

## Companies on their way to climate neutrality



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# The energy transition as decisive competitive advantage

*"In addition to lowering energy costs and contributing to climate protection, investments in the energy transition are an increasingly important factor for the competitiveness of every company. The Upper Austrian companies presented here are pioneers and "leaders" in the energy transition. They are shining examples of how climate protection and competitiveness go hand in hand."*

**Markus Achleitner, Regional Minister for Economy and Energy, Upper Austria**



The goal is clear: Europe aims for climate neutrality by 2050, Austria already by 2040. Decarbonisation is a major challenge, but also Europe's main strategy for economic growth. With these decisions, we seem to be at the turning point of another "industrial revolution". In addition to mastering the digital transformation and coping with the pandemic, independence from fossil fuels is an increasingly critical factor for international competitiveness.

**How can companies strategically approach climate neutrality and make it an integral part of their normal business practices? Which investments are necessary? What additional benefits can it create for them?**

## Energy Transition Leaders: an innovation ecosystem for the energy transition

The "Energy Transition Leaders Initiative", developed and coordinated by the regional energy agency of Upper Austria (OÖ Energiesparverband), provides answers to these questions. The initiative is based on the cooperation between 15 pioneering companies that are implementing the energy transition in a holistic manner and prioritising the phase-out of fossil fuels. These 15 Energy Leaders employ over 25,000 staff and generate more than 7 billion Euro in annual turnover.

In the context of the initiative, a novel tool was developed: the "Energy and Climate Balance". Based on this analysis, company-specific "Energy Transition Roadmaps" are developed in an interactive process and implemented. The partners cooperate on energy transition topics in regular workshops. Adopting energy and CO<sub>2</sub> indicators as KPIs (Key Performance Indicators) is an important element. This ensures that progress is regularly checked and becomes part of the strategic decision-making process. All initiative partners consider it essential to involve their own employees. Their active participation is key to the long-term success of the energy transition.

The exchange between the initiative's partners and the technical inputs from specialists provide inspiration, motivation and support for the concrete implementation of innovative solutions. As a result, climate neutrality can be achieved – together with higher competitiveness and quality of life!

## Upper Austria: leading the industrial energy transition

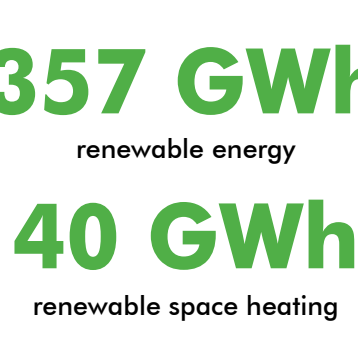
Upper Austria is the industrial heart of Austria and generates 25 % of the country's industrial exports. Since manufacturing is responsible for 44 % of the region's total energy consumption, its decarbonisation is critical for the energy transition. Much has already been achieved in the last 15 years: greenhouse gas emissions were kept roughly stable despite 57 % economic growth! It is now time to move forward with fresh impetus.

### The OÖ Energiesparverband

The OÖ Energiesparverband is the initiator and coordinator of the Energy Transition Leaders Initiative. Established by the regional government as its energy agency, it is a central driver of the energy transition in Upper Austria. It offers product-independent information and services on energy efficiency, renewables and innovative energy technologies. It supports companies in their energy transition through comprehensive advice, guidance and cooperation projects.

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The infographic is divided into two main sections. The top section features a large green number '357' followed by 'GWh' in a bold, sans-serif font. Below this, the text 'renewable energy' is written in a smaller, black, sans-serif font. The bottom section features a large green number '40' followed by 'GWh' in the same bold, sans-serif font. Below this, the text 'renewable space heating' is written in a smaller, black, sans-serif font. The entire infographic is enclosed in a thin green border.

Category	Value (GWh)
renewable energy	357
renewable space heating	40

**5.3**  
**MW**  
PV installed



# THE ENERGY TRANSITION LEADERS INITIATIVE

## Competitive through the energy transition

- We show how companies are phasing out fossil fuels and thereby increase their competitiveness.
- We accompany and showcase pioneer companies that work successfully on this vision.
- We support Upper Austrian companies in the development of products and services for the industrial energy transition.
- Together, we create an innovation ecosystem of companies, public organisations and research for the industrial energy transition and a "climate neutral economy".

## Initiative activities

- Energy and Climate Balance
- Energy Transition Roadmaps
- Networking und exchange
- Cooperation projects
- Visibility

## Competitive advantages through the energy transition

- Employer branding
- Image gains (clients, partners)
- Increased productivity
- Reduced supply chain pressure
- Risk reduction

## The "New Normal"

- LEDs
- PV
- Heat recovery
- Free cooling systems
- Renewable space heating
- High efficiency standards for new construction and renovations
- Green electricity supply
- Energy management systems
- (Some) electric cars
- Dedicated energy teams

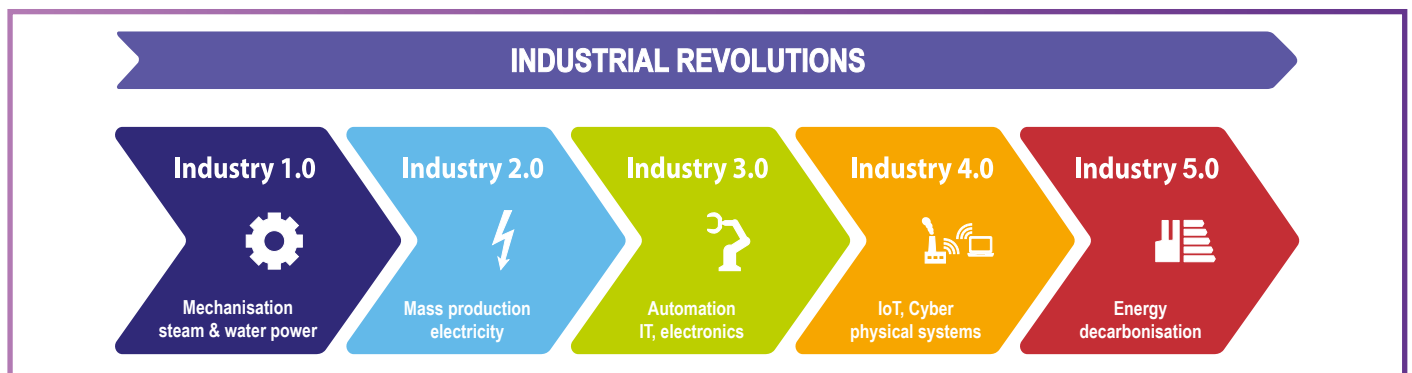
## The next big steps

- (Fully) electric fleets
- Renewables for industrial processes
- Energy storage
- Decarbonisation of external logistics
- Energy and CO<sub>2</sub> as KPIs
- Comprehensive staff involvement
- Using all benefits of the energy transition!

# The Energy Transition Leaders Initiative

Upper Austria is the industrial heart of Austria and generates 25 % of the country's industrial exports. Since manufacturing is responsible for 44 % of the total energy consumption, its decarbonisation is critical for the energy transition. Already 2.3 billion Euro per year are invested in the energy transition, of which 30 % are spent on energy efficiency measures in industry.

However, understanding how to achieve climate neutrality in practice and concretely plan the process for a specific company is a path not yet travelled by many. The novel initiative "Industrial Energy Transition Leaders", developed by the regional energy agency of Upper Austria (ÖÖ Energiesparverband), is strongly contributing to making the industrial energy transition reality. It is based on the cooperation between 15 pioneering companies to develop practical, real life approaches for achieving carbon neutrality. These 15 Energy Leaders employ over 25,000 staff and generate more than 7 billion Euro in annual turnover at 400 locations. As forerunners, they have already implemented many energy efficiency and renewable energy projects within their own companies, and thereby reduced their costs and increased their competitiveness. The aim is now to achieve climate neutrality and phase out fossil fuels!



## Mission statement Energy Transition Leaders Initiative

We show how companies are phasing out fossil fuels and thereby increase their competitiveness and profits.

We accompany and showcase pioneer companies that work successfully on this vision.

We support Upper Austrian companies in the development of products and services for the industrial energy transition.

Companies, public organisations and researchers work together on a vision of a "climate neutral economy", thus creating an innovation ecosystem for the industrial energy transition.

## Industry 5.0: Decarbonisation – a decisive competitive advantage

With Europe's political decision to strive for climate neutrality by 2050 – and Austria's ambition to reach this by 2040 – a clear goal has been set. The EU sees decarbonisation as a major challenge, but also as its main strategy for economic growth.

In Upper Austria, the manufacturing sector is responsible for 44 % of the total energy consumption and thus plays a critical role in the energy transition. Much has been achieved in the past 15 years: Despite 55 % economic growth, greenhouse gas emissions were reduced! It is now time to move forward with fresh impetus and significantly decrease them further.

The initiative showcases the diversity and importance of the benefits created by the energy transition. Increased productivity through improved working conditions (e.g. better lighting or indoor air quality), reduced failures and extended maintenance intervals are just a few examples. Companies that show commitment to sustainability are also more attractive employers and benefit from a better image with customers and partners. Companies that operate internationally – of which there are particularly many in Upper Austria – are frequently confronted with sustainability requirements from their customers (e.g. in the automotive sector) and the risk of being excluded from supply chains.

We seem to be at the turning point of another "industrial revolution". Following automation and digitisation, "Industry 5.0 decarbonisation" will characterise the next big step in the industrial transformation. Decreasing dependence on fossil fuels is an ever more critical factor for international competitiveness. For companies, this transformation process requires designing a solid strategy and its step-by-step implementation.



## Energy and climate balance, roadmaps and sharing knowledge

In the context of the initiative, a novel tool was developed: the "Energy and Climate Balance". It helps assess how far a company is on its way to climate neutrality. It enables quantifying a company's CO<sub>2</sub> emissions in a simple manner – using only limited input data – and helps prioritise measures. Following a testing phase, it is now offered by the OÖ Energiesparverband as part of the regional energy advice service that is available to all companies.

Company-specific "Energy Transition Roadmaps" are at the very core of the initiative. They are developed in an interactive process and contain goals, measures and technology options. The essence of the Energy Leaders initiative is sharing knowledge and mutual inspiration, e.g. in the context of regular workshops, meetings and company tours.

## An innovation ecosystem for the industrial energy transition

The partner companies are pioneers in the energy transition and have already implemented many investments and organisational measures. These include e.g. LED lighting, renewable heat from biomass and heat pumps, heat recovery solutions, large PV systems, purchasing green electricity, energy management systems, electric vehicles and ambitious efficiency requirements for new buildings and renovations.

Over the next few years, the focus will be on using innovations to tackle fields that are still economically or technologically challenging today. Some examples are the decarbonisation of logistics and transport and of high-temperature processes as well as including company suppliers in the process. The growing flexibility of the energy system offers new possibilities, such as storage solutions that increase the self-consumption of renewable energy generated on-site. It is also crucial that energy and CO<sub>2</sub> indicators be adopted as key performance indicators (KPIs). This ensures – as with other important company figures – that progress is regularly checked and becomes part of the strategic decision-making process.

## Together for competitiveness and quality of life

All initiative partners consider it essential to involve their own employees in the transformation processes and see their active participation as key for the long-term success of the energy transition. This takes the form of regular information about energy-efficiency measures in the company, tips for saving energy at home, ideas competitions, cross-department energy teams or incentives for sustainable mobility for employees' commute to work.

The exchange between the initiative's partners as well as the technical inputs from specialists provide inspiration, motivation and support for the concrete implementation of innovative solutions. As a result, climate neutrality can be achieved – together with higher competitiveness and quality of life!

## The initiative at a glance

- 15 companies:  
Bellaflora, BMW, Fronius, KEBA, Miba, Obermayr, ÖkoFEN, Peneder, Resch & Frisch, Rexel, Rübigen, Sparkasse, Starlim, TIGER, Weber Hydraulik
- Total number of employees:  
> 25,000
- Annual turnover:  
> 7 billion Euro
- Production sites:  
> 40 in Europe, USA und Asia
- Sales locations:  
> 400





# Fronius: Energy pioneers by conviction



*"Sustainability is deeply rooted at Fronius. It was present about 75 years ago at the very beginning of the company's history with the idea of extending the short lifespan of car batteries by using energy more efficiently. Today, more than ever, we are committed to developing climate and environmentally friendly solutions."*

**Elisabeth Engelbrechtsmüller-Strauß, CEO**



"24 hours of sun" is Fronius' vision for a fossil-free energy future. The family-owned Upper Austrian company develops, manufactures and markets solar and battery technologies for the energy transition. Fronius is also successfully implementing the energy transition in its own manufacturing and logistics: 63 % of its energy consumption is supplied by renewables. The Austrian locations are largely heated and cooled CO<sub>2</sub>-free and greenhouse gas emissions from transportation were reduced by 5 % in 2019 (despite a 5 % increase in transported weight).

## High-tech from Upper Austria worldwide

Perfect Welding, Solar Energy and Perfect Charging are Fronius' three business units. What began in 1945 as a one-man repair shop has grown into an innovative and internationally active technology manufacturer with 5,440 employees, 1,264 patents and an export rate of 93 %.

### What was achieved?

Self-sufficient for heating and cooling through PV, geothermal and biomass

#### Location in Sattledt

- PV: 542 kWp DC power
- 1,500 kW biomass heating plant

#### Location in Thalheim

- Geothermal field (204 deep drillings, 200 metres each)
- PV: 240 kWp DC power
- Waste heat recovery from laboratories
- Process and space cooling using river water
- SOL2HUB – a system solution for local production, a storage and use of solar hydrogen

#### Location in Wels

- Architectural flagship building
- Refurbishment: around 55% reduction in heating demand
- PV: 180 kWp DC power
- 70 geothermal probes, 100 metres each
- Groundwater cooling

#### Location in Pettenbach

- PV: 477 kWp DC power, facade, building roof, car park canopy
- Gas heating replaced with heat pump

#### Increased manufacturing efficiency

- 41% reduction in energy intensity (from 2014 to 2019)



### Made for solar power

Generating, storing, distributing and consuming solar energy in an efficient and intelligent manner are the very core of the company's philosophy. In 2019, the amount of solar power generated at all 5 Upper Austrian Fronius locations totalled 1,195 MWh – enough for 6 million kilometres in an electric car! The facade of the production hall in Pettenbach contains ventilated, semi-transparent PV modules, thus enabling solar power generation while reducing cooling load. The solar electricity is used for manufacturing processes, the heat pumps and for charging electric vehicles.

### Clean mobility – filling up on sunshine

Already 20 % of the company fleet have alternative drive systems: currently 9 plug-in hybrid, 3 hydrogen and 42 electric vehicles. The 97 charging stations, which serve the company vehicles, can also be used by all employees. Fronius is particularly proud of its self-developed SOL2HUB: the first company-internal, green hydrogen fuelling station in Austria. Electrolysis is used to convert PV electricity into hydrogen, which is then stored. The green hydrogen is used for the company's internal fuel cell vehicles or converted back into electricity when required – in which case the waste heat can also be used. This innovative system was awarded the Upper Austrian prize for sustainable energy projects "Energiestar".





## Solar power sparks innovation: Fronius myStrom

Developed and implemented by and for Fronius employees, myStrom ("my electricity"), is a true community project. The idea was born in the context of the company's "Idea Challenge" in 2014 and realised in the subsequent "Future Workshop": PV surpluses from employees' private PV systems are fed into a "pot" and can be used by all participating employees, whether they own a PV system or not.

## Energy from sustainable sources

Although PV is Fronius' business focus, the company also uses other renewables to cover its energy needs. For example, the manufacturing site in Sattledt is heated by a biomass plant (80 %) and near-surface geothermal system (20 %). At the R&D centre in Thalheim, 40 km of geothermal probes serve as seasonal energy storage. The waste heat from the test laboratories is used for heating. During peaks, water from the nearby Traun river is used for cooling. The data centre in Wels is cooled using groundwater. Fronius' own supply of renewable energy is supplemented with purchased renewable electricity. Natural gas is now only used to cover peaks in heat demand.

## Energy efficiency: low-investment measures with high impacts

Particular emphasis is placed on resource-efficient manufacturing processes and energy-efficient building technologies. Through continuous optimisation, innovation and tailored solutions, manufacturing and working conditions are steadily improved and energy costs reduced. A wide range of energy efficiency measures have already been implemented, such as installing modern pump technology, reducing the pressure in the water supply, or replacing conventional lamps with LEDs. The optimisation of air compressors is also constantly addressed and has allowed saving more than 100 tonnes of CO<sub>2</sub> per year at the manufacturing locations in Sattledt and Pettenbach. Also simple, low-investment measures can have a surprisingly big impact. For example, deactivating the backlighting on all hot and cold drink vending machines at Fronius saves around 2,500 kWh of electricity per month!

## Thinking one step further: Fronius Repair Centre

Repairs are carried out professionally and according to high quality standards at the repair centre in Steinhaus, which has over 4,000 m<sup>2</sup> floor area. Fronius puts great effort into the durability of its products right from the start. The foundation for sustainability is laid in the design phase to ensure Fronius products can be used, repaired and recycled in the best possible way.

## The company – key facts & figures

Fronius International GmbH

**Founding year:** 1945

### Products:

- Welding technology
- Solar electronics
- Battery charging systems

### Locations:

- in Upper Austria: Wels, Sattledt, Thalheim, Pettenbach, Steinhaus
- subsidiaries in 30 countries
- 60 countries with sales partners

**Employees:** 5,440

**Annual turnover:**  
856 million Euro (2019)

### Legal structure:

Owned by the family foundation

### Processes:

R&D, mechanical and electronic manufacturing, assembly



*"Where do the ideas come from? From committed, innovative colleagues who see things in their daily lives and want to change and improve them."*

**Markus Zauner, Facility Management**

# Starlim: A world leader in efficient injection moulding



*"Our goal is to become the most efficient injection moulding company in Austria. If we can achieve this in Austria, we can also do so worldwide."*

Thomas Bründl, CEO



## The world's largest liquid silicone processing company sees energy efficiency as a competitive advantage

By pairing with Starlim, the traditional toolmaking company Sterner developed into the world's largest processor of liquid silicone. The company now manufactures 5,000 different silicone products at three locations in the Wels region. Most of these products go unnoticed in our daily lives. They are used, for example, as seals in cars, as dampers in kitchen drawers or in the form of keyboard mats. Each year, over 11 billion silicone parts make their way from the headquarters in Marchtrenk to industrial customers in Europe, America and Asia.

Starlim produces single and multi-material parts out of and with silicone in a fully automatic injection moulding process. More than 200 injection moulding, compound and 2K systems are in operation at the Marchtrenk and Weißkirchen locations. The production runs in shifts, 24 hours a day, 365 days a year.

### What was achieved?

Projects: step-by-step to higher efficiency

#### PV systems at 3 sites

- Marchtrenk: 938 kWp
- Weißkirchen: 245 kWp
- Lambach: 266 kWp
- PV electricity generation: around 1.5 million kWh/year

#### Cooling processes

Freecooling, water cooling  
Savings: 150 MWh/year at one plant and similar at a second

#### Ventilation systems

Heat recovery, new systems with layered ventilation  
Savings: 274 MWh/year savings and electricity consumption reduced by 2/3 at one plant. The same applies to a second plant site and partly to the main plant.

#### Space heating

Use of waste heat in Weißkirchen and Lambach: no additional fossil energy required for heating

#### Compressed air

Pressure reduction: savings of 40,000 kWh/year



### Energy efficient injection moulding – how to get there Constantly striving to increase efficiency

The strategy is to constantly increase efficiency in all areas and to further optimise based on the experience gained. This requires advancements in control technology. Since a flaw in controlling can cost a lot of money and energy, Starlim puts great effort into continuous improvement.

#### Use efficient machines

Starlim works closely with the manufacturer of its injection moulding machines. Together, new technical possibilities were developed to increase the machines' efficiency and convert them to servomotor drives. Servomotors react to changing output requirements and run at optimal speed. In everyday production, this allows 30% electricity savings compared to a standard drive.

#### Ventilation and cooling: electricity demand divided by three!

New, individually controlled ventilation systems decreased the electricity consumption at one plant from 441 to 167 MWh/year and the related CO<sub>2</sub> emissions by around 60 %.

By providing layered ventilation, these systems can circulate reduced air volumes in an energy-efficient manner while ensuring better air quality. The cold water systems at all three sites are networked and the cooling circuits are divided according to temperature levels. This ensures higher efficiency in the generation and distribution of cold. In addition, free-cooling makes use of ambient air when outside temperatures are low.



At the plant in Weißkirchen, a 600 m<sup>3</sup> water basin allows saving energy from the lower temperatures during the night and morning hours for cooling during the day, thus reducing the operating time of the cooling units by one third and saving around 150 MWh/year.

### **Saving with more efficient compressed air**

The pressure in the compressed air lines was decreased from 8.2 to 7.0 bar – leading to lower losses and electricity savings of almost 40,000 kWh per year. At the location in Marchtrenk, electricity savings of 4% were achieved with this measure alone.

### **Fossil fuel-free operation**

The sites in Weißkirchen and Lambach, which are mostly dedicated to production and have limited office space, already operate entirely free of fossil fuels. Waste heat from the production process and a water-to-water heat pump cover the heating demand.

### **Efficiency with extra benefits**

The new ventilation systems in the production halls are not only more energy efficient, they also ensure better air quality. The conversion of the lighting to LED increased light quality and employee comfort in addition to saving electricity.

### **Solar power from the rooftops: 1.5 MWp**

Three large rooftop PV installations with a total of 8,400 m<sup>2</sup> produce over 3 % of the total electricity consumption. 100% of the PV electricity is used on-site, saving 330 t CO<sub>2</sub> per year. The company's vehicle fleet also benefits from the renewable electricity: Starlim purchased electric vehicles for traveling between company sites. The vehicles can be charged with fossil-free electricity at charging stations in Marchtrenk and Lambach.

### **There is more to come!**

In addition to continuously improving the control technology and ongoing energy efficiency projects, Hannes Jungmair wants to replace the heating system at the Marchtrenk plant with a water-to-water heat pump (1,500 kW). This would enable an even better use of waste heat. The return flow of the "hot" production processes can cover the base heating load. Fossil fuels would then only be needed to cover peak loads. Further building areas will be converted to LED. The ventilation systems and controls are also constantly being renovated and optimised.

## **The company – key facts & figures**

**Starlim Spritzguss GmbH**

### **Founding year:**

1974: STERNER Werkzeugbau GmbH established by Franz Sterner as Franz Sterner GesmbH  
1984: STARLIM Gummi- und Kunststoffverarbeitung GmbH (today STARLIM Spritzguss GmbH)

**Employees:** 1.500 (1.000 in Austria)

### **Annual sales:**

Around 220 million €/year

### **Ownership structure:**

Family owned and managed

**Export:** 90% (Europe, America, Asia)

**Industrial sectors:** Automotive (47%)

Life science (30%)

Industry (furniture components, telecommunications, sanitary, 23%)

### **Processes:**

Silicon processing (Starlim)

Tool making / Tool manufacturing (Sterner)



*"Our goal is to be an energy efficiency pioneer among injection moulding companies. Keeping electricity consumption as low as possible is a constant drive."*

**Hannes Jungmair, Global Facility Management**



# Resch&Frisch – successful through sustainability & efficiency

— SEIT 1924 —

**RESCH & FRISCH**

AM LIEBSTEN IMMER



*"For Resch&Frisch, sustainability means combining social responsibility, resource efficiency and economic success."*  
**Josef and Georg Resch, Managing Directors and Owners**



At Resch&Frisch, sustainability and profitability are mutually dependent, not contradictory. The well-known company from Wels has shown through a mix of measures how entrepreneurial success and innovation go hand in hand with resource and energy efficiency.

## The company name says it all: fresh bakery products around the clock

It all began as a one-man bakery founded in 1924 by the grandfather of the current owner. Today, Resch&Frisch offers around 1,300 different bakery goods and pastries in Austria and abroad – from classic bread to special dietary products. The company supplies frozen, ready-to-bake products to 18,000 commercial customers in 12 countries and 200,000 households in Austria and Southern Germany. In addition, it operates around 40 bakery-café, mainly in Upper Austria and Salzburg. Continuous development and innovative business ideas are the basis of its success. The family-owned company also focuses on high quality ingredients: fully traceable, GMO-free and regionally sourced from 350 Austrian farmers.

## What was achieved?

### Heat recovery

Savings: 1,180,000 kWh

### Thermal renovation

Savings: 3,430,000 kWh

### Purchase of thermal oil ovens

Savings: 810,000 kWh

### Frequency converter for compressors

Savings: 94,600 kWh

### Switch to LED lighting

Savings: 35,000 kWh

### Route optimisation and vehicle replacement

Savings: 1,020,000 kWh

### PV system

Electricity generation: 48,000 kWh

### Total savings (2014-2019)

Around 6.6 GWh



## Resource efficiency with renovation instead of new construction

In 2018, the company headquarters moved to Gunskirchen. Resch&Frisch deliberately decided against erecting a new building on a green field. Instead, a former cardboard factory was bought and renovated to serve as production, research and administration site. More than 75 million Euro were invested in thermal refurbishment, state-of-the-art building services and measurement and control solutions. Using waste heat from the production process replaced the need for a conventional heating system. These technologies enable energy savings of more than 4,000 MWh per year. Furthermore, the useful life of an already-standing building was extended, rather than using more resources for a new building.

## Energy monitoring by Resch.GRÜN

All measures are the result of a concrete concept: The company's "Resch.GRÜN" sustainability programme links resource efficiency and economic success. In addition to procuring regional ingredients and prioritising renewable energy, the programme aims at saving 200,000 kWh of energy annually – despite growth. An elaborate energy monitoring system helps to make this possible by automatically recording the energy consumption of all production processes, sites and subsidiaries.



All 52 Austrian company sites can be viewed at the push of a button. Positive impacts of efficiency measures are immediately visible, negative trends can be instantly traced. In many cases, organisational or low-investment measures were effective in reducing energy consumption, i.e. self-closing doors for the deep-freeze warehouses and consistently turning off cooking equipment when not in use.

### Baking technology: pairing efficiency with quality

In the context of the "Resch.GRÜN" project, the company switched to energy-efficient thermal oil ovens. This heat transfer medium offers many advantages including energy savings, precision temperature control and the ability to turn out large quantities of premium bakery goods.

### And it goes on!

Resch&Frisch also focuses on transport. Using regional ingredients shortens transport distances. Improving delivery routes and upgrading the vehicle fleet contribute to energy savings. Furthermore, the company optimised its compressed air supply and switched to LEDs for its office and outdoor lighting. In 2020, new filters will increase the efficiency of the ventilation system. The company will also invest in heat recovery systems.

### Energy contracting: benefits without investment

Increasing efficiency and renewable energy often means significant investments. This requires capital that could be used for other projects. When possible, Resch&Frisch opts for energy contracting: a financing model that enables investments with little or no equity capital. The PV system at the logistics and delivery centre in Wolkersdorf was planned, built and financed by an energy contractor (ESCO), under a 13-year contract. Energy contracting will also be used in 2020 to install LED lighting and PV at the production site in Wels, with a payback time of only 3.4 years. With this model, Resch&Frisch benefits from the expertise of the ESCO and capital remains available for other investments and innovations.

## The company – key facts & figures

Resch&Frisch Gruppe

**Founding year:** 1924

**Products:** over 800 types of bakery goods and pastries, plus 500 regional & seasonal speciality products

#### Company sites:

- 104 (52 in Austria)
- 3 production sites in Upper Austria: 1 in Gunskirchen, 2 in Wels

**Number of staff:** 1.700

**Annual turnover:**  
153 million Euro (2018)

**Ownership structure:**  
Family business



*"For us, energy efficiency does not mean just meeting our legal obligations. We want to make the best possible contribution to reducing CO<sub>2</sub> emissions."*

**Claudia Desch-Kampelmüller, Real Estate and Energy Management**

# BMW engine plant in Steyr: energy efficiency is imperative

**BMW GROUP**  
Werk Steyr



*"At the BMW Group Plant Steyr, we are committed to implementing environmental and climate protection measures in line with our sustainability policy and to continuously reviewing the achievement of our targets."*

**Dr. Alexander Susaneck, Geschäftsführer BMW Group Werk Steyr**



Sustainability is part of the BMW Group's business model. A clear commitment to sustainability has long been anchored in the company's corporate strategy. Group-wide, measurable targets across all corporate levels ensure that decision-making processes consider both economic and environmental factors. For the BMW Group Plant Steyr – BMW's largest engine plant worldwide – this primarily means goals for reducing product-specific energy consumption. The staff members follow the motto "Only known problems can be solved". Detailed energy monitoring lays the foundation for effective and extensive efficiency measures. These are accompanied with investments in renewables, innovative technologies, and employee training and engagement programmes.

## What was achieved?

### Results at the Plant Steyr

#### Reduction of energy consumption per engine

- minus 45 % since 2006

#### Energy supply

- 80 % CO<sub>2</sub>-neutral
- 100 % renewable electricity
- biomass district heating
- CHPs

#### Project for baseload reduction

- more than 30 % since 2016
- savings in the GWh range

#### Optimisation of cleaning cells

- reduction of water consumption
- savings in the GWh range

#### Engine function testing

- cold testing, without fuel
- fuel savings: several 10,000l/a

#### New traffic concept

- decreasing truck traffic for local residents, reduction of 340 truck km/day
- corporate mobility concept: installation of an attractive e-bike charging infrastructure



## Champion engines from Steyr: drive train expertise for the whole world

With the brands BMW, MINI and Rolls-Royce, the BMW Group is a leading premium manufacturer of automobiles and motorcycles. The company employs more than 130,000 people in over 140 countries worldwide. With over 1.2 million engines produced per year, the BMW Group Plant Steyr is the world's largest engine plant. It is also the Diesel Engine Development Centre for the whole Group and one of the largest industrial companies in Austria. Around every second vehicle delivered by the BMW Group is powered by an engine from Steyr. The plant achieves an output of up to 6,000 engines per day at peak times. These include three, four and six-cylinder petrol and diesel engines, complex drive systems for future-oriented mobility, such as engines for hybrid drive trains and housings for the latest-generation of electric drive trains (i.e. e-machines, transmissions and inverter electronics).

## Energy efficiency anchored in corporate targets

In 2012, the BMW Group set itself ten strategic and measurable sustainability goals running through to 2020 and then consistently pursued them. These group-wide guidelines encompass, among others, resource consumption, quantity of waste, CO<sub>2</sub> emissions from the new vehicle fleet, employee development and social commitment. Detailed and binding targets were set from these guidelines for individual business areas, locations, departments and products. One of these targets is a 45 % reduction of the energy consumption of engine production by 2020 (base year: 2006). The plant in Steyr achieved this target already in 2018 and has set itself the ambitious goal of being among the top 3 most energy-efficient locations of the entire BMW Group.





## Energy management: objectives, ideas and monitoring

Energy management at the plant in Steyr is multi-faceted and well-integrated into the company's processes. Robust energy data are an important building block for successful efficiency measures. Modern measurement technology and high-performance monitoring software enable reliable forecasts for proposed measures and make consumption levels transparent for staff members. Dedicated employees contribute significantly to resource efficiency. Their suggestions for improvements are systematically recorded, evaluated and prioritised by the BMW Group in a database across all locations. This central management of project ideas is a prerequisite for the allocation of financial resources. It also strongly supports and improves the group-wide transfer of know-how.

## Optimised processes, training, and new technologies

BMW Group Plant Steyr achieved the group-wide goals through a broad mix of measures. Combined heat and power systems were installed on site. The lighting was switched to LED technology in all production areas. The quality control of the engine testing relies on so-called "cold testing", which is carried out without starting the engine or needing fuel. In addition, a training module on energy saving was developed. It presents effective measures and is widely used in the plant.

## New production lines: efficient from day one

For new production lines, BMW Group Plant Steyr considers energy and resource consumption right from the start. This prevents having to laboriously track down and optimise "energy guzzlers" later on. Machinery and equipment suppliers must comply with specifications for resources efficiency and consider these in their offers. They are also requested to provide an "energy pass" for their products. These allow the company to compare energy consumption and life cycle costs and use this information as purchase criteria.

## Highly efficient use of energy: baseload and systems optimisation

A range of major projects helped to reduce energy consumption significantly in recent years. One of these aimed at lowering the baseload in mechanical production, which accounts for around 80 % of plant's energy consumption. Through the implementation of an energy-optimised operating concept, the electricity consumption in non-production times was reduced by more than 30 %. In addition, BMW Group Plant Steyr is constantly looking for ways to optimise. The washing of engine components required after specific machining processes is a particularly energy-intensive process. 20 cleaning stations were retrofitted with frequency inverters for pumps and fans. Shut-off valves were installed in the exhaust air ducts to increase the air tightness to reduce heating demand. The resulting annual energy savings are in the GWh range.

## What's next: targets for 2030

45 % savings in energy, water, waste, solvents, and CO<sub>2</sub> – this was the BMW Group's target for 2020. The next group-wide goals have already been set: reducing CO<sub>2</sub> emissions per vehicle over the entire life cycle by at least one third compared to 2019. In production, this means a reduction of 80 %. Binding corporate goals make sustainability and energy efficiency an integral part of BMW Group's business model and offer the company a competitive advantage by promoting future-oriented solutions.

## The company – key facts & figures

BMW Motoren GmbH

Founding year: 1979

Products and services:

- engines and engine components
- competence and development centre for diesel engines

Location: Steyr/Upper Austria

Employees: about 4.500

Annual turnover:  
3.7 billion Euro (2019)

Legal structure: Company with limited liability



*"Measurement technology, monitoring and energy management are crucial for planning and controlling our efficiency measures. Achieving our ambitious savings goals is only possible with reliable consumption forecasts."*

**Peter Knoll, Facility Management**

# KEBA efficiency by innovation



"Automation by innovation" is KEBA's motto. The Linz-based company is convinced that energy efficiency and innovation go hand in hand. For product development, KEBA's experts monitor industrial trends, develop top-quality solutions and are always on the lookout for opportunities for improvement. The company demonstrates the same high level of innovation in its own building and production technologies through continuous optimisation and the most modern technologies. The Facility Management is constantly finding new ways to further increase energy efficiency – which also increases competitiveness, working conditions and motivation.

## Solutions for the future: 50 years of automation and 10 years of e-mobility

For more than 50 years, KEBA has developed and manufactured innovative automation solutions for the industrial, banking, logistics and service sectors. The company's youngest business area is energy automation, including innovative control systems for biomass heating and heat pumps as well as charging infrastructure for electric vehicles. KEBA's automation experts presented the company's first charging station prototype as early as 2009 – when electromobility was just getting started. Since then, KEBA has become one of the top manufacturers of e-charging stations worldwide.

### What was achieved?

#### Thermal renovation

- Full thermal insulation
- Roof refurbishment
- Replacement of windows, doors and gates
- Savings: 203 MWh/year

#### LED lighting

- 2011: start of the retrofit to LED
- 2016 - 2018: large office and production areas converted
- 60 % of the outdoor lighting
- Savings: 32 MWh/year

#### Manufacturing systems

- Central humidification and dehumidification system
- Replacement of measurement and regulation technologies and building control centre
- Optimisation of the compressed air system
- Optimisation of the refrigeration systems
- Modern surface mounting technologies

#### E-mobility

- 7 company-owned electric vehicles
- 41 charging stations
- 190 kW available, with dynamic load management



### Competitiveness and efficiency through innovation

KEBA's headquarters, located in the Linz-Urfahr industrial park, has steadily grown throughout the company's history. Over time, additional buildings were acquired. The site now comprises 10 buildings that house offices, R&D, training workshops, manufacturing and logistics. After their acquisition, a number of the buildings were refurbished and equipped with modern, state-of-the-art building technologies and manufacturing systems. Innovation is very important for KEBA. In addition to thermal renovation and investments in efficient refrigeration technology and compressed air systems, a range of innovative energy efficiency measures were implemented. The main building, inaugurated in 2003, is not only an architectural trademark, with its passive house technology it also stands for environmental awareness and safe handling of raw materials and energy. The two floors of office space are cooled with groundwater. An automated lighting system and optimal daylight usage save energy and create a pleasant atmosphere for employees. Integrated green spaces bring nature into the building and help reduce heating and cooling demand.

In 2018, KEBA performed a comprehensive refurbishment of the ventilation in its production facilities: The ventilation systems were replaced, a central humidification-dehumidification system was installed, and the building control technology was modernised – including an optimisation of the measurement and regulation systems. The goals behind these measures were to continue meeting the high industrial indoor environment standards for electronic component manufacturing, achieve a homogeneous indoor climate and improve working conditions in general.



### More than low operating costs

KEBA is convinced that energy efficiency offers much more than just lower operating costs. Constant improvements of the thermal standards, the smart shading systems and the optimisation of the ventilation and air conditioning systems create a good indoor environment and a comfortable work environment – which increase the motivation and productivity of employees. Where it used to be too cold in winter and too hot in summer, the temperatures are now pleasant all year round, offering KEBA staff an enjoyable workspace.

### LED: better light and no failures

The company has installed around 1,000 LEDs in recent years. The main arguments for making this switch are, obviously, lower energy consumption and the reduction in maintenance costs. The latter is especially relevant in production, where replacing lamps is difficult and costly due to high ceilings and necessary interruptions in production.

### Smart charging of electric cars

Thanks to the electric cars in its fleet and its 41 charging stations, KEBA can test new developments in the field of energy automation (e.g. load management systems for e-charging infrastructure) under real-life conditions. Employees are also welcome to use the charging points for their private vehicles. 190 kW of charging power is available. Almost 700 kW would be needed for maximal charging speed at all stations. A dynamic KEBA load management system regulates the consumption by shifting and prioritising. This flattens the load curve and ensures optimal use of the available charging capacities.

### Green – a matter of course

Further energy optimisation of its buildings is at the very top of KEBA's agenda. The use of tried and tested technologies is already foreseen, such as expanding the existing groundwater cooling system. In addition, KEBA continues to move towards e-mobility, especially in its own vehicle fleet.

## The company – key facts & figures

KEBA Group

Founding year: 1968

Business areas:

- Industrial automation
- Banking, logistics and service automation
- Energy automation

Locations:

25 (including Austria, Germany, Switzerland, The Netherlands, Romania, Czech Republic, Turkey, South Korea, USA, China, Japan, Taiwan, India)

Employees: around 1,750

Annual turnover:

373.5 million Euro (2019/2020)

Export rate: 88 %

R&D: 16.6 %

Legal structure:

Owner-managed corporate group



"We combine energy efficiency projects with already existing business and economic measures, making it possible and feasible to implement many innovative ideas."

Doris Breiteneder, KEBA Facility Management



# Sparkasse OÖ: Our employees are our greatest capital for energy efficiency!



*"We are convinced that true innovation and progress  
are only possible by involving our employees."*  
Maximilian Pointner, Member of the Board of Directors



"How can we reach our colleagues?" This question was the first step in launching the Sparkasse Oberösterreich's internal energy-efficiency campaign. The goal: increasing employees' enthusiasm for energy efficiency and encourage conscious energy-efficient behaviours. The submission of more than 100 ideas for energy-saving measures and almost 30 % electricity savings in the central administrative building in Linz (sBC) clearly show the success of the initiative.

## Regional, customer-oriented and innovative

Sparkasse OÖ describes itself as a "local supplier of financial services". As a traditional regional bank, it puts emphasis on offering an extensive network of branches and quality customer services. Around 2 million Euro are invested annually in the modernisation of its locations and expansion of its network. In addition, Sparkasse OÖ focuses on future-oriented banking solutions and business banking platforms.

### What was achieved?

**Reduction of annual electricity  
consumption at sBC in Linz**  
minus 28 % since 2010  
(430,000 kWh)

**Constant total electricity  
consumption**  
despite 12 % increase in floor area

**Reduction of energy  
consumption per m<sup>2</sup>**  
minus 25 % at key locations  
(basis 2010)

#### Staff training

- 87 % of staff trained on energy topics

#### LED lighting retrofit (2016-18)

- in 6 branches: complete refurbishment
- in 20 branches: partial refurbishment
- in 28 branches: refurbishment of effect and advertising lighting



### Being. Energy. Conscious – The Employee Energy Efficiency Campaign

Energy is an important cost factor for companies. Sparkasse OÖ recognised this at an early stage and decided to bring its employees on board. It was clear to them that committed employees are key to energy savings. Rather than imposing energy-efficiency measures from top-down, all employees were invited to make suggestions under the form of an ideas competition. An information and communication platform was set up on the intranet for this means. The platform also offered information on topics related to energy efficiency and on the company's energy consumption. The weekly updates were lightened up by humorous articles, such as "Saving energy with the Easter Bunny" or "Tips for keeping a cool head on hot days".

The platform received almost 30,000 visits, around 280 per day, during the 5-month initiative. Employees submitted 114 ideas for energy efficiency measures. As recognition, each one received an electricity monitoring device. The 5 best ideas were rewarded with e-bikes or shopping vouchers. External experts evaluated the submissions in regard to their savings potential, level of innovation and transferability to other banking centres.



### Implementation is well under way

Even the best ideas are only effective if they are implemented. A number of suggestions were implemented immediately (e.g. motion detectors in less frequented rooms). Others were put in place step-by-step after an assessment of their economic viability. For example, in the "Spotlight" project, the lighting in the workspaces and lobbies of several buildings was converted to LED. Under the heading "Take a break", standby consumption and energy-efficient office equipment were addressed. Some measures were even incorporated into the long-term corporate policy, such as introducing energy officers at every branch and training staff on energy topics. The employees are particularly proud of the "Smart Guide", a folder that creatively illustrates the most important ideas and summarises them with nifty slogans. Even more innovative proposals, which might have been ahead of their time, were not simply filled-away. Technologies continue to develop. For example, it now makes economic sense to convert effect lighting to LED, so it is being carried-out at all bank locations.

### There's more: getting energy monitoring ready for the future

Energy monitoring is the foundation of the bank's efficiency measures. "Energy guzzler" can only be eliminated once they have been identified. Energy consumption data is currently mostly entered manually into an energy monitoring tool, but this will soon change. The data from 3 pilot branches are already transmitted online to the head office. If necessary, adjustments can be made. Important parameters such as weekend and night-time temperature reduction can be controlled centrally. In addition, the new system is designed to provide prompt feedback on energy-saving measures and therefore fosters energy-saving behaviours.

### E-bikes for the city: fast and green from A to B

The Sparkasse is also getting into e-mobility: five e-bikes are available for business trips between inner-city locations and can be easily reserved via an app. Helmets and saddlebags ensure that cyclists as well as laptops and documents arrive safely at their destination.

## The company – key facts & figures

Allgemeine Sparkasse  
Oberösterreich

**Founding year:** 1849

**Products:** Banking services for private and corporate customers

**Employees:** over 1,700

**Banking centres:** 162

**Customers:** more than 400,000

**Operating income:** 58 million Euro

**Legal structure:**

Stock company (main shareholder:  
Anteilsverwaltung  
Allgemeine Sparkasse, about 57 %)



*"In the future, our technical monitoring system will enable us to centrally control and optimise the most important energy parameters of each of our banking centres."*

**Gerhard Hochreiter, Head of Facility Management**

# TIGER IS GREEN – and committed to energy efficiency!



*"In the 21st century, companies that cannot guarantee their customers the sustainable manufacturing of their products have little chance of success."*

**Elisabeth Berghofer, Chairwoman, Board of Directors**



Producing more with less energy - this is the motto at TIGER Coatings, a manufacturer of high-quality, innovative coating systems. To achieve this, the family-owned company headquartered in Wels, Austria, uses established measures like smart LED lighting systems and efficient circulator pumps. It also undertakes ambitious projects, such as the "Gemba Support Centre". This new award-winning office building is heated with waste heat from the production process and cooled with groundwater. An intelligent control system ensures an optimal indoor climate.

## From a paint store to a global player

What began as a small painting business and paint store has become an international success story. With 8 production facilities, 3 R&D centres and around 50 sales offices worldwide, TIGER is now a leading manufacturer of high-quality surface coating solutions. Its products are used for facades, windows, car rims, furniture, refrigerators, machinery and more. They are solvent-free, versatile, have high material utilisation rates and are protective as well as decorative. TIGER's latest products, TIGITAL 3D high performance materials, are highly relevant for e-mobility and for the field of transportation in general.

## What was achieved?

### Heat recovery from powder coating production

From waste heat to space heating –  
savings: 993,000 kWh/year

### Efficient lighting

LED lamps for 400 luminaires  
Motion sensors and dimmers  
Savings: 47,000 kWh/year

### Groundwater cooling

In 2014, extension of the  
groundwater abstraction permit  
(400 m<sup>3</sup>/h, discharge temperature:  
20 °C)  
Energy savings for cooling:  
116,000 kWh/year

### Compressed air

Leakage rate reduction from 16 to  
8 % Pressure reduction through  
empirical approach from 8 to 6.3 bars  
Savings: 169,000 kWh/year

### Replacement of heat circulator pumps

Replacement of 3 main pumps  
with speed-controlled units  
Savings: 67.000 kWh/year



## Producing more with less energy

TIGER focuses on quality and innovation. Energy efficiency has also been a topic of high importance over the past decades. It all started in the year 2000 with the construction of a well that enabled using 12 °C groundwater to cool the company's buildings and processes. Ever since, TIGER has been consistently tracking down its savings potentials. Today, production halls and office buildings are heated with waste heat from the production process and highly efficient speed-controlled circulator pumps have replaced the old "power guzzlers". LED lamps with motion sensors and dimmers reduce electricity consumption while providing better light and a more comfortable workspace. At the location in Wels, the leakage rate of the compressed air system has been reduced to as low as 8 % through regular maintenance. Since 2019, a 400 kWp PV system supplies the production hall with renewable electricity.





### Gemba Support Centre – an office building sets new standards

TIGER is dedicated to keeping energy consumption as low as possible in new construction projects. The "Gemba Support Centre", an office building built in 2017, sets new standards in this respect. Winner of the 2018 "Energiestar" – the Upper Austrian prize for sustainable energy projects – the building has underfloor heating and a water-to-water heat pump that uses the cooling basin of the production facility as heat source. The constant and high temperature of the water ( $\sim 19^\circ\text{C}$ ), enables a coefficient of performance (COP) of over 6.

Suspended cooling ceilings supply cooling from the groundwater well. Intelligent solar control glass eliminates the need for blinds and saves around 6 % energy compared to similar facades. LED lighting and daylight utilisation are already mainstream for the company. Monitoring software follows the energy consumption and the ventilation is optimally regulated by means of  $\text{CO}_2$  sensors. The new office building is not only a very efficient and sustainable building, it also offers a comfortable and motivating working environment.

### Moving forward: e-mobility, more solar and away from natural gas

TIGER Coatings has a lot planned for the next few years. First steps have been taken towards the acquisition of electric cars and charging stations. Further charging stations are to follow in the next few years so that employees can charge their electric vehicles during working hours. An additional PV system is being considered as well as a 1,000 kW heat pump that will allow all space heating and hot water generation without gas. The current energy monitoring system will also be improved because TIGER is convinced that having a good overview of one's resource consumption is the basis for successful environmental and energy management.

### The company – key facts & figures

**TIGER Coatings GmbH & Co. KG**

**Founding year:** 1930

**Products:** Powder coating and digital inks for industrial printing systems

**Employees:** 525 (in Austria), 1.250 (worldwide)

**Production sites:** Austria, China (3), Canada, Mexico, USA, Vietnam

**Consolidated group sales:** 295 million Euro (2018)

**Ownership structure:** Professionally managed family-owned business

**Processes:** Three-stage powder coating production (premixing, extrusion, grinding); Production of digital inks and 3D printing materials



*"We identify which efficiency measures bring the most benefit, implement them and continuously monitor their impact."*

**Marielen Haider-Madl, Senior Project Manager**

# ÖkoFEN: Pioneer in renewable heat and clean mobility



*"At ÖkoFEN, we have been driving the transition to renewable heat for 30 years. With our Clean Mobility Programme, we are showing that the transition to renewable mobility is also achievable."*  
**Stefan Ortner, Managing Director**



Generating clean, renewable heat in a smart, user-friendly and affordable manner – this is ÖkoFEN's mission. Technological leadership is at the core of the company's values. The boiler manufacturer from Niederkappel/Austria has specialised in pellets, a local fuel that allows automated and easy to use renewable heat supply. ÖkoFEN also focuses on renewable electricity and green mobility in its own activities. The company's Clean Mobility Programme has shown that innovative financing models can make e-mobility affordable for many people. Around a quarter of the employees at the European headquarters are now proud drivers of electric cars.

## 30 years ÖkoFEN

What was achieved?

### CO<sub>2</sub> savings through ÖkoFEN products (1989 - May 2020)

- worldwide: around 7.4 million tonnes
- Austria: around 1.8 million tonnes
- Germany: 3 million tonnes

### ÖkoFEN production in Niederkappel & Lembach

- 100 % renewable heat supply (pellets)
- 100 % green electricity
- 95 kWp PV system
- 40 kWh electricity storage
- 10 kW hydropower plant
- 5 kW pellet Stirling engine

### Clean Mobility Program

- Electric cars for 25 % of employees
- 29 charging stations with a charging management system
- 23,000 litres of fuel saved per year
- Visibility as an innovative company
- Increased staff loyalty and strengthened team spirit



## Heating with wood: Pellets as the key to success

The Upper Austrian company is Europe's pioneer in pellets and specialist in renewable heating. In 1989, company founder Herbert Ortner started developing and producing eco-friendly wood heating systems in a former henhouse. In 1997, ÖkoFEN presented the world's first certified fully automatic pellet boiler – a milestone in biomass heating technology. Since then, it has sold more than 100,000 pellet heating systems. Today, the high-efficiency pellet condensing boiler technology is booming. ÖkoFEN offers an array of products in this category ranging from 10 to 512 kW. With a market share of 76 %, the company is market leader in Germany. MyEnergy365, its latest innovation, enables homes to become energy self-sufficient, step by step and exclusively with renewables. The modular concept combines a pellet condensing boiler with a 1 kW Stirling engine for electricity generation. PV and electricity storage units can also be integrated into the system. A single delivery of pellets suffices for the entire year – no additional energy needs to be purchased.

## Production hall out of local timber

Large success in exports led to a recent doubling of production volumes in just two years. For the expansion of its headquarters in Niederkappel, ÖkoFEN chose regionality and sustainability. Locally-sourced timber was used both as construction and facade material, including wooden beams with a span of up to 25 metres. Minimising energy demand and offering good work conditions for employees were key considerations during planning. Workstations were placed close to the windows to make optimal use of natural light. The entire building is equipped with LEDs. Glass surfaces in the offices were designed and positioned in such a way that air conditioning is not necessary. The building is heated with pellets, of course, and a PV system supplies the production processes with renewable electricity.



## ÖkoFEN Clean Mobility Programme: electric cars for everyone!

The first electric car was introduced into the company's fleet as early as 2010. A few years later, after the technology had been further developed, ÖkoFEN took a big step towards affordable e-mobility for its employees. In its Clean Mobility Programme, all employees who had been working for the company for over 3 years were offered an electric car against a wage reduction of around 160 Euro/month. The subsidy of the federal government was used as down payment. The monthly rates for the 4-year leasing plan are made up of a combination of the salary reductions and the related reductions in employer contributions to social security. 25 % of all employees took advantage of this attractive offer and are now driving electric cars for both business and private purposes. The initiative, which won the Upper Austrian energy award, the "Energiespar", led Rohrbach to be the district with the highest proportion of newly registered electric cars in Austria at the start of 2018.

## Charging with solar electricity, hydropower & pellets

The electric cars are charged with 100 % renewable electricity. 95 kWp PV, a small hydropower plant and a 5 kW pellet Stirling engine supply around 70 % of the electricity demand. Green electricity is bought to cover the rest. Employees can charge their cars during working hours, free of charge. A smart charging management system distributes the self-produced electricity in a fair manner among the 29 charging points and ensures that the share of self-produced electricity is maximised. The vehicles are charged alternately in 30-minute intervals – mostly with three-phase power with a maximum output of 3.7 to 22 kW, whereby the actual output is adapted to the real-time available electricity production. Practical experience so far has shown that even in the worst-case scenario (i.e. when production requires a lot of electricity and little solar or hydroelectric power is available), every car can be charged with 15 kWh – around 100 driving kilometres.

## Better climate balance and motivated staff

Staff mobility has a considerable influence on a company's CO<sub>2</sub> footprint. ÖkoFEN's Clean Mobility Programme reduces CO<sub>2</sub> emissions per produced heating system by 33 %! In addition, it strengthens the team spirit and sense of belonging. It also contributes significantly to positive company branding. Through this programme, ÖkoFEN presents itself as an attractive and innovative employer that invests in future-oriented technologies and rewards employee loyalty.

## The company – key facts & figures

ÖkoFEN Pelletsheizung

**Founding year:** 1989

### Products:

- Pellet boilers, electricity producing pellet heating
- Pellet storage and pellet conveying systems
- Energybox – container heating system
- Heat storage and solar panels

### Locations.

- 3 in Austria: Niederkappel, Lembach and Purgstall
- Sales companies and partners in 17 countries worldwide

**Employees:** 400

### Annual turnover:

around 80 million Euro

**Export rate:** 95 %

### Legal structure.

Family owned and managed



*"Electric company cars offer us a good opportunity to position ourselves as a forward-thinking and environmentally friendly employer"*

**Herbert Ortner, Founder and Managing Director**



# Weber Hydraulik does it all: biomass, solar energy & energy efficiency



*"We are proud to make a sustainable contribution to climate and environmental protection. This motivates us to continue working on these topics in the future."*  
**Kurt Sperrer, Managing Director**

Thanks to a diverse mix of measures, Weber Hydraulik has its energy consumption under control despite increasing production. Waste heat recovery, concrete core activation, innovative lighting technology and biomass heating: energy efficiency is a top priority for the metal processing company. Weber Hydraulik is convinced that innovative energy technologies bring more than "just" low operating costs.

## A solution for every machine: Weber Hydraulik – specialist for individual hydraulic systems

Weber Hydraulik is a specialist for the development and production of customised hydraulic solutions. Its systems are used throughout the globe for lifting and lowering multi-tonne loads (i.e. in the automotive industry, as mobile machinery, commercial vehicles and agricultural machinery). It is also one of the four largest manufacturers of rescue equipment in the world. The demand for Weber Hydraulik products is growing rapidly – almost 10 % growth for several years in a row.

### What was achieved?

**Heat recovery**  
(waste heat from air compressors)  
Reduction of heating demand in  
2018: 165 MWh

**PV self-consumption system**  
160 kW<sub>p</sub>  
Electricity production:  
156,000 kWh/year  
Reduction of electricity costs:  
16,000 Euro/year

**Biomass contracting**  
Wood chips from local farmers  
replace 120,000 litres of heating oil  
per year

**Compressed air optimisation**  
Savings in 2018:  
around 7,000 Euro

**Conversion to LED**  
90 % already implemented



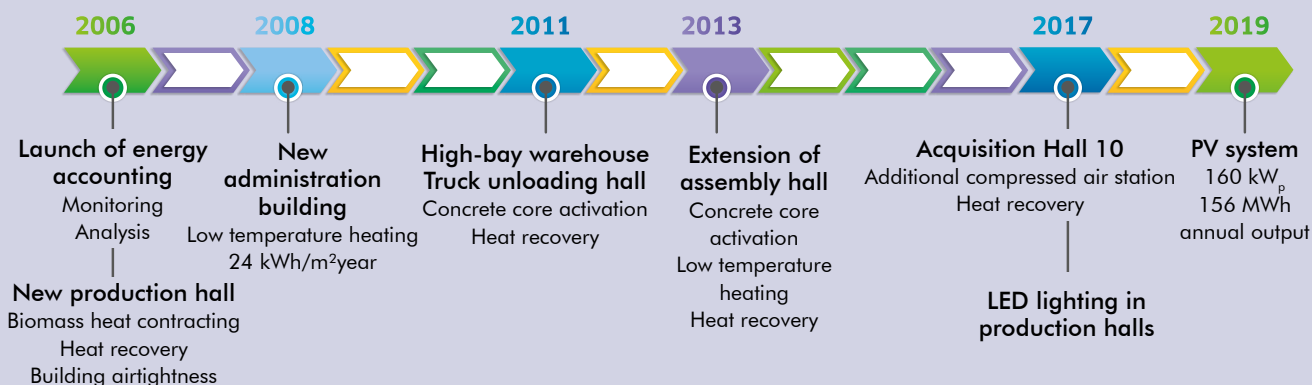
### Heat recovery for compressors: Reducing heating costs and improving indoor climate

Metalworking is energy-intensive. Growth and increasing production typically meant higher energy costs. Hence efficient processes and innovative technologies are an absolute must for Weber Hydraulik. Waste heat from air compressors and hydraulic power units supplies heat for process water and space heating through concrete core activation. This innovative technology is already used on 4,000 m<sup>2</sup> at the site in Losenstein and has been made standard for new buildings. Heating demand is reduced by 14 % – 15,000 Euro per year – while greatly improving the indoor climate in the offices and production halls.

### Solar power: maximising self-consumption

High and constant electricity demand makes Weber Hydraulik a perfect candidate for self-consumption of PV electricity. The company is exploiting this potential: since 2019, a 160 kW<sub>p</sub> PV system saves around 16,000 Euro in electricity costs per year. Self-consumption systems are specifically dimensioned so that the company can use almost all of the solar power itself. High self-consumption often means shorter payback times – for Weber's system only 7 to 8 years.

## Step-by-step measures for energy efficiency



## Switching to biomass without investment costs

Using renewable energy has become a tradition at Weber Hydraulik. In 2006, an expansion brought on the need for a new heating system. Since then, a 500 kW wood chip heating plant efficiently supplies space and process heat from local and sustainable resources. The plant was implemented and financed using the energy contracting model. This allowed the company to switch to biomass without investment costs. Around 12,000 Euro in heating costs are saved each year compared to an oil heating system.

## But that's not all: LED & Young Resources

The company has perfected energy efficiency in other areas as well. 90 % of the lighting system has already been converted to LED. Pressure lines are regularly checked for leaks. Apprentices are trained on energy efficiency topics in the "Young Resource" project. During weekends and plant shutdowns, the young employees track down the sources of wasted electricity. 80 MWh of electricity have been saved since the start of the project.

## Next step: intelligent cooling

The next step towards an efficient energy future is already planned: concrete core activation for cooling as well as heating. Intelligent concrete core cooling will be used for the first time in a new, 6,000 m<sup>2</sup> multi-storey production hall.

## More than energy savings

The company wants to invest further in energy efficiency. The advantages of efficiency measures go far beyond mere cost reductions. For example, biomass heat contracting represents a convenient all-in model. In addition to planning and financing the heating system, the contractor looks after operation, maintenance and fuel deliveries. Weber has nothing to worry about when it comes to heating. These extra advantages often convince even the last sceptics in the company.

## The company – key facts & figures

Weber Hydraulik GmbH

Founding year: 1969

**Products:** High-quality hydraulic cylinders and rescue equipment

**Location:** Losenstein

**Employees:** 380  
(at the site in Losenstein)

**Annual turnover:**  
88 million Euro (2019)

**Ownership structure:**  
Weber Hydraulik GmbH is a subsidiary of a German family-owned business headquartered in Baden-Württemberg

*"The installation of our biomass heating system in 2006 was the starting point: We succeeded in reducing our heating costs despite increasing floor area. Since then, we have been going all out in terms of energy efficiency and perfecting our energy use."*

**Albert Koppenberger, Head of Operational Maintenance**

# Peneder: higher productivity and efficiency for our customers

*"As a family business with almost 100 years of history, we are aware of our responsibility towards future generations. Our energy-efficient building technologies and renewable energies make an important contribution to climate and environmental protection."*

Christian Peneder, CEO



Peneder is a specialist in smart industrial and commercial buildings for new build, expansion and modernisation. Even in the most complex projects, it increases its clients' energy efficiency as well as productivity with smart building technologies and automation. Through its tailored energy concepts, energy costs can be reduced by over 30 %. Peneder also sets standards in its own company buildings: The modern headquarters in Atzbach scores high in functionality and efficiency as well as being heated and cooled in an environmentally-friendly manner – with regional biomass.

## Peneder Basis (Headquarters)

Office building with restaurant, underground car park, cafe, bar, hotel, event rooms and company nursery school

Year of construction: 2010

### Biomass plant

- 2x500 kW with moving floor conveyor system
- Fuel consumption: 440 tonnes of wood chips/year
- Absorption chiller: 475 kW cooling capacity

### Heat distribution

- Concrete core activation of ceilings for heating and cooling
- Flow temperature: 25 degrees

### Lighting and shading concepts

- Movement detectors
- Daylight sensors
- Consideration of the sun's position and radiation

### Waste heat recovery

- for hot water generation
- for pre-drying of wood chips

PV system (42 kWp)



## The Peneder concept: one-stop shop for customised turnkey solutions

Starting out as a blacksmith and then a locksmith, Peneder developed into a specialist in fire protection solutions and industrial and commercial construction, and made a name for itself as an expert in smart buildings for businesses. Peneder plans, constructs and operates smart, customised office, logistics and manufacturing buildings. Each project begins with an interactive process to analyse the customer's individual requirements, processes and potentials. The building and its technologies are then planned, from the inside out, based on the flow of goods and people, and optimised for the specific production processes. Heating with waste heat from production or cooling with renewables are part of Peneder's standard programme. The same goes for smart and efficient building automation, which is implemented in cooperation with the Upper Austrian company STIWA. In addition, Peneder's industrial and commercial buildings have an unmistakable architecture, making them both brand-building and identity-creating.

## Innovative, bold, efficient: the Peneder Basis

Peneder Basis, the distinctive headquarters built in 2010 in Atzbach, successfully showcases Peneder's integrated building concept in practice. The building, which highlights steel as main construction material, offers high functionality, optimal working conditions and indoor climate with very low energy costs. It is literally a "village within a village" and combines many services under one roof. The building contains offices, a hotel, a restaurant, a childcare centre, a cafeteria and an event hall that is also used for local events.





### Perfect indoor climate through thermal component activation

Heating and cooling of the Peneder Basis occurs via thermal component activation of the concrete ceiling. By using such a large surface for heat transfer, the system manages to heat and cool the building with very low temperature differences – thus offering optimal indoor climate without drafts. Underfloor convectors prevent condensation on the glazed facade. A ventilation system with heat recovery and humidity regulation also ensures good air quality.

### Cooling with biomass

In Austria, heating with biomass is widespread, also in the business sector. However, this is not yet the case for cooling with biomass. Peneder has a biomass-based heating and cooling system: 2 wood chip boilers, equipped with a moving floor conveyor system, heat the building and supply an absorption chiller with the energy required for cooling. 440 tonnes of regionally sourced wood chips per year provide CO<sub>2</sub>-neutral heating and cooling for 9,500 m<sup>2</sup> of office space and production. 25 % of the biomass is used for cooling, around 30 % for heating. The rest of the heat goes to the production processes.

### Smart lighting and air conditioning

Light sensors and movement detectors regulate lighting and air conditioning according to actual demand. A shading system with daylight optimisation is automatically activated depending on the position of the sun, indoor temperature and solar radiation in order to prevent overheating in summer or annoying glare. These smart building systems contribute significantly to a performance-enhancing work environment and minimise the energy requirements for lighting and air conditioning.

### Energy monitoring for continuous improvement

All these measures have resulted in optimal indoor, working and manufacturing conditions with low energy consumption. An energy monitoring system automatically records and documents energy consumption. This ensures that further improvement potentials are identified in a timely manner so that action can be taken.

### And it goes on

As next step, Peneder plans to implement an energy strategy with defined energy targets and pursue climate-friendly solutions for its large vehicle fleet.

## The company – key facts & figures

Peneder Holding GmbH

**Founding year:** 1922

#### Products:

- Industrial and commercial buildings
- Halls and arched roofs (self-supporting up to 25 metres)
- Solutions for fire protection

#### Locations:

- in Upper Austria: Atzbach, Fraham
- further branches in Austria, Germany and Switzerland

**Employees:** 383

#### Annual turnover:

around 95 million Euro

#### Legal structure:

Owner-managed family business



*"We increase our customers' productivity through optimised production and functional processes, long building life cycles, forward-looking planning and high user-comfort and energy efficiency."*

**Markus Brychta, Process and Energy Management**

# Obermayr Holzkonstruktionen: Innovators in sustainable timber construction!



*"Our company has gained considerable visibility and our building contributes to a positive corporate image: a significant benefit that cannot be measured in numbers!"*

**Hans-Christian Obermayr, Managing Director**



A wood-processing company constructing its own building out of wood is hardly worth mentioning. However, Obermayr's production hall sets new standards for energy technology and design. In addition to offering high energy efficiency, low operating costs and an optimal work environment, it attracts considerable attention to the innovative company.

## The Project

Production hall in timber construction and passive building standard

**Year of construction:** 2004

**Usable area:**  
3,500 m<sup>2</sup> usable floor space  
900 m<sup>2</sup> canopy

**Energy performance indicator**  
8 kWh/m<sup>2</sup>a (space heating demand)

**Investment costs**  
About 2 million Euro

**Lighting concept**

- daylight-driven lighting control
- additional investment costs: 28,000 Euro
- energy cost savings: around 7,000 Euro/year
- payback time: 4 years
- daylight optimisation (sky lights)

**Construction**

- 7,000 m<sup>2</sup> of prefabricated wooden roof and wall elements
- laminated timber trusses and supports
- insulation made of wood chips and recycled mineral wool



## Specialist for commercial buildings and industrial halls in timber construction

Obermayr is one of the most innovative companies in its field and has shown by example that timber multi-storey residential buildings and industrial halls are possible. It has dared to carry out ambitious projects – many of which award winning. Recently honoured projects include the "Dragonerquartier", a six-storey apartment building in Wels, and the "Grüne Erde-Welt Almtal", a 9,000 m<sup>2</sup> production and sales building that stands out due to the complex structure of its roof and the absence of any visible steel parts.

## Obermayr's production hall: Pioneering work and showcase example

Triggered by an increase in sales and the need to expand, Obermayr built a production hall that has made the company a pioneer in timber construction. This first large-scale industrial hall in timber construction and passive building standard features remarkable wide spans and an 18-meter support-free projecting roof.

The heating demand of 8 kWh/m<sup>2</sup> and year is around one sixth of the typical value at the time. The innovative building requires neither a heating nor cooling system. This was achieved through a number of smaller and larger measures: high-speed gates, high airtightness, night ventilation, activation of the concrete floor slab and construction using highly thermal insulated wood sandwich panels.



### Artificial light: on demand only

The daylight-driven lighting concept reduces the electricity demand for lighting by up to 70 %. This enables energy cost savings of 7,000 Euro compared to conventional lighting. The additional investment costs for the lighting control system were 28,000 Euro and had a payback time of only 4 years.

### One project – many benefits!

Today, almost 15 years after construction, it is clear that the building delivers what was promised: minimisation of operating costs, optimal work environment, increased employee performance and benefits from the company's forward-looking, environmentally conscious image. The project anchored the company's position as a pioneer in innovative, energy-efficient timber construction for commercial and industrial buildings. Obermayr uses its experience and implements many of the solutions from its own production hall in customer projects.

### Producing with renewable heat from wood residues and solar power

Obermayr has implemented many measures to exploit its energy efficiency potentials and switch to renewables. 99.9 % of the space heating and process heat for wood drying comes from its own wood residues. Additionally, a biomass boiler heats 5 single-family houses via a local district heating network. A 175 kWp PV plant reduced the electricity consumption from the grid by around 30 %, resulting in a payback period of only 8-9 years. A screen at the reception displays the self-sufficiency level of the production hall in real-time: a diagram illustrates the current share of self-generated electricity in the building's total electricity consumption.

### There is more!

Managing Director Hans-Christian Obermayr is continuously on the lookout for ways to save energy and to use more renewables. There are already plenty of ideas for trendsetting projects that would further increase the company's energy self-sufficiency, such as switching to electric forklifts and replacing the biomass heating system with a biomass cogeneration plant to generate electricity and heat from wood residues.

## The company – key facts & figures

Obermayr  
Holzkonstruktionen

**Founding year:** 1933

**Products:** Timber construction for residential, commercial, industrial and municipal buildings, silos for road salt, timber bridges, laminated timber constructions

**Employees:** 80

**Location:** Schwanenstadt

**Processes:**  
Production of laminated timber, hall construction, production of wood, roof, wall and ceiling elements

**Ownership structure:**  
Owner-managed family business



# bellaflo: a green oasis for sustainability

**bellaflo**  
DIE WELT DER GRÜNEN NUMMER 1

*"Around two thirds of our turnover comes from selling plants. Therefore, we experience hands-on how climate change is affecting us and feel particularly responsible for environment and climate protection."*

**Mag. Franz Koll, Managing Director**



bellaflo is an Austrian garden centre chain with 27 locations. It primarily offers plants for hobby gardens, balconies and indoor living spaces as well as a wide range of gardening products. As the "green number 1" (the company slogan), bellaflo is strongly committed to sustainability, actively avoids environmentally and climate damaging products and sets itself clear goals to reduce its own ecological footprint.

## What was achieved?

### Use of solar energy

- 15 of the 27 locations equipped with PV systems
- around 400 kWp PV generated more than 300 MWh of solar electricity in 2019
- 10 % of the total energy consumption covered by self-generated solar power

### E-Mobility

- 14 of the 27 locations equipped with charging stations
- supplied with 100 % renewable electricity
- Goal: charging stations at all stores

### Lighting

- new buildings: dimmable LED lighting at all new locations
- refurbishments: replacing fluorescent tubes with LEDs and efficient control technology (indoors and outdoors)

### Gardening products

- 100 % natural ingredients in pesticides and fertilisers
- sustainability standards for suppliers
- pesticide reduction programme for plant propagation (verified by testing of plants in accredited laboratories)
- banning of particularly critical pesticides
- maximum 50 % peat in substrates, peat-free for organic products
- 100 % organic plant protection and strengthening agents in all stores



## The "green number 1" offers green products

bellaflo, Austria's largest garden centre retailer, was founded more than 40 years ago, in 1978, when Hilde Umdasch opened a small, regional plant nursery. In 2004, the addition of organic herbs to the product range marked the start of bellaflo's green transition. By 2009, organic fruit and vegetable plants, perennials, pesticides, substrates and fertilisers had found their way onto the shelves. A year later, the company started a project to preserve and sell heirloom varieties. In 2013, it removed chemical-synthetic pesticides from its stores. Since 2014, only natural fertilisers are sold. Threshold limit values for the use of pesticides for suppliers and a programme to reduce the amount of peat in bellaflo products were introduced. Conventional substrates contain a maximum of 50 % peat, organic products are peat-free. The company also focuses on regional sourcing – more than 40 % of its products come from Austrian suppliers and two thirds of the plant suppliers are regional gardeners.

## Sustainable commitment as competitive advantage

One of the company's main goals is to deepen customer, employee, and supplier knowledge on the importance of sustainability and to spur enthusiasm for natural gardening. bellaflo is convinced that increasing people's environmental awareness in everyday life and their interest in hobby gardening positively effects the economic development of the company. Therefore, it offers its employees an extensive training programme on sustainability and eco-friendly products. The company is also constantly cooperating with suppliers to further increase the environmental quality of its product range.



### Renewable electricity, e-mobility and moving away from gas

The company uses 100 % renewable electricity at all its locations. 15 bellaflora stores are already using solar power from on-site PV systems. The systems are optimised for self-consumption and, together, cover more than 10 % of the company's total electricity demand. bellaflora joined the age of e-mobility already in 2010 with the installation of its first e-charging station. Today, customers and employees can charge their electric vehicles for free at 14 locations – and soon at all its stores. Heating the garden centres is particularly energy-intensive due to the greenhouses and represents the company's main source of CO<sub>2</sub> emissions. Improving insulation and switching from gas to more climate-friendly heating technologies are particularly important. Four locations are now heated with heat pumps and seven are connected to district heating.

### LED and water recycling for a better environment balance

bellaflora also focusses on using energy-efficient and climate-friendly technologies in all its stores. Dimmable LED lighting offers enhanced product presentation as well as energy savings. To reduce water consumption, so-called "ebb and flow" systems with water circulation are standardly used at new bellaflora centres instead of inefficient sprinkler systems. In addition to being more water-efficient, this technology offers higher flexibility in irrigation times and a gentler irrigation overall. From 2015 to 2019, the company reduced its water consumption by around 30 % despite increased dry spells.

### What is still to come: clear goals have been set!

bellaflora has set ambitious targets for the next 3 years. The heating demand of indoor areas will be decreased by 10 % through the optimisation of heating and ventilation and smart building management systems. PV will be installed wherever suitable building structures allow. An additional 200 kW are planned by 2023. CO<sub>2</sub> emissions will also be reduced by 10 % with a mix of measures including increased energy efficiency, replacing fossil fuels with renewables and fewer business trips. Optimised technologies and employee training will enable 5 % savings in water consumption.

## The company – key facts & figures

bellaflora Gartencenter GmbH

#### Products and services

- plants, fertilisers, substrates, pesticides
- indoor and outdoor home decor items
- pet supplies
- wool

Founding year: 1978

#### Locations in Austria:

- 27 stores throughout Austria
- company headquarters in Leonding/Upper Austria

Employees: around 500

#### Annual turnover:

86 million Euro (2019)

legal structure: Family owned and managed business



*"For us, it is normal that we implement every measure possible to optimise the environmental and energy aspects of our company. In new buildings, we strive to use the most modern technologies."*

**Elisabeth Schipflinger, Sustainable Development**

# Rexel Austria: Success through customer proximity, innovation and sustainability

REXEL

*"Climate protection and CO<sub>2</sub> reduction targets can only be achieved if we continue to increase energy efficiency along the entire value chain – from manufacturing to storage and use – and thereby reduce overall consumption."*

J. Robert Pfarrwallner, CEO



The Rexel Group is a global electrical wholesaler that offers a comprehensive range of products for household, commercial and industrial customers. Rexel Austria designs solutions and services for new build, retrofit and maintenance in the fields of automation, electrical, lighting, network and security technologies, energy efficiency and energy management. Sustainable development and environmental responsibility are strongly embedded in the company's corporate strategy.

## What was achieved?

### Logistics centre in Weißkirchen

- Optimisation of lighting:
  - Electricity savings: 15 %
  - CO<sub>2</sub> reduction: 60 tonnes/year
- Reusable transport boxes:  
370 tonnes of cardboard/year avoided
- 100 % renewable electricity since 2017
- Heat supplied by the local biomass district heating plant

### Solar energy at Rexel Austria

- PV: 215 kWp over 5 locations
- Electricity storage: 9.6 kWh

### Mobility and logistics

- Replacement of company cars
  - CO<sub>2</sub> requirements for new cars
  - Reduction in actual consumption:  
from 143 to 119 g CO<sub>2</sub>/100 km
- Optimisation of truck routes
- Digitisation of the last mile:
  - Paper savings: 460,000 sheets
  - 2,430 kg CO<sub>2</sub>/year
  - Time savings of 5,200 h/year  
(no scanning or copying)
- E-mobility:
  - 16 charging stations at 15 locations
  - E-bike campaign for employees

### Combatting energy poverty:

- Cooperation with Caritas on device replacement (2014 to 2017)
- Advice for low-income households by Rexel employees
- Energy workshops for low-income households



## Commitment to a better energy future

Rexel's approach to sustainable development, with a focus on energy, is based on 5 pillars:

- Innovative energy services and efficient products
- Improvement of the company's energy and environmental footprint
- Training and awareness-raising for employees
- Increasing sustainability in the value chain
- Projects on preventing and combatting energy poverty

## Two sales networks focussing on energy efficiency

The history of Rexel Austria began in the 90s with the acquisition of the electrical wholesaler SCHÄCKE and the takeover of REGRO, a specialist in industrial automation, process optimisation and BUS-controlled system solutions. SCHÄCKE targets electrical retailers and commercial customers and offers a full range of electronic devices – from white and brown goods to PV systems. Both sales networks focus on market segments in the energy sector (e.g. LEDs, heat pumps and ventilation systems with heat recovery) and innovative energy services for monitoring, financing, training and audits.

## An app makes energy efficiency easy

Rexel offers the Rexel Power App as part of its range of services. It is a free tool for commercial and industrial customers that combines a sensor hardware, cloud data and big data analysis tools as well as a software for data visualisation. With one click, it displays energy consumption data in a clear and comprehensible manner and offers suggestions for energy savings. The app is not only an energy monitoring instrument, but also offers functions for calculating the ROI of smart building solutions and process optimisation. In 2019, Rexel Austria brought Comtech IT-Solutions, a software specialist, on board to further expand its digital services.





### Central warehouse in Weißkirchen: Green logistics through energy monitoring & sustainability

The Rexel Power App was installed and tested in the company's central warehouse – Austria's largest central warehouse for electronics. The monitoring software identified the lighting to be the building's largest electricity consumer. This triggered the decision to switch the unregulated T8 lamps for LED lighting with daylight control and movement sensors. The outdoor lighting was also replaced with LEDs. These measures reduced the total electricity consumption by around 15 %. The building's energy supply is particularly sustainable with 100 % renewable electricity and heat. The heat is supplied by the local biomass district heating plant, which is fuelled partly on wood residues from Rexel itself. Rexel is also proud of its stackable reusable delivery containers. 900,000 high-quality boxes prevent damage and soiling of the goods during transportation, help avoid 370 tons of cardboard per year, reduce disposal costs and simplify processes.

### Training as a recipe for success

Rexel uses its position as an intermediary between manufacturers and professionals in trade and industry to provide information on innovative energy solutions. Its training programme "Planning and implementing energy-efficient solutions", developed in cooperation with TÜV Süd, trains electrical engineers to become energy efficiency specialist partners. The programme also offers seminars on e-mobility that increase knowledge on planning and installing e-charging infrastructure, load management and possibilities for combining it with PV and electricity storage. In 2019, REGRO and SCHÄCKE trained a total of 1,300 people on topics relating to energy efficiency, renewable and smart energy technologies, digitisation and security technology.

### Involving our employees: Awareness raising and support

Rexel supports its employees' climate-friendly investments. Members of staff receive discounts and interest-free loans when purchasing a PV or electricity storage system. By offering particularly economic e-bikes, the company creates an incentive for them to adopt a CO<sub>2</sub>-saving way of commuting to work. Training for truck drivers and fuel-saving competitions help increase awareness on the influence drivers have on fuel consumption. In the context of the REXEL ECO DAYS, employees were invited to report on their own energy-saving activities via the intranet and suggest climate protection measures.

### There's more!

Further focal points in the areas of environment protection and energy savings include the step-by-step renovation of the company's 16 sites and placing special consideration on the access to public transport when deciding on new locations. In 2020, Rexel will tackle the expansion of its monitoring system at its location in Weißkirchen with, among others, the addition of water consumption tracking. In its on-going efforts to combat energy poverty, the company will continue to collaborate with the social organisation Caritas on energy saving training for low-income households. Employee motivation also remains an important focus. In the future, new staff members will receive targeted information on energy efficiency at work and at home on their Welcome Day. In addition, energy-saving workshops will be offered for employees that do not have access to IT, since it is more difficult to reach them with standard information campaigns.

### The company – key facts & figures

REXEL Austria GmbH

Founding year: 1996

#### Products and services

- Wholesale of electrical installation material and appliances
- Services

#### Locations in Austria:

16 locations, central warehouse in Weißkirchen an der Traun

Employees: around 700

Consolidated group turnover: 3.7 billion Euro (2018)

#### Legal structure:

Part of the listed Rexel S.A. based in Paris



*"At REXEL, we take a holistic approach and involve all stakeholders in energy efficiency measures. We get our employees engaged and offer training for our customers."*

**Petra Spatt, CSR & Sustainability**

# Upper Austria – a leader region in the energy transition

Upper Austria, the most industrial of Austria's 9 regions with a population of 1.5 million, is well on its way in the clean energy transition. Significant progress has already been made: 75 % of the electricity, 60 % of all space heating and 31 % of the primary energy come from renewables. Through significant increases in energy efficiency and renewable energy, greenhouse gas emissions from buildings were reduced by 32 % in the past 10 years.

Upper Austria has a thriving clean energy sector. Already 2.3 billion Euro are invested each year in the energy transition: 40 % in renewables, 30 % in energy efficiency in buildings and 30 % in industrial energy efficiency and CHP. The ambition is to achieve competitiveness and quality of life through energy decarbonisation. Fostering cooperation among market actors along the value chain has resulted in the growth of a vibrant industry that successfully exports worldwide.

## "Carrots, sticks and tambourines": an effective combination of policy measures

The region's progress in the energy transition is owed to its targeted energy policy approach, supported by the OÖ Energiesparverband (ESV), the regional energy agency. Coined "carrots, sticks and tambourines", it consists of a combination of financial incentives, regulatory measures, and information & training activities.

- **"Carrots":** A range of financial support programmes are available to citizens, municipalities and companies. Programmes are targeted at both mass-deployment of energy efficiency and renewables and the development of innovative technologies. Avoiding stop-and-go through long-term programmes has been an important success factor.
- **"Sticks":** Legislation for buildings and heating and cooling systems are strategically used to drive innovation by regularly updating them towards higher efficiency and lower emissions. In addition to a significant reduction in greenhouse gas emissions, this has led to a strong market of competitive companies and the development of a range of innovative products and services.
- **"Tambourines":** Communication activities are the motor behind the momentum. The ESV is a central source of information on all topics related to the clean energy transition. It actively reaches out to stakeholders through, among others, 10,000 face-to-face energy advice sessions per year for homeowners, businesses and municipalities. It trains more than 500 people each year in its Energy Academy and supports 150 companies in the context of the Cleantech-Cluster.

## Upper Austria's achievements in the clean energy transition

- Renewable energy share:  
31 % of primary energy consumption  
60 % of space heating  
75 % of electricity
- 32 % reduction of CO<sub>2</sub> emissions  
in buildings in the past 10 years
- Value of avoided fossil fuel imports:  
over 2.4 billion Euro/year
- 2.3 billion Euro annual investments in  
the energy transition

## OÖ Energiesparverband

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# World Sustainable Energy Days

## [www.wsed.at](http://www.wsed.at)

The OÖ Energiesparverband is the organiser of the annual World Sustainable Energy Days (WSED), one of Europe's largest conferences on achieving global climate neutrality, held in Wels/Upper Austria. The WSED shows how the energy transition is progressing throughout Europe and worldwide in regard to policies, markets, financing, bioenergy, e-mobility, industrial energy efficiency and more.

Each year, over 600 participants from more than 50 countries gather for the event's comprehensive package which includes up-to-date information on current trends in the sustainable energy world, technical site visits, a major tradeshow and valuable networking opportunities.

**2021: 21 - 25 June**

**2022: 2 - 4 March**

### CONFERENCES:

- European Energy Efficiency Conference
- European Pellet Conference
- Smart E-Mobility Conference
- Industrial Energy Efficiency Conference
- Innovation Workshops
- Young Energy Researchers Conference



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## Competitiveness through the energy transition

The "Energy Transition Leaders Initiative" shows how companies are phasing out fossil fuels and thereby increase their competitiveness. The initiative is based on the cooperation between 15 pioneering companies and the OÖ Energiesparverband, the regional energy agency of Upper Austria.

Together, they work towards achieving a climate neutral economy and demonstrate how they can make it an integral part of their normal business practices.



[www.energyleaders.eu](http://www.energyleaders.eu)