

The energy vision of the company is the following:

- **Environmentally friendly electricity generation through PV & CHP**

The company produces its own electrical energy. With a photovoltaic plant and a cogeneration (combined heat and power, CHP), it fully provides its customers with green electricity.

- **Maximization of space**

The company installed a photovoltaic system up to 455 Kwp on the refurbished roofs of the production halls and warehouses.

- **Maximization of heat**

The CHP plant (combined heat power) generates the necessary heat to warm the pickling baths and at the same time it produces electrical energy (384 kWh).

- **Power generation**

With these facilities, the company self-produces and covers for 100% of its energetic needs, so as to provide 100% renewable electricity.

- **Oil savings**

The amount of electricity generated covers the annual electricity needs for about 450 households and corresponds to an annual saving of 120,000 liters of oil or 144,000 m³ of natural gas.

- **Totally renewable PV system**

The factory exclusively uses silicon modules; these are completely recyclable and made in order not to burden the future generations.

- **No environmental impacts**

During the power generation, neither chemical nor physical processes which lead to changes in the environment are being used.

- **CO² savings**

The CO² savings through our photovoltaic system and the cogeneration plant amounts to 839.25 thousand kilograms of carbon dioxide annually. Therefore, we manage to make an active contribution to climate protection.



Figure 33 - CHP Plant/Power station. Supplier of the technology: Thermic Energy RZ GmbH

Why is it a GBE FACTORY exemplary case?

The Gesellschaft für Emaillierung und Oberflächentechnik mbH“ is a One by One GBE Factory Model. The savings of energy are very important for companies working in the enamelling sector, because they use a big quantity of electrical and heat energy. Through the RES Plant, it is possible to save the energy costs; at the same time the factory satisfies the business energy needs and sells out the surplus of energy. The RES investment gave 45 workers the possibility to be employed and reduced air pollution and greenhouse gas emissions. Even more importantly, RES produces little or no waste products such as carbon dioxide or other chemical and mechanical pollutants, so it has minimal environmental impact.