Cleantech-Cluster Upper Austria

The Cleantech Cluster (CTC) is the platform for energy and environmental technology companies in Upper Austria with more than 250 partner companies. Two specialised teams - located within the OÖ Energiesparverband (the energy agency of Upper Austria) and the Business Upper Austria (the business agency of the Upper Austrian government) - manage the topic areas energy and environmental technologies. The Energy Technology News present new products, current projects and other company news.

Highlights Technology and Partner News

Gasokol: "Solar One Energy Collector"

Together with 3F Solar, the company Gasokol presented the "Solar One Energy Collector". This patented hybrid system combines PV and solar thermal technologies. One unit of this collector has a capacity of 265 Wp electrical and 825 W heat.

CTC-Link: GASOKOL GmbH

Obermayr: timber social housing building

Obermayr constructed an energy-efficient timber social housing building in Wels. The six-story building, which offers 63 rental apartments (gross building area 2,747 m²), was built almost entirely of wood. In addition to a wood facade, wood-aluminium windows and wooden ceilings and floors were used. Total project costs amounted to around 10.2 million Euro. These are similar costs to those of conventionally-built residential buildings and below the construction cost threshold for social housing in Upper Austria - showing how affordable housing and high environmental standards can be combined.

CTC-Link: Obermayr Holzkonstruktionen GesmbH

Peneder: extension of the production facilities at Kahlbacher Machinery

Peneder Businessbau was commissioned for an 800 m² extension of the production facilities of Kahlbacher Machinery. In addition, the existing building will be partially renovated and restructured. The total investment amounts to around 2 million Euro. Before the start of planning, a productivity check was carried out and revealed the need for a reorganisation of the existing building. Peneder’s previous financial year was very successful with a turnover of 83 million Euro.

CTC-Link: Peneder Holding GmbH
Abatec: cooperation with fire-fighter Rosenbauer

Abatec electronic solutions develops and implements electronic solutions for Rosenbauer, a global leader of airport fire-fighter vehicles. Abatec developed a transmission control system for the Rosenbauer airport fire-fighting vehicles. In addition to the gear selector, the company manufactures the cabin control system for the "Panther" (one of the vehicle types). This system manages many functions from lighting and ignition to the vehicle's window regulators. Another key product for Rosenbauer is the component control unit, which is used as a controller for various mobile devices.

CTC-Link: abatec group AG

Ziegelwerk Eder: a new brick for apartment buildings

The 38 cm thick brick is characterised by an optimal combination of static strength, noise insulation and energy efficiency. The mineral wool filling enables a high level of thermal insulation despite the brick’s internal bridges. The filled brick provides a healthy indoor climate with pleasant surface temperature of walls and improves the properties of masonry buildings.

CTC-Link: Ziegelwerk Eder GmbH & Co KG

Windhager: extension of the biomass product range

Windhager now offers its pellet boiler "BioWIN2 Touch" with condensing technology. The new BioWIN2Plus is up to 15 % more efficient. As of autumn 2018, it is available in four output sizes ranging from 10 to 28 kW. At the same time, Windhager will start offering its PuroWIN model with outputs of 72, 83, 99 and 103 kW for buildings with a higher heat demand. All boilers can be operated with wood chips as well as with pellets and can be installed in cascades of up to four units.

CTC-Link: Windhager Zentralheizung GmbH

KWG: "MiLa" - rental charging station for electric cars

KWG offers "MiLa", a rental charging station for electric cars. The company installs the charging station and can also look after the maintenance for larger installations. This service includes the charging infrastructure, a smooth implementation and the possibility of changing to a newer model for a reduced price after the minimum contract period of 24 months.

CTC-Link: KWG
EWS: new service "DeCarb"

The EWS offers new services that help companies with climate protection. EWS supports companies in establishing their corporate carbon footprint and is available to answer questions about carbon accounting, company climate policy and carbon neutrality. With these services, EWS brings the objective of achieving complete decarbonisation of all business sectors by 2040 in the forefront.

CTC-Link: EWS Consulting GmbH

Wels Strom: e-car sharing in residential complexes

Wels Strom GmbH, together with TRIO Development, is playing a pioneering role in the field of e-car sharing in residential complexes. The company will realise its first project for a condominium in Upper Austria in the near future.

CTC-Link: eww Gruppe

Linz Energieservice: "EnergyCube"

The "EnergyCube" from Linz-Energieservice is a mobile monitoring system for companies and public bodies/organisations for measuring, visualising and analysing data. It is equipped with sensors, records data after connection to a power supply (Plug & Play) and transmits it via GSM to any internet-enabled device. The indoor climate as well as the lighting in office, storage or production areas can be controlled and the heating and ventilation can be adapted.

Furthermore, Linz-Energieservice implemented an innovative lighting system for the residential building project "Grüne Mitte Linz". The lighting system is only lit when people are present in the park or on the paths (reduction of energy consumption of 67%).

CTC-Link: Linz Energieservice GmbH - LES

Frauscher Thermal Motors: technical centre inaugurated/opened

Frauscher Thermal Motors opened a technical centre in April 2018. Since 2001, Frauscher has been conducting research on all types of Stirling engines. The Stirling technology makes it possible to use sewage gas, landfill gas as well as wood and biogas for electricity generation. The new technical centre offers almost 2,000 m² for the production and testing of engines with external combustion, in a focus on reducing the waste of resources.

CTC-Link: Frauscher Thermal Motors GmbH
Ecotherm: solar steam generation

Ecotherm offers a complete solar steam generation system for industry that permits a reduction of up to 30 % of the oil and gas consumption of existing steam boilers. Moving mirrors concentrate the incoming solar radiation on to the receiver. Motors allow the mirrors to track the movement of the sun. The water in the receiver vaporises. Steam of up to 250 °C can be generated and integrated into existing steam systems. In addition, Ecotherm also offers a new high-performance flat-plate heat exchanger with high peak capacity and a large heat exchange surface.

CTC-Link: Ecotherm Austria GmbH

Solarfocus: new pellet elegance condensing boiler

Solarfocus developed the pellet elegance condensing boiler (10 - 24 kW). The condensing module, a stainless steel heat exchanger located at the rear of the boiler, removes heat from the boiler flue gas until a condensate is generated that can be drained away. Features of this technology include a very high efficiency (up to 104 %), reduced fuel costs and lower emissions. The condensing module is optional and can be installed separately. In addition, Solarfocus developed the air heat pump vamp™. Particular emphasis was placed on low-noise technology and efficiency.

CTC-Link: Solarfocus GmbH

BlueSky Energy: extension saltwater electricity storage

BlueSky Energy's saltwater storage system Greenrock has been further developed into a complete solution with an energy management system. It increased independence through off-grid operation, integration of different electricity producers, targeted control of predefined consumptions and electric charging stations. Various energy producers can be integrated into the energy management system. A 24 kWh Greenrock storage system was installed in a Swedish school. In addition, a 12 kWh storage system supplies a training centre in southern Ghana.

CTC-Link: BlueSky Energy GmbH

ÖkoFEN: off-grid house with Fronius

ÖkoFEN has developed an off-grid house in cooperation with Fronius. The combination of a pellet boiler with integrated Stirling engine, PV and energy storage technologies makes it possible to generate on-site 100 % of the home's required heat and electricity. A management system records and processes all relevant data for heat and power generation.

CTC-Link: ÖkoFEN Pelletsheizung, Fronius International GmbH
Bioenergy 2020+: new test method for firewood stoves

A new test method for firewood stoves enables the practical evaluation of efficiency and emissions levels. In the future, manufacturers will be able to develop and optimise their devices even more effectively. Upon purchase, end customers will receive detailed information on emissions and efficiency levels during operation. In the long term, these project results could also be incorporated into the development of standards for firewood stoves.

CTC-Link: BIOENERGY 2020+ GmbH

Hainzl: touch control unit for OEM applications

The new control unit has a touch display and can be used for applications in building and energy technologies as well as for the control of devices and machines. The control units produced by Hainzl can be custom adapted for customer's specific application. Open design is possible through Linux-based Qt or CoDeSys V3.0 program. Common interfaces (USB, ethernet, RS485) enable the integration of the operating unit into higher-level systems.

CTC-Link: Hainzl Industriesysteme GmbH

Fröling: EnergieGenie for wood chip boiler T4e

The 2018 EnergieGenie prize for innovation was awarded to Fröling for its T4e woodchip boiler. The boiler features an integrated e-particle separator, innovative air distribution control, a high efficiency motor, components with low electricity demand and an integrated system to increase the return flow temperature. Ignition of the boilers takes place using the residual embers.

CTC-Link: Fröling Heizkessel- u. Behälterbau GmbH

KNV: EnergieGenie for "Smart Price Adaptation"

KNV received the EnergieGenie Award for the "Smart Price Adaptation" for heat pumps. This enables the use of variable electricity prices on an hourly base. The heat pump is controlled so that it always uses the cheapest electricity price of the day. This results in estimated energy cost savings of up to 30%.

CTC-Link: KNV Energietechnik GmbH
Ochsner: EnergieGenie for hot water heat pump

The Genius hot water heat pump Europe 333 from Ochsner was awarded the EnergieGenie prize. This air heat pump with 300 litres of storage enables the optimisation of the PV self-consumption rate. It is continuously variable/stepless controllable/infinitely adjustable, and has a performance efficiency of 3.8.

CTC-Link: Ochsner Wärmepumpen GmbH

Energie AG: "Energiestar" award

Energie AG Power Solution received the "Energiestar" award in the category "Innovative Financing" for its PV contracting service. Energie AG Power Solutions plans, installs and operates PV systems and covers the resulting costs. The investment is refinanced through the revenue from the generated electricity. In 2017, ten plants were implemented with this model, resulting in a total capacity of 7,000 kW.

CTC-Link: Energie AG Oberösterreich Power Solutions GmbH

Siemens: "Energiestar" award for AMAG project

AMAG is a global player and supplier of primary aluminium and semi-finished aluminium products. It’s "Energy Efficiency Flagship Project" received the "Energiestar" award in the category "Large Scale Energy Innovation". As part of the aluminium casting process, the aluminium ingots are cooled. In the project planned by Siemens, the heat is recovered and temporarily stored in a 28 m high buffer tank. The energy is used to heat the buildings and halls with the support of two heat pumps. This project enables a 35 % reduction of the natural gas consumption and heat savings of 17,000,000 kWh.

CTC-Link: Siemens AG Österreich, Building Technologies

Capatect: "Energiestar" award

The project "School Refurbishment: Hemp goes to School" in the municipality of Pabneukirchen received the "Energiestar" award in the category "Energy Innovation at local Level". In addition to connecting the school to the local biomass district heating network, installing a 30 kW PV system and renovating the building’s technologies and 148 windows, a focus was placed on the external thermal insulation. The 1,920 m² facade was equipped with 20 cm of hemp insulation panels by Capatect. Energy savings of over 60 % were achieved through the use of hemp-based insulating material as an alternative to conventional products - permitting savings of around 16,000 Euro/year in heating costs.

CTC-Link: Capatect Baustoffindustrie GmbH
Young Energy Researchers Award 2017

The winner of the Young Energy Researchers Award 2017 is Fabian Moisl for his diploma thesis "Profitability analysis of operational strategies of battery energy storage systems". Fabian Moisl grew graduated from the HTL Linz LiTec and is currently working at the Vienna University of Technology. The excellent work examines the different possibilities of using battery storage systems and contributes to the optimised integration of renewable energy forms into the overall energy system.

Info: Young Energy Researchers Award 2017 (in German)

Wallner Automation: controller VoltoPlus

Wallner Automation developed the energy controller "VoltoPlus" that enables the optimised use of surplus generated PV electricity for own consumption. The device works independently from the inverter, electricity metre or pulse generator. Thanks to the integrated measuring unit, VoltoPlus can detect the currents, voltages and capacities and switch the different energy flows accordingly.

CTC-Link: Wallner Automation GmbH

Guntamatic: biomass hybrid systems and e-filter technology

In combination with PV and electric vehicles, Guntamatic's "Hybrid" pellet heat pump offers homeowners a high degree of independence and contribution to environmental protection. Hybrid log wood heat pumps offer convenience to farmers with PV systems. Furthermore, Guntamatic now also offers its pellet, log wood and wood chips systems with electrostatic precipitator technology.

In addition, Guntamatic developed the new hybrid pellet heat pumps "BMK Hybrid" (for 1/2 m wood logs) and "Bio Hybrid" (for 1/3 m wood logs and smaller buildings).

CTC-Link: GUNTAMATIC Heiztechnik GmbH

Scheuch: extension of product range

The manufacturer of waste management systems, IPE Produktionsgesellschaft für Entsorgungssysteme, became part of the Scheuch Group at the starting of 2018. IPE offers filter systems, extraction systems and briquetting presses for the woodworking sector. These systems extend the Scheuch LIGNO product range, above all with mobile dust extractors and stationary extraction systems that are modular and flexible where limited space is available.

CTC-Link: Scheuch GmbH
Einsiedler Solartechnik: stainless steel solar shower

Einsiedler Solartechnik now offers its patented vacuum solar showers in stainless steel. The solar shower is based on the principle of vacuum storage. Vacuum is a very suitable thermal insulation due to its minimal heat emission to the surroundings. For this new product, the fittings, shower rail, cover and shower head are completely made of stainless steel. The shower has a conversion efficiency of solar energy of 92%. Even on cloudy or rainy days, the water heats up to 65 °C.

CTC-Link: Einsiedler Solartechnik GmbH

Hargassner: product range extension

The wood log boiler Neo-HV is the further development of Hargassner’s 1/2M gasifier HV. The unit’s new design includes a tiltable display. Optimised combustion processes allow good processing of diverse types of wood and humidity levels and reduce emissions to a minimum. The integrated draught fan with EC-motor allows electricity savings. A premium version is also available (stainless steel, automatic ceramic ignition and LED lighting in the filling chamber). The Nano-PK series is also available as Nano-PK PLUS (including condensing technology).

CTC-Link: Hargassner GmbH

Internorm: sales growth and digitalisation

Internorm International once again recorded significant growth in the 2017 financial year. Sales increased by 3 %, reaching 331 million Euro, and incoming orders increased by 4 %. In the new financial year, Internorm is again investing around 24 million Euro. One focus is on digitalisation: sales documents will be enriched with augmented reality and virtual reality will be introduced at trade fairs.

CTC-Link: Internorm International GmbH

Energiewerkstatt Verein: webcams for monitoring wind turbines

The Energiewerkstatt association offers the HQWindCam 3.0 for the monitoring of measuring systems. The camera has been used in projects under extreme conditions and has been successfully tested for wind energy. In many applications, the high-resolution picture quality is an advantage. For applications with other optical requirements (wind farm panoramas, construction site supervision), the option of long exposure is available.

CTC-Link: Energiewerkstatt Verein
Energy professionals of tomorrow

Together with Berufsschule 8, the vocational school for heating installers, the ÖÖ Energiesparverband/Cleantech Cluster organised five technical site visits to cluster partner companies. Under the title "energy professionals of tomorrow", a total of 217 students participated in the events and visited the companies Gasokol, Guntamatic, ÖkoFEN, Fröling, ETA, KNV, Hargassner and Solarfocus. The site visits offered students the opportunity to ask specific questions on-site and make contacts with the companies.

Link: www.ctc-energy.at

Innovation Forum on Energy-Efficient Manufacturing

The Innovation Forum organised by the ÖÖ Energiesparverband informed participants on how to systematically identify energy efficiency potentials in manufacturing companies. It presented innovative solutions for increasing efficiency and using renewable energy sources for manufacturing in various industries (i.e. metal processing, mechanical and automotive engineering and plastics).

Info: Further information (in German)

Upper Austria’s Energy Performance Contracting programme extended until 2020

The region of Upper Austria extended its Energy Contracting Program (ECP) until the end of 2020. Projects can receive funding of up to 75,000 Euro with funding rates of max. 40 % depending on the type of project. Over 200 projects have already been funded. Funding is available for investments of 50,000-250,000 Euro eligible costs.

Link: www.energiesparverband.at (in German)

International Activities

Fronius: activities across the globe

Fronius has commissioned 162 inverters for a solar park in Ukraine with a peak capacity of 5 MW. Fronius has supplied around half of the projects implemented so far in the new programme of the Chilean government for public buildings. The company now also has a branch in Ukraine and Tatabánya (Hungary) and offers consulting and service programmes on site. In Iran, Fronius and its local service partner support private and commercial plant operators with easy-to-install inverters. The subsidiary "Fronius do Brasil" has branches in the states of Minas Gerais, Paraná, Amazonas, Sao Paulo and Rio Grande do Sul.

CTC-Link: Fronius International GmbH

www.ctc-energy.at
Philips Lighting: "Light as a Service"

Philips Lighting has selected the SUSI Energy Efficiency Fund (SEEF) as financing partner for the implementation of its "Light as a Service" projects (LaaS). This concept helps Philips Lighting customers across Europe switch to more energy-efficient lighting systems and reduce emissions. LaaS projects include the design, implementation, operation and maintenance of new lighting systems. Total project costs are distributed over an agreed duration.

CTC-Link: Philips Lighting Austria GmbH

Sunlumo: training campaign in India

Sunlumo and its partner ADS Projects & Systems are introducing PV*SOL® in India. PV*SOL® is a software for the design and optimisation of PV systems. Employees are trained for green and solar jobs. The software is used to precisely calculate self-consumption rates as well as to optimise and visualise PV installations.

CTC-Link: Sunlumo Technology GmbH

Muggenhumer & KNV: slinky ground collector goes international

The slinky ground collector developed by Muggenhumer Energietechnik and KNV Energietechnik is now also exported to Germany, Hungary and Switzerland. The collector enables the use of geothermal energy with a similar cost level as air heat systems. It also permits individual planning and simple installation.

CTC-Link: Muggenhumer Energiesysteme GmbH, KNV Energietechnik GmbH

Ledon: off-grid, solar outdoor LED lights

The E-Mobility Division of ZF Friedrichshafen, a company in the field of power-drive and vehicle technology, illuminates its car park in Schweinfurt with LEDIVA, LED outdoor lighting from Ledon. Traffic on ZF's 6,000 m² car park is strongest during shift changes. Therefore, the 19 LEDIVA lights are programmed to deliver the most light output between 4:00-6:00 and 20:00-22:00. In this way, energy consumption and light pollution are minimised at times of low frequency.

CTC-Link: Ledon GmbH
Solarfocus: air heat pumps for the UK

Solarfocus’ “MCS Air Source Heat Pump for Great Britain” was the first project to be accepted for support from the Upper Austrian funding programme “Cleantech Reference Technologies on Export Markets”. The goal of the project is the export and first time installation of the newly developed air source heat pump in the UK.

CTC-Link: Solarfocus GmbH

Bioenergy 2020+: wood as raw material for the chemical industry

Bioenergy 2020+ concludes a research project on ”mixed alcohol synthesis” with an international consortium. In this project, a laboratory-scale pilot plant for the conversion of wood gas to alcohols was operated with real wood gas. This resulted in a mixture of different alcohols used, above all, in the chemical industry or as fuel.

CTC-Link: BIOENERGY 2020+ GmbH

Guntamatic: 5.5 MW pellet plant in Strasbourg

Guntamatic delivered 22 modular block units with a total capacity of 5.5 MW to Strasbourg (250 kW per module), where 1,500 apartments and 90,000 m² of living space are now heated with biomass. In this flagship project, oil and gas boilers were dismantled and replaced by low-noise and efficient modular pellet boilers. 25,000 kg of pellets are consumed daily, corresponding to savings of 15-20 million litres of heating oil over 10 years.

CTC-Link: GUNTAMATIC Heiztechnik GmbH

Ecotherm: flat-plate project in a hospital in Oman

Ecotherm installed 32 thermal solar systems with a total collector surface of 1,336 m² for the Royal Oman Police Hospital. The average collector area per unit is 42 m². The plants are equipped with touch-screen control systems and comprise 71 storage tanks with a volume of 750 litres each. A weatherproof Alucobond insulation was developed for 19 of the storage tanks. The reheating is supplied by integrated ceramic heating elements (9 kW per storage tank).

CTC-Link: Ecotherm Austria GmbH
Windhager Germany with a new location

The new Windhager headquarters in Gersthofen now offers generous consulting and training facilities in modern architecture. Windhager thus sets the course for further growth in the German heating market. In the company's expert rounds event series, biomass installers can gain know-how from their peers. So far, around 100 companies have participated in these product and brand neutral events.

CTC-Link: Windhager Zentralheizung GmbH

Internorm: 15 million windows

The company's 15-millionth window was produced at the site in Upper Austria - meaning around half a million newly built or renovated single-family houses have been equipped with Internorm windows. Internorm has also taken over 80% of the Finnish window and door manufacturer Skaala Oy. With sales of approximately 95 million Euro, Skaala is the leader in the Finnish window market. The company currently employs around 550 people.

CTC-Link: Internorm International GmbH

IPMT: "ANSOLE" project partner

JKU Institute of Polymeric Materials and Testing (IPMT) is a partner in the "ANSOLE" project (African Network for Solar Energy). The aim is to strengthen technical and vocational training in the field of renewable energies. In addition, research activities among African and international scientists, sustainable development and environmental protection in Africa are promoted.

CTC-Link: Universität Linz, Institute of Polymeric Materials and Testing (IPMT)

Funding programme in Upper Austria: "Cleantech reference technologies on export markets"

The aim is to support partner companies of the Cleantech-Cluster to develop new markets. The programme supports the first sales of a product to a new market. So far four projects were supported.

Link: www.ctc-energy.at
European Pellet Conference 2019

The European Pellet Conference, the largest annual pellet event worldwide, will take place from **27 – 28 February 2019** in **Wels/Austria**. Visited by over 450 experts each year, it is the meeting place for the global pellet community. The event delivers latest news about markets, technologies and policies and provides valuable networking opportunities. The conference is held in parallel with the “Energiesparmesse”, a leading energy tradeshow with more than 100 pellet-related exhibitors. The European Pellet Conference is organised by the OÖ Energiesparverband as part of the "**World Sustainable Energy Days**" (WSED), one of Europe’s largest annual conferences in the fields of energy.

**Link:** World Sustainable Energy Days

Innovation trip to Massachusetts

Many innovations in digitisation and new business models come from the USA. Therefore, a trip to the leading US state of innovation, Massachusetts, was organised. The extensive program included visits to companies, research centres (including a day at the MIT) and institutions. The trip offered information and cooperation opportunities regarding topics of smart products, energy storage and new business models, among others.

**CTC-Link:** Further information (in German)
New Partners

**BIOS BIOENERGIESYSTEME GmbH**
Research and development: research, development, planning and optimisation of processes and plants designed to generate heat and power from biomass, planning and design of thermal biomass conversion systems

**CTC-Link:** [BIOS BIOENERGIESYSTEME GmbH](#)

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**E-Natura**
Manufacturer in Upper Austria/Sales: photovoltaic installations, storage systems, LED lighting installations, partner of #SolarEdge, Solarworld and Naturkraft

**CTC-Link:** [E-Natura](#)

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**Einsiedler Solartechnik GmbH**
Installer/sales: solar showers, solar collectors, photovoltaics, biomass heating boilers, heat pumps, installations

**CTC-Link:** [Einsiedler Solartechnik GmbH](#)

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**ETU GmbH**
Sales: Energy certificate software, heating load calculation software, Solar and PV-software, energy efficiency training and seminars

**CTC-Link:** [ETU GmbH](#)

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**GK-Consulting GmbH**
Consultancy/planning company: management of support programmes for businesses and industry (environmental and R&D programmes), energy advice for businesses and industry

**CTC-Link:** [GK-Consulting GmbH](#)
GWG - Gemeinnützige Wohnungsgesellschaft der Stadt Linz GmbH
Social housing, privately-financed houses, assisted living, kindergartens, retirement homes
CTC-Link: GWG

IKB Procontracting
ESCO (Energy Service Company): supply contracting, technical plant management, LED contracting, technical building management, energy services (energy efficiency: consulting, testing, auditing, monitoring), heating cost allocation accounting, shaft ventilation system "Bluekit©", electricity cost reduction /cost management, e-mobility
CTC-Link: IKB Procontracting

KNV Energietechnik GmbH
Heat pumps (air-water, soil, ground source, ground water), hot water heat pumps in combination with PV & solar, heat pumps - storage systems, SG heat pumps with PV & smart pricing heat pumps, ventilation systems, high capacity heat pumps > 500 kW
CTC-Link: KNV Energietechnik GmbH

Kraftwerk Glatzing-Rüstorf eGen (KWG)
Energy supplier/plant operator: electricity supplier, lamps, fibre optics
CTC-Link: KWG

LASCO Heutechnik GmbH
Manufacturer in Upper Austria: Forced-air heating (pellets and wood chips) 50 - 2,500 kW, mobile hot air generator, log wood stoves
CTC-Link: LASCO Heutechnik GmbH

mitPlan GmbH
Consultancy/planning company: management of subsidy programmes, energy audits, energy and environmental management, carbon footprints, planning of renewable power generation equipment
CTC-Link: mitPlan GmbH

www.ctc-energy.at
RIKA Innovative Ofentechnik GmbH

Manufacturer in Upper Austria: production and sales of pellet stoves (2 - 9 kW), log wood stoves (2 - 9 kW), combi stoves (3 - 10 kW)

CTC-Link: Rika Innovative Ofentechnik GmbH

Stern Holding GmbH

Construction company, installer: building industry, electrical engineering industry, heating, ventilation - air condition - gas - water – plumbing, energy saving mode

CTC-Link: Stern Holding GmbH

System Tera Electronics

Manufacturer in Upper Austria / Sales: building control, monitoring and automatisation, heating control, energy monitoring, optimisation of energy costs

CTC-Link: System Tera Electronics GmbH

Wallner Automation GmbH

Manufacturer in Upper Austria, sales: development of tailor-made hardware and software, customised electronics as OEM products, safe electronics, machinery safety up to SIL3/PL e, development and sales of VoltoPlus, optimisation of self-consumption for PV

CTC-Link: Wallner Automation GmbH