

## **Bayernwald Environmental Policy**

The resources of Mother Earth used by the human are limited. It is our vision that we leave to future generations a world worth living. Therefore, environmental protection is a main pillar of responsible corporate governance. Our aim is to prove to ourselves and others that the implementation of environmental and sustainable measures does not exclude the profitability of a company.

In production processes, resources are necessarily consumed and emissions and waste are being produced. We are committed as a matter of course to comply with the legal requirements. For the protection of nature and the environment it is our concern to apply stewardship of the available resources. To ensure continuous improvement of environmental protection and sustainable processes, we are open to new technologies.

Our employees and business partners such as suppliers are being encouraged to minimize environmental impacts and apply appropriate measures for an environmentally friendly and sustainable economic management. It is our goal to permanently and continuously analyse all processes for environmental compatibility and, where possible, to convert or to converge on sustainable technologies.

**Bayernwald Früchteverwertung KG**  
General Management

**The Bayernwald Environmental Management includes, among others, the following measures and goals, which are already practiced partially and should be expanded in the future:**

- Compliance with all applicable **environmental laws and regulations**, including sorting and recycling of all materials as far as possible. Recycling is being applied for glass, paper, scrap metal, batteries, fluorescent tubes, waste oils, plastic films.
- Detection, documentation and reduction of energy consumption.  
Energy management: Certification according to ISO 50001.  
Annual quotas are set for quantitative targets of at least 0,5 % of energy demand. This corresponds to an annual saving of 23 tons of CO<sub>2</sub>.  
Electricity is generated in part by two PV systems.  
A new electricity management system is used to reduce power peaks in electricity demand and to use the self-generated solar power optimally. This reduces burden on the public electricity grid.  
Consumption is regularly monitored and documented.
- When purchasing electricity, suppliers which supply electricity with a higher proportion of renewable energy (229g CO<sub>2</sub>/kWh electricity) than the German average (421g CO<sub>2</sub>/kWh electricity) are taken into account. This results in a saving of 672 t/a CO<sub>2</sub> at Bayernwald.
- Upgrade and modernization of buildings and installations as well as investment in new and more efficient machinery and equipment is done with more efficient facilities such as intelligent lighting control and use of LED technology.
- Frequency converters for power engines and motors with higher efficiency classes are in use, e.g. in compressors for ice production to reduce the electricity consumption.
- During steam generation, the Economizer recovers the thermal energy from the flue gas and thus preheats the supply water.
- All heating systems were converted from fuel oil to natural gas. The condensing boilers have a higher efficiency and less CO<sub>2</sub> is produced.
- Post-steam utilisation - utilisation of the excess steam generated in the steam deaerator to preheat boiler supply water - see “News” on our homepage and link to advertisement in trade journal.
- When purchasing new refrigeration systems only natural refrigerants (CO<sub>2</sub> and NH<sub>3</sub>) are used. Old existing refrigeration systems are gradually being converted. The waste heat from the refrigeration system is used to heat offices.
- For environmental reasons, a cast resin transformer is purchased instead of an oil-cooled transformer.
- The roof areas of the new warehouse are equipped with a photovoltaic system (over 500 kWp), so that the electricity for our own use can be generated. This results in saving 114 tons CO<sub>2</sub> per year.

- Waste heat generated by the NH<sub>3</sub> refrigerant of the desuperheater from the ice water system is used for preheating the supply water. In addition, the waste heat from the CO<sub>2</sub> cooling system of the three cold stores for finished goods is used to heat the offices in the dispatch and laboratory building. This saves 20 tons CO<sub>2</sub> per year.
- Water, especially drinking water is used responsibly, multiple use of water where possible; waste water is screened and neutralized before being discharged into the public sewer system. Rinsing water of the CIP system is used several times. Cooling water is produced from well water and runs in a circuit (the cooling back of product takes place in the first step with cooling tower water, the next step is carried out with ice water).
- The employees' awareness in dealing with the energy used is increased through training. Energy consumption is regularly recorded and centrally monitored.
- Water and waste water consumption is analysed and optimised with the support of an external company as part of a project.
- Organic waste is being delivered to suppliers of bio-energy for the production of biogas and electricity.
- Offered packaging can be re-used or recycled largely and reusable containers are offered. We use recycled steel drums which are fed back to the reconditioning for multiple use. IBC containers such as returnable stainless-steel containers and reusable plastic barrels and boxes are in use.
- Cardboard and plastic film are separated into usable fractions and compressed in specially purchased baling presses and recycled afterwards.
- Product developments take into account environmental aspects.
- Annual investment plans also include energy and environmental issues.
- Chemicals needed for certain laboratory methods are being replaced by more gentle methods (e.g. HPLC, distillation methods).
- The in-house canteen does not use any disposable tableware.
- No chlorine-bleached paper is being used. Through paper-saving or paperless communication and use of optical archiving, paper consumption is constantly being reduced.
- Fork lifts are purchased with electric drives instead of combustion engines. Using high-frequency chargers saves electricity and CO<sub>2</sub> due to their higher efficiency. It is also planned to use Li-ion battery cells instead of lead cells which increases the battery life and efficiency. The battery consists of materials such as lead, steel and acid, which are processed as far as possible during recycling.

- Company vehicles are regularly replaced by newer vehicles in accordance with the state of the art (environment/safety). There are already two cars with electric drive in use and it is planned to increase the number of cars with hybrid and electric drive. The company's own charging station is powered by the photovoltaic system.
- For environmental reasons a large orchard (approx. 8000 m<sup>2</sup>) with a classic flower meadow (bee and insect food) was planted next to the company premises - see "News" on our homepage June 2018 and November 2019