

Solution



## The energy solution for future-proof hotels.

Pioneering work in the Wilder Kaiser region of Tyrol - Stanglwirt Hotel is setting new standards in hospitality



# Case study Hospitality 2025

## Green Spa Resort Stanglwirt

Stanglwirt is an organic farm, a five-star wellness oasis, and a luxury resort all rolled into one. For more than 400 years, the family-run hotel has delighted guests with authentic Tyrolean hospitality and a commitment to sustainable quality.

## Summary

Stanglwirt Organic & Wellness Resort at the Wilder Kaiser made history as the world's first hotel with a Reversepowerplant. Here, innovation meets centuries of Tyrolean tradition

- ✓ Sustainable coverage of the hotel's electricity and heat demand with regional wood residues and energy wood, including a Minus-CO<sub>2</sub> impact.
- ✓ Automatic crane feeding system - compact, quiet, and efficient, with a biomass boiler for peak loads.



syncraft.at

SYNCRAFT GmbH  
Alte Landstraße 7  
6130 Schwaz, Austria  
T +43 (0) 5242 62510  
office@syncraft.at

## Stanglwirt GmbH

System type: CW1800-500

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.

## Challenge

Running a hotel requires immense amounts of energy every day - from kitchens and wellness facilities to laundry services and guest rooms. At the Stanglwirt Organic & Wellness Resort in the Wilder Kaiser region, this not only results in high energy costs but also presents a complex challenge: meeting the entire demand sustainably with regional resources. Space was extremely limited, and peak loads must be reliably covered - all without disturbing the hotel's tranquil operation.

## Solution

Guided by vision, Stanglwirt partnered with SYNCRAFT, a name synonymous with innovation and professionalism. The resort made history as the first hotel worldwide to operate a Reversepowerplant. This cutting-edge, negative-emission technology sustainably meets electricity and heat demands using regional forest residues and energy wood, while actively capturing CO<sub>2</sub>. An automatic crane feeding system maximizes space quietly and efficiently, and a biomass boiler handles peak loads reliably.



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



Johannes Hauser  
Head of Agriculture & Gastronomy

*„We chose SYNCRAFT because its technology is ahead of its time. We are proud to have such a strong partner from Tyrol at our side and to be the first hotel in the world to generate climate-positive electricity and heat.“*

## Result

The Stanglwirt proves that hospitality and sustainability go hand in hand. With the first Reversepowerplant in a hotel, the resort sets the standard for environmental responsibility and regional sourcing - attracting guests who value genuine climate action.

550<sub>kW</sub>  
electricity

740<sub>kW</sub>  
heat

400<sub>t/a</sub>  
carbon

## Do you have any questions?

Your contact person will be happy to assist you.



Thomas Besendörfer  
Technical Sales Manager  
+43 524 262 510 - 300  
thomas.besendoerfer@syncraft.at

**Reverse is Forward.**