenges that companies face with economic goals.

#### Sustainability Reporting

Sustainability reporting can be considered the result of a comprehensive and regularly recurring process that allows companies to present issues that go beyond financial reporting but are closely related to the development of the company and its sustainability. The basic requirement is sustainability management, which makes the necessary qualitative and quantitative information available and verifiable.

#### **Supply Chain**

The supply chain refers to the value-added network of companies created by the material, information, and money/financial flows that connect the individual actors. Since supply chains often do not have linear structures, continuous traceability, in particular, is a major challenge.



# MEYER BURGER

With the right energy, anything is possible.