

Solution



## Process heat for the food industry.

Sustainable brewing excellence: ArcoBräu makes history using process heat from a Reversepowerplant.



# Case study Food industry 2025

## Arco Clean Energy GmbH & Co.KG

Beer has been brewed in Moos according to the Bavarian Purity Law since 1567. While modern technology has entered the brewing process, the heart of brewing still depends on skill, experience, and the brewer's keen intuition.

### Summary

A SYNCRAFT Reversepowerplant has been installed next to the ArcoBräu brewery, providing the Moos brewery with sustainable, resource-efficient energy.

- ✓ Renewable energy now powers the energy-intensive cleaning processes.
- ✓ Thanks to the Reversepowerplant, the brewery reduces its CO<sub>2</sub> emissions by a significant amount each year.

## Arco Clean Energy

System type: CW1800x2-1000

Commissioning: 2024

### Overview

- ⚡ Our systems convert around 30% of the wood chips into renewable electricity - less than 1 kg of wood generates over 1 kWh of power.
- 🔥 Custom heat concepts according to demand. Around 40% of wood chips are converted into renewable heat at 95°C, with up to 180°C available on request.
- 🌱 Reversepowerplants generate energy and green carbon, typically with around 90% carbon content and a calorific value of 29 MJ/kg.
- ☁️ If Green Carbon is reused in such a way that it becomes a permanent CO<sub>2</sub> sink, negative emissions, i.e., minus CO<sub>2</sub>, are created, generating CO<sub>2</sub> certificates and economic added value.



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## Challenge

Brewing beer is energy intensive. From mashing and wort boiling to bottling, every step demands process heat – and plenty of it. Mid-sized breweries like ArcoBräu, renowned for their focus on regional ingredients and exceptional quality, aim to take responsibility not just for their raw materials, but for their energy use as well. While hops, yeast, and water have long been sourced locally, energy remained a challenge: high consumption, rising costs, and the need for a sustainable, regional solution.

## Solution

Together with SYNCRAFT, a customized solution was developed, enabling ArcoBräu to break new ground: it is the first brewery in Germany to use process heat from a Reversepowerplant. This makes brewing more climate-friendly thanks to a significantly lower carbon footprint, more economical thanks to stable energy costs, and more regional, as both the ingredients and the energy now come from the brewery's own home region.



SYNCRAFT develops and builds Reversepowerplants that generate renewable energy and Green Carbon from forest residues and energy wood in a resource-efficient way. With this innovative technology, our clients make use of renewable residual materials while actively producing negative CO<sub>2</sub> through Green Carbon. Reversepowerplants contribute directly to defossilization and decarbonization – true to our motto: Reverse is Forward.

## Feedback



Fabian Zirngibl  
Authorized Signatory, Arco-Betriebe e.K. / Arco Clean Energy GmbH & Co. KG

*“With the SYNCRAFT system, we are taking another significant step toward secure supply and sustainable energy generation. It creates real added value – both for us as producers and for our customers as consumers.”*

## Result

ArcoBräu unites over 450 years of brewing tradition with cutting-edge energy technology. Its Reversepowerplant supplies the process heat needed to brew beer sustainably, showcasing a model where food production and the energy transition work hand in hand.

1.000 kW  
electricity

1.380 kW  
heat

800 t/a  
carbon

## Do you have any questions?

Your contact person will be happy to assist you.



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**Reverse is Forward.**