

# Sustainability Report 2023

# Honest Quality

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## Honest Sustainability

For more than 50 years, we at Beck have been dedicated to delivering the highest quality in everything we do. From our products and services to our relationships and commitments, we strive to achieve the best results. Pursuing the highest quality is our responsibility to contribute to a more sustainable world. Sustainability is not just an ambition for us; it is an attitude and an integrated part of our long-term goals.

In 2017, we took a strategic step towards becoming a leader in sustainability within our industry. We systematically analyzed the UN 17 Sustainable Development Goals, and after careful consideration, we found that Goal 12—Responsible Consumption and Production—would be the goal on which Beck would have the most significant impact.

We aim to minimize our CO2 footprint and contribute positively to the environment by ensuring our products are 100 percent biodegradable and compostable. We are proud to have met the UN's climate target 12.5 and the EU Directives 1 and 2 concerning packaging and packaging waste.

Since 2017, we have taken many steps to become more sustainable. Our work on sustainability has become significantly more formalized and progressive. We have become a member of UN Global Compact. We have adjusted our processes and data practices to align with evolving regulations and governance principles. To demonstrate our commitment to sustainability, we have dedicated full-time personnel to support our headquarters in Denmark and the USA.

We are proud to have been early adopters of sustainability. This aligns with our values and resonates with the expectations of our customers, suppliers, business partners, sales agents, and employees. Our foresight in this area reassures our stakeholders and underscores our commitment to a sustainable future.

This report shows we have sound insight into our greenhouse gas emissions in scopes 1, 2, and 3. Independent experts have documented and reviewed these control measures using qualified and recognized methods and platforms. Our high level of control strengthens the confidence of our stakeholders in our environmental management and our ability to make data-driven decisions to reduce emissions most efficiently.

We have adopted the "Science-Based Targets" initiative, which provides methodology and guidance. Creating reduction targets and aligning them with scientific principles ensures a robust and evidence-based approach to climate action. By proactively striving for these targets, we aim to continue contributing to advancing climate protection and demonstrating leadership in climate action.

This report will provide insight into our sustainability journey and the many steps we are taking to ensure a more sustainable future. We look forward to continuing this journey together with our stakeholders.

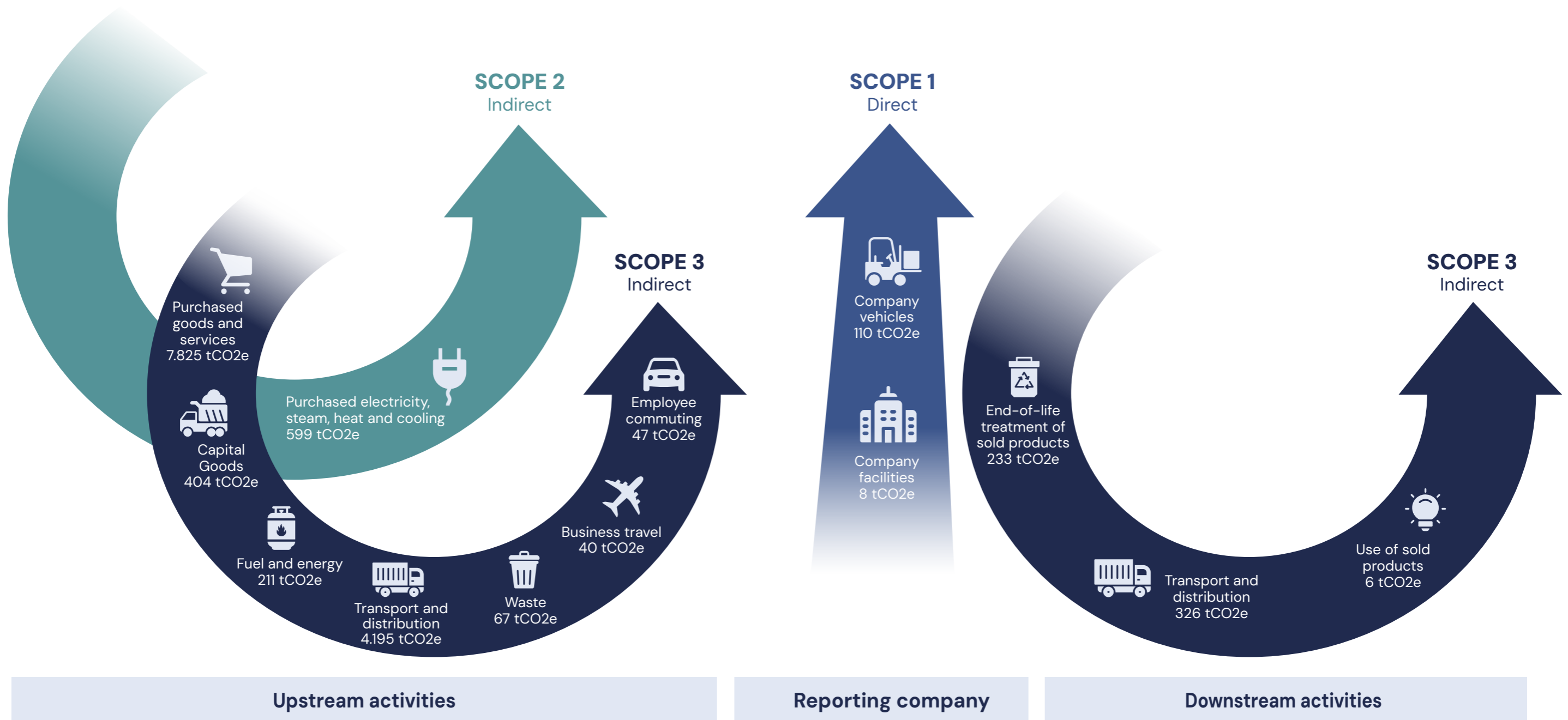
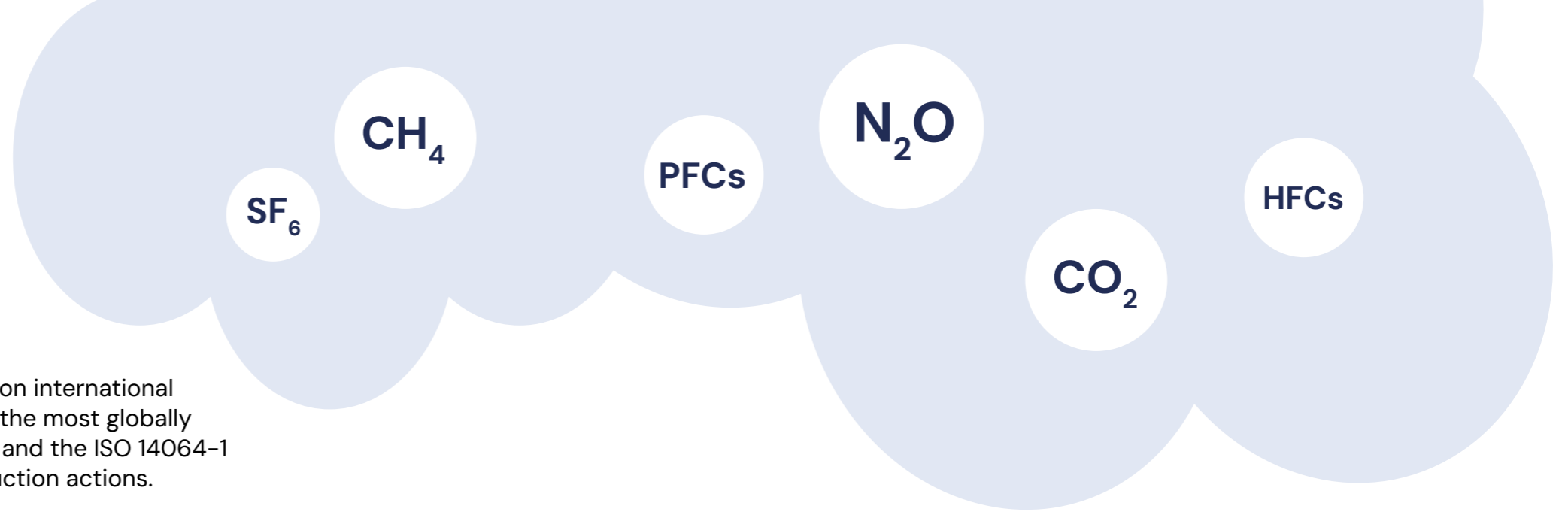
Best regards,

Lars Krusell, Group Quality & Sustainability Manager  
Peter Vesløv, CEO

# Methodology

## The GHG Protocol

The methodology used in this report is based on international standards such as GHG Protocol, that supplies the most globally recognised GHG accounting standards today, and the ISO 14064-1 standard on GHG emission reporting and reduction actions.



# Carbon Emission Reduction Strategy: Key Targets & Initiatives

In 2021, Beck set the foundation for its carbon neutrality efforts by establishing a CO2e baseline. This measure allows us to monitor progress and implement strategic goals from 2023 to 2030. Through energy efficiency, waste reduction, and partnerships, we are committed to achieving Net Zero emissions by 2050, with significant reductions by 2030 in own operations.

## 2021: Establishing Our Baseline

In 2021, Beck defined its CO2e baseline, enabling the company to track progress and set reduction targets across all operations.

## 2023 – 2025: Defining the Path to Zero Emissions

Beck has implemented several initiatives aimed at achieving zero emissions:

### 1. Sustainability Strategy (2023–2025)

A strategy focusing on energy efficiency, waste reduction, and sourcing sustainable materials.

### 2. Carbon Emission Overview (CEMASys)

Emissions are tracked across Scopes 1, 2, and 3 through the CEMASys system, validated by an external expert. This data is refined annually to guide reduction efforts.

### 3. Recycling of Waxed Liners

In 2022, Beck reduced 96 metric tons of liner waste, equivalent to 48 tons of CO2e. In 2023, recycling efforts cut this to 2 tons of CO2e.

### 4. Key 2024 Sustainability Milestones:

- **UN Global Compact:** Beck will complete the 2024 COP questionnaire, reinforcing its commitment to sustainability principles.
- **SBTi:** Preparation of baseline data and targets for validation in 2025.
- **ESG Reporting:** Reports prepared in 2024, with full implementation in 2025.
- **Extended Producer Responsibility**
- **Energy Management:** Systems will be implemented to manage energy use more effectively.

### 5. Energy Efficiency Opportunities

Beck is identifying ways to use energy more efficiently in daily operations, with reductions target-

ed in electricity consumption (e.g. weekend factory close-down saving 50,000 kWh annually) and other operational areas.

### 6. Setting Energy Reduction Targets

Cardboard and wax contribute to over 90% of emissions from purchased materials. Using supplier emission data, Beck has significantly cut emissions from these materials, particularly through partners.

### 7. Transition to Greener Energy Sources

- **Company Vehicles:** Transitioning to electric vehicles has saved 6 tons of CO2e (Scope 1).
- **LPG to Biogas or Heat Pumps:** Expected savings of 99 tons of CO2e (Scope 1).
- **Green Power:** Switching to renewable electricity could save 580 tons of CO2e (Scope 2).
- **District Heating:** A greener solution could save 21 tons of CO2e (Scope 2).

### 2025 – 2030: Strategic Emissions Reduction

From 2025 to 2030, Beck will continue to reduce emissions through strategic projects:

### 8. Collaboration with Transportation Suppliers

Transportation accounts for nearly one-third of Beck's emissions, so we are working with partners to optimize logistics and reduce emissions.

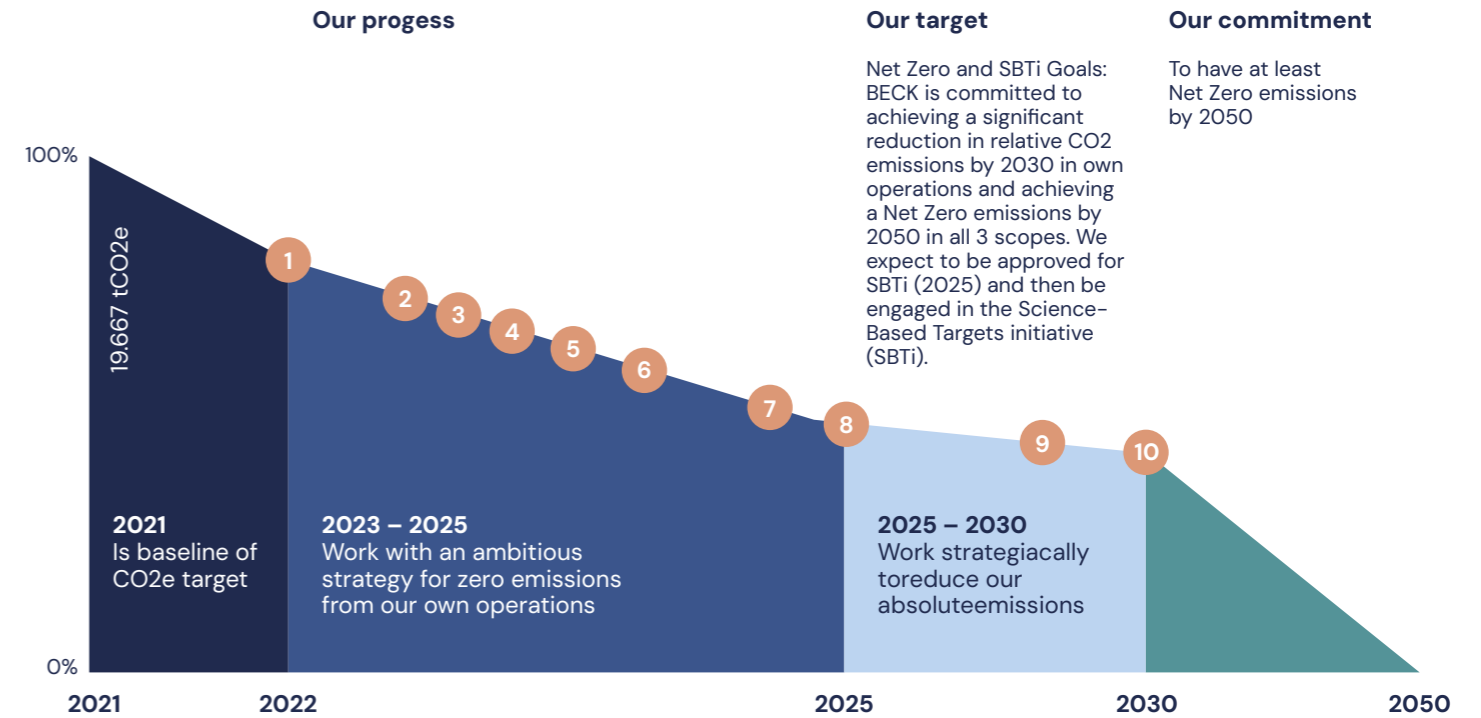
### 9. New Emissions Reduction Projects

Additional projects will be implemented before 2030, focusing on reducing emissions in key operational and supply chain areas.

### 10. Scaling New Technologies

Beck remains committed to adopting and scaling technologies that reduce environmental impact. As innovations emerge, they will be integrated into operations to improve efficiency and reduce emissions.

Through these efforts, Beck aims to lead in sustainability, working toward carbon neutrality in scope 1 and 2 by 2030 and Net Zero in total by 2025.



1. Establish Sustainability Strategy (2023–2025)
2. Carbon emission overview CEMASys scheme through annual climate accounts in scope 1,2 and 3. Validated by external expert. Continuously refine emission data.
3. Recycling of waxed liners (own operation). Y 2022 96 mt liner wasted equal to 48 tCO2e. Reduced Y 2023 to 2 tCO2e due to recycling. Company vehicle (cars, forklifts) into electrical savings 6 tCO2e (scope 1).
4. Purchased materials account for more than 50% of our total CO2 emissions. Cardboard and wax, in particular, contribute to over 90% of the emissions from purchased materials. Utilizing CO2 reduction data from cardboard and wax suppliers will drive our CO2 emissions in a very positive direction. For 2023, emission data from our paper suppliers Hertzberg and SCA have been used.
5. 1. UN Global Compact -> 2024 COP questionnaire done.  
2. Extended Producer Responsibility (2024)  
3. SBTi -> 2024 Preparation baseline and Target for validation (2025)  
4. ESG -> 2024 Preparation for in-house reports -> 2025
6. Mapping opportunities to utilize energy more efficient in our daily operations. Energy reduction target settings and initiatives.
7. LPG gas into biogas or heat pumps potential savings of 99 tCO2e (scope 1)  
Green power energy (elc.) potential savings of 580 tCO2e (scope 2)  
District heating into a green solution saves 21 tCO2e (Scope 2)
8. Work strategically with transportation suppliers. Transportation upstream and downstream accounts for nearly one-third of our total CO2 emissions.
9. Identified new projects to implement before 2030, in order to achieve emission reduction target.
10. Scaling new technologies, as they become available.

# Reusing Beck's Liners in Fiber Gypsum Boards: A Sustainability Success



## Introduction

In pursuing a circular economy, Beck has found a solution in Fermacell reproducing industrial waste into valuable resources, transforming waste liners into high-quality fiber gypsum boards. This innovative approach reduces landfill waste and highlights the potential for industries to collaborate and develop greener solutions for the construction industry. This chapter explores our journey in recycling its liners and the significant environmental impact it has achieved through this partnership.

## The Challenge

The Beck-liner® is made from a combination of cardboard and wax. Historically, these liners were discarded as waste, contributing to growing concerns around landfill use and resource depletion. As a producer of thousands of tons of liners annually for the global market, we recognized this challenge as an opportunity to innovate and find a more sustainable solution.

## The Collaboration with Fermacell

In response to the growing need for sustainable practices, Beck collaborated with Fermacell, a leading producer of fiber gypsum boards. Fermacell's expertise in utilizing recycled materials, particularly paper and cardboard, allowed them to integrate the discarded Beck-liners® into the production of their fiber gypsum boards.

Fermacell's boards are well-known for their durability and sustainability, and integrating Beck's recycled liners into the process helped enhance these qualities while contributing to resource conservation. By shredding the liners' cardboard and wax components, Fermacell incorporated them into their manufacturing process, reducing the need for virgin materials and diverting significant amounts of waste from landfills.

## Success in Numbers

The partnership between Beck and Fermacell has already yielded tangible environmental benefits. In 2022, we produced 96 metric tons of liner waste, generating approximately 48 tons of CO<sub>2</sub>e. The recycling process dramatically reduced these figures by 2023, with only 2 tons of CO<sub>2</sub>e emitted. This significant reduction in emissions underscores the effectiveness of the recycling program and its contribution to a more sustainable future.

Today, approximately 15–20% of the liners we produce are recycled at Fermacell's facilities in Siglingen and Münchhof, Germany. This translates to thousands of tons of waste being repurposed into new products each year, and we plan to increase this percentage in the coming years as the collaboration expands.

## Environmental Impact

The global issue of paper and cardboard waste has urgently needed innovative recycling solutions. By incorporating our recycled liners into their fiber gypsum boards, Fermacell reduces waste and supports the circular economy, a key component of sustainable development. The collaboration between these two industry leaders serves as a model for how companies can work together to reduce waste, lower emissions, and create sustainable and market-competitive products.

## Circular Economy in Action

This partnership reflects the core principles of the circular economy, where waste is not seen as a problem but as a resource. Beck and Fermacell have demonstrated that with the proper infrastructure and collaboration, industries can turn their waste into valuable inputs for other processes, reducing the strain on natural resources and contributing to a greener future.

## A Vision for the Future

Looking ahead, Beck will continuously work to identify

areas where the Beck liner recycling can be implemented, aiming to reduce its carbon footprint and contribute to more sustainable resource management practices.

The success of this initiative has spurred us to explore additional ways to reduce waste and emissions. By continuing to map energy efficiency opportunities, set ambitious emissions reduction targets, and leverage innovative recycling partnerships, we are positioning ourselves as leaders in sustainable packaging solutions.

## Conclusion

The collaboration between Beck and Fermacell highlights the power of industry partnerships in driving sustainability. By transforming waste liners into a critical resource for producing fiber gypsum boards, we significantly contribute to the circular economy and set a new standard for responsible resource management. As Beck continues to innovate and expand its recycling efforts, this partnership's environmental benefits will continue to grow, helping to shape a more sustainable future for all industries involved.



# 2023 Greenhouse Gas Report Summary

Beck reported total greenhouse gas (GHG) emissions of 14,069.7 tons of CO2 equivalent (tCO2e) for 2023, marking a significant 35.2% decrease from the previous year. This reduction was mainly due to decreased material purchases, which led to lower emissions in several Scope 3 categories, particularly transportation and end-of-life treatment.

## Emissions breakdown

- Scope 1 (Direct Emissions): Amounted to 117.8 tCO2e, representing 0.8% of total emissions. These emissions are from sources directly controlled by the company, such as diesel and petrol for transportation and liquefied petroleum gas and propane for wax heating and forklifts.
- Scope 2 (Indirect Emissions from Energy Use): Contributed 599.5 tCO2e, or 4.3% of total emissions, primarily from electricity and district heating.
- Scope 3 (Other Indirect Emissions): The largest category, comprising 13,352.4 tCO2e, or 94.9% of total emissions. Significant contributors include purchased goods and services (55.6% of total emissions) and upstream transportation (29.8%).

## Key Emission Sources

- Purchased Goods and Services: At 7,824.9 tCO2e, this category is the largest source of emissions, driven by materials for liner production, especially paper.
- Upstream Transportation: Contributed 4,195.3 tCO2e, mainly due to sea and road freight. Sea freight is more efficient per ton-kilometer, but road freight within Denmark has higher emissions.
- Purchased Electricity: Emissions were 593.7 tCO2e, using a location-based method reflecting grid emissions where electricity was consumed.

## Methodology and Data Quality

The report uses the operational control approach to follow the Greenhouse Gas Protocol (GHGP). Data quality was high, with 91.5% of emissions based on actual activity data, 5.1% on supplier-specific emission factors, and 3.4% on spend-based factors. Improvements in data quality were noted, particularly in emissions from purchased goods.

## Comparison with 2022

- Scope 1 Emissions: They decreased by 0.4%, from 118.3 tCO2e in 2022 to 117.8 tCO2e in 2023. Stationary combustion increased slightly, but mobile combustion decreased by 43.4% due to reduced fuel usage in Denmark. One key initiative was to implement more company electric vehicles.
- Scope 2 Emissions: Fell by 9.6%, mainly due to reduced electricity consumption via factory energy-saving initiatives.
- Scope 3 Emissions: Saw the most significant drop, down 32.3%, from 19,736.4 tCO2e to 13,352.3 tCO2e. This was mainly due to a 27.90% reduction in emissions from purchased goods and services, driven by lower material purchases and improved supplier-specific data. Upstream transportation emissions also dropped by 33.9%. Recycling of waxed liners from own operation. Y 2022 96 mt liner wasted equal to 48 tCO2e. Reduced Y 2023 to 2 tCO2e due to recycling.

## Future Focus

Beck plans to enhance data accuracy, particularly for the use phase of sold machinery, which currently relies on proxy estimates. Improved data collection in this area will be a priority in future inventories.

## Benchmarking

The report compares the company's emissions to other activities, noting that 14,069.7 tCO2e is roughly equivalent to the annual emissions of 3,349 gasoline-powered cars or the energy use of 1,835 homes. These emissions are also comparable to the amount of GHG avoided by four wind turbines running for a year.

## Conclusion

The 2023 GHG Report highlights Beck's gradual progress in reducing its carbon footprint, primarily due to reduced production levels, mainly through decreased raw material purchases and transportation of finished goods. Although recycling the waxed Beck liner waste contributes only minimally to the overall reduction in emissions, it is a notable milestone that we have successfully implemented this recycling process. Energy-saving initiatives have also contributed to a modest reduction in emissions.

## Key Figures GHG Emissions

Summary	Unit	2021	2022	2023
Total Scope 1	tCO2e	105,3	118,3	117,8
Total Scope 2	tCO2e	602,5	662,8	599,5
Total Scope 3	tCO2e	18.959,1	18.955,2	13.352,3
<b>Total</b>	<b>tCO2e</b>	<b>19.666,8</b>	<b>19.736,4</b>	<b>14.069,7</b>

	Units	2021	2022	2023	%	Development / Comment
Scope 1 total	tCO2e	105,3	118,3	117,8	-0,39	Change to electric company cars and trucks (6t Co2e)
Scope 2 total	tCO2e	602,5	662,8	599,5	-9,55	Reduced production as well as savings measures weekend shutdown (8t Co2e)
Scope 3 total	tCO2e	19.666,8	19.736,4	13.352,3	-32,35	Primarily drawn from lower production
Category 1: Purchased goods and services Total	tCO2e	11.018,5	10.853,1	7.824,8	-27,90	Main reason - less production as well as published positive emission figures from main paper suppliers
Category 2: Capital goods Total	tCO2e	219,8	547,3	403,5	-26,28	Fewer investments and less maintenance
Category 3: Fuel-and-energy-related activities Total	tCO2e	272,9	208,0	210,8	1,34	Higher emission for "cradle to gate" for Power produktion. (BEOF & RVV)
Category 4: Upstream transportation and distribution Total	tCO2e	6.336,2	6.346,7	4.195,3	-33,90	Main reason - less production
Category 5: Waste Total	tCO2e	71,3	118,0	66,7	-43,42	Less production = less waste. Fermacell project reduce own waste (46 tCO2e)
Category 6: Business travel Total	tCO2e	42,3	44,2	40,0	-9,50	Lower travel activity.
Category 7: Employee commuting Total	tCO2e	96,0	101,3	46,6	-54,04	Due to less production = fewer employees.
Category 9: Downstream transportation and distribution Total	tCO2e	506,7	405,9	325,6	-19,79	Main reason - less production
Category 11: Use of sold products Total	tCO2e	5,0	4,2	5,8	40,06	This is derived from higher sales of machines (ejectors) and accessories in DK
Category 12: End-of-life treatment of sold products Total	tCO2e	390,3	326,6	233,3	-28,58	Main reason - less production, hence less sales (15% recycled liners)
<b>Total emissions (Scope 1 + 2 + 3)</b>	<b>tCO2e</b>	<b>19.666,8</b>	<b>19.736,4</b>	<b>14.069,7</b>	<b>-28,71</b>	<b>Lower production + electric company cars + Fermacell project recycling + weekend power close down.</b>

# Key Highlights and Priorities

As sustainability defines the future of responsible business practices, we at Beck remain committed to embedding sustainability at the heart of its operations. In 2024, we are expanding our efforts across multiple focus areas to ensure we contribute positively to the environment, society, and global governance. These initiatives reflect our dedication to sustainable growth and our responsibility towards reducing our environmental impact while aligning with international standards.

## Sustainable Forestry and FSC Certification

We take pride in ensuring that all our paper suppliers operate under sustainable forestry practices. This commitment guarantees the responsible management and regeneration of forests, an essential resource in our production. Currently, 100 percent of our paper mass is FSC-certified (FSC-certified includes FSC Recycled Credit, FSC Mic Credit, and FSC Recycled 100%), a testament to our adherence to rigorous environmental and social standards. Through this initiative, we support biodiversity and forest conservation and contribute to the well-being of communities dependent on forest resources.

## Biodegradability and Composability

The products we design today are built for the future. We ensure that all its products are 100 percent biodegradable, compostable, and recyclable. These characteristics allow our products to break down naturally, reducing long-term environmental impact. In alignment with a circular economy, our biodegradable and recyclable products can be transformed into new materials, helping to minimize waste and promote resource efficiency.

## United Nations Global Compact

In 2024, we have strengthened its commitment to corporate sustainability by joining the United Nations Global Compact, a global initiative promoting socially responsible business practices. By signing the Letter of Commitment, our CEO has formalized Beck's dedication to aligning with the UN's human rights, labor, the environment, and anti-corruption principles. This partnership underscores our pledge to integrate these values into our operational framework continually.

## Net Zero and SBTi Goals

At Beck, we have set ambitious targets for reducing our carbon emissions. We aim to cut relative CO2 emissions

by 2030 and achieve Net Zero by 2050 across all three emissions scopes. As we approach 2025, we expect our Science-Based Targets initiative (SBTi) approval to ensure our emissions reduction goals are scientifically validated. Our strategy focuses on the present and setting a long-term trajectory for meaningful climate action.

## Carbon Footprint Disclosure

Transparency is a critical element of our sustainability approach. We provide a clear picture of our environmental impact by disclosing our carbon footprint, including emissions from scopes 1, 2, and 3. In 2022, we reported emitting 200 grams of CO2 per liner, offering a benchmark for future reductions. This data helps us hold ourselves accountable, and fosters trust with stakeholders by demonstrating our ongoing efforts to cut emissions.

## Recycling and Resource Management:

As a significant producer of liners, we recognize the importance of recycling. Currently, 15–20 percent of the liners used by our customers are recycled into Ferma-cell building boards. We are committed to increasing this percentage, improving resource management, and minimizing waste. By expanding our recycling efforts, we aim to contribute to a more sustainable lifecycle for our products.

## Energy Efficiency Measures

Energy efficiency is a central component of our sustainability strategy. By implementing energy-saving measures such as LED lighting, EFK lighting, and weekend shutdowns, we have reduced our electricity consumption by 10 percent annually. Additionally, our weekend close-down procedure has cut standby electricity use by 20 percent. These measures reduce our carbon footprint and exemplify our proactive approach to energy management.

## Sustainability as a Core Business Strategy

Sustainability is not just a compliance goal for us; it is an integral part of our business strategy. It informs every decision we make, aligns with our brand identity, and is critical to maintaining our social license to operate. By placing sustainability at the core of our operations, we ensure that our long-term growth is both responsible and aligned with the expectations of our stakeholders.



## Use of Paper as a Raw Material

Paper remains one of our primary raw materials, chosen for its renewable and fiber-based nature. The paper we use predominantly comes from recycled fibers, emphasizing our commitment to reducing reliance on virgin resources. This responsible sourcing choice helps to lower our environmental impact while supporting the circular economy.

## Energy Efficiency and Reduction Targets

We continuously seek ways to use energy more efficiently. We are mapping energy usage across our facilities. By monitoring the energy consumption of each machine, we are better positioned to implement targeted initiatives that reduce overall energy use and drive sustainability across our operations.

## Transportation Strategy

We are also focused on reducing emissions in transportation. By collaborating with logistics suppliers, we are exploring more sustainable transportation options. We aim to reduce absolute emissions between 2025 and 2030 by optimizing our supply chain and finding greener solutions for the movement of goods.

## ESG Commitment

Beck's commitment to Environmental, Social, and Governance (ESG) principles reflects our holistic approach to sustainability. Our ESG framework guides our actions, ensuring that we address environmental concerns, social responsibility, and ethical business practices. By embedding ESG into our core processes, we affirm our commitment to act in the best interest of all stakeholders.

## Green Solutions and Partnerships

Our approach to sustainability extends across our supply chain. In collaboration with our partners, we are committed to sourcing materials that support green solutions. This systematic approach ensures that the materials we use and the products we create align with our broader sustainability goals, helping to drive innovation and reduce our environmental footprint.

Beck's focus areas in 2024 highlight our continued leadership in sustainability, balancing business growth with environmental responsibility. Each initiative represents our dedication to making a tangible impact and creating a better future for our business, the environment, and society.





If you need further information about block production, block products, machinery, and developments, please do not hesitate to contact us.

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