

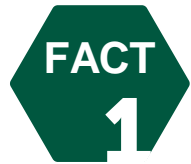
Jungheinrich POWERLiNE:
Moving towards carbon-neutral trucks.

JUNGHEINRICH

**Sustainability plays
a key role in our
corporate strategy.**

Sustainability is a core component of our corporate strategy.

The significance of carbon neutrality.



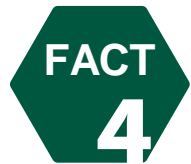
As pioneers in the field of electrical, and thus sustainable, intralogistics, we are actively driving change. We believe we are **paving the way towards sustainable intralogistics**.



As part of our strategy, we are pursuing a clear goal: "**to create sustainable values**". As a cornerstone of our corporate strategy, this mission influences our daily activities in many ways.



Our comprehensive sustainability standards are based on the three pillars of **economy, ecology and social affairs**. Given the urgency to tackle environmental changes, **carbon neutrality*** is a key focus of our strategy.



In our role as a "**sustainability enabler**", we are not only transforming our own company, but also have the opportunity to positively influence our customers' business activities with our products and solutions. Our **POWERLINE series**, for example, is the **first of our trucks** to be **carbon neutral** upon delivery to our customers.

*At Jungheinrich, we understand carbon neutrality to mean offsetting emissions with regard to the greenhouse gases listed in the Kyoto Protocol.

The basics:

**What are CO₂ equivalents
(CO₂e)?**

Climate-changing greenhouse gas emissions, indexed as CO₂ equivalents.

In addition to the widely known greenhouse gas **CO₂ (carbon dioxide)**, there are numerous other greenhouse gases with varying degrees of climate impact, including:

- CH₄ (methane)
- N₂O (nitrous oxide / "laughing gas")
- HFC (hydrofluorocarbons)
- PFC (perfluorocarbons)
- SF₆ (sulphur hexafluoride)
- NF₃ (nitrogen trifluoride)

In order for them to be comparable with each other despite their different climate impacts, they are indexed as **CO₂ equivalents / CO₂e**.

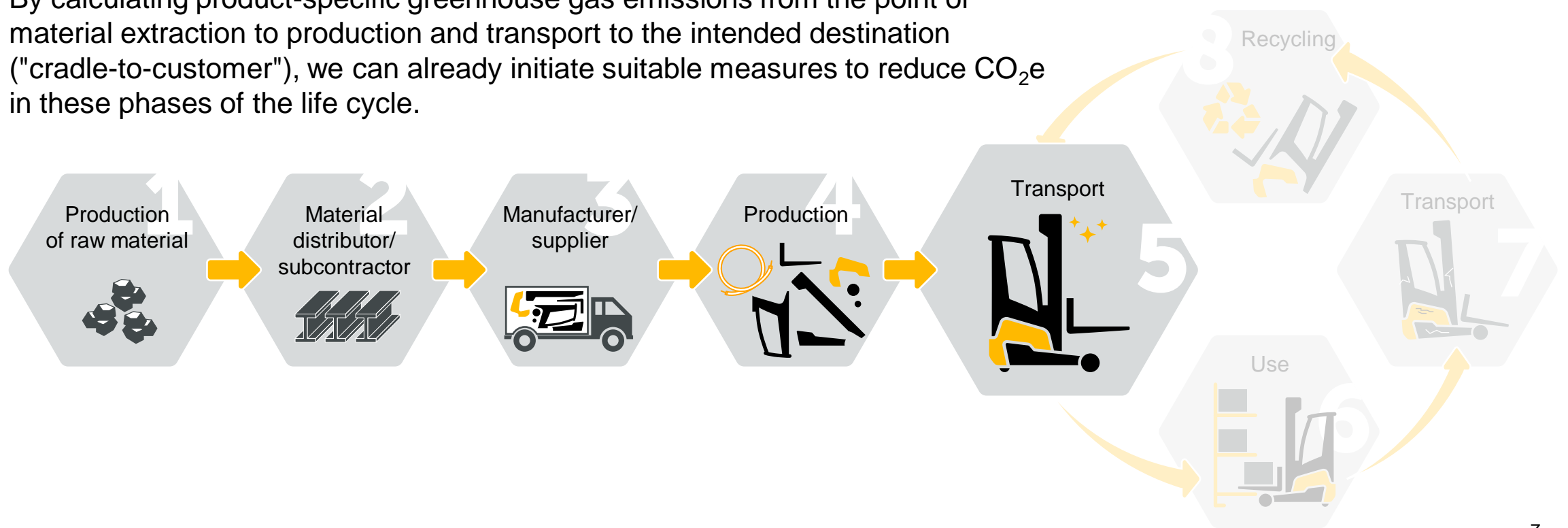
**A sustainable product cycle:
The means to achieving
carbon neutrality right
through to delivery.**

CO₂e over the entire life cycle:

The calculation and reduction of greenhouse gas emissions for the POWERLINE.

Throughout its life cycle and even at the end of its life cycle, the Jungheinrich POWERLiNE produces emissions that affect the ecological balance of our trucks.

By calculating product-specific greenhouse gas emissions from the point of material extraction to production and transport to the intended destination ("cradle-to-customer"), we can already initiate suitable measures to reduce CO₂e in these phases of the life cycle.



How Jungheinrich is gradually reducing CO₂e emissions.

Measures to optimise your products.

Measures already implemented

- ▶ A large proportion of production in Germany combined with comprehensive environmental protection regulations
- ▶ Green electricity supply for the plants in Germany, as well as the constant expansion of the company's own photovoltaic systems
- ▶ Optimum use of energy both in product design and in buildings and workshops
- ▶ Adaptation of tool use (e.g. replacement of compressed air tools with power tools)
- ▶ Optimised colouration (e.g. temperature curve adjustment)



Measures to reduce CO₂e further

- ▶ Continual reduction in energy consumption
- ▶ Further exploitation of savings opportunities
- ▶ Continuous improvement in product development
- ▶ Offsetting remaining emissions by investing in climate protection projects

Carbon offsetting for the POWERLiNE: Measures for offsetting the remaining emissions.



When producing the POWERLiNE series, Jungheinrich reduces the majority of emissions through a **wide range of optimisation measures**.

The remaining unavoidable emissions, produced both before and during the delivery of the POWERLiNE trucks, are voluntarily offset. For example, Jungheinrich makes an individual contribution to climate protection by (co-)financing measures that contribute to the reduction or avoidance of CO₂e emissions elsewhere.

**Our determination to offset
our carbon footprint:
offsetting remaining
emissions.**

Our general requirements for offsetting the emissions of **POWERLiNE trucks.**

We apply the highest standards when it comes to offsetting the carbon emissions of our POWERLiNE trucks – from production right through to delivery.



Guaranteed carbon offsetting through...

- ▶ tailored, thoroughly tested and certified carbon offsetting projects
- ▶ testing by reputable organisations based on the Gold Standard (GS) and Clean Development Mechanism (CDM)
- ▶ maximum transparency, sustainability and governance




We invest exclusively in projects...

- ▶ for which the certified emission reductions are only issued once the effect has been proven (result-based finance)
- ▶ that have a low long-term risk of failing from a practical point of view (e.g. reforestation projects are at risk of forest fires or pest infestation)

Concrete examples of carbon offsetting for Jungheinrich POWERLiNE trucks in 2022/2023.


Voluntary investments in climate protection projects: Jungheinrich offsets the remaining CO₂e emissions from POWERLiNE trucks by purchasing CO₂e certificates. In 2022/2023, certificates were acquired from the following three climate protection projects:

Solar power project in India (see [website](#))




Project type	Status	Contribution to SDG
Solar energy	Gold Standard + Clean Development Mechanism (CDM)	

Biomass project in China (see [website](#))



Project type	Status	Contribution to SDG
Biomass energy	Gold Standard + Clean Development Mechanism (CDM)	

Wind power project in India (see [website](#))



Project type	Status	Contribution to SDG
Wind energy	Gold Standard + Clean Development Mechanism (CDM)	

**Beyond delivery too:
using POWERLiNE trucks in an
environmentally friendly manner.**

Your savings potential during operation: Carbon-neutral utilisation phase & 2nd life.



Reducing emissions during operation

With the POWERLiNE truck, we can supply a carbon-neutral product up to and including delivery. During the period of use, the carbon footprint is significantly influenced by the mixture of energy sources used. The use of **green power from renewable sources** and the **environmentally conscious use of trucks** can significantly reduce CO₂e emissions.



Responsible reuse of trucks

Reduce your carbon footprint by returning your POWERLiNE truck to us at the end of its useful life. Depending on the condition of the truck, we will be happy to advise you on the reconditioning options. For **reusable (2nd life)** products, up to 99% of the materials can be returned to the production cycle on average through efficient recycling.

Contact Us

Do you have further questions about
the carbon footprint of our
POWERLINE trucks?

Contact us anytime at:
sustainability@jungheinrich.de

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