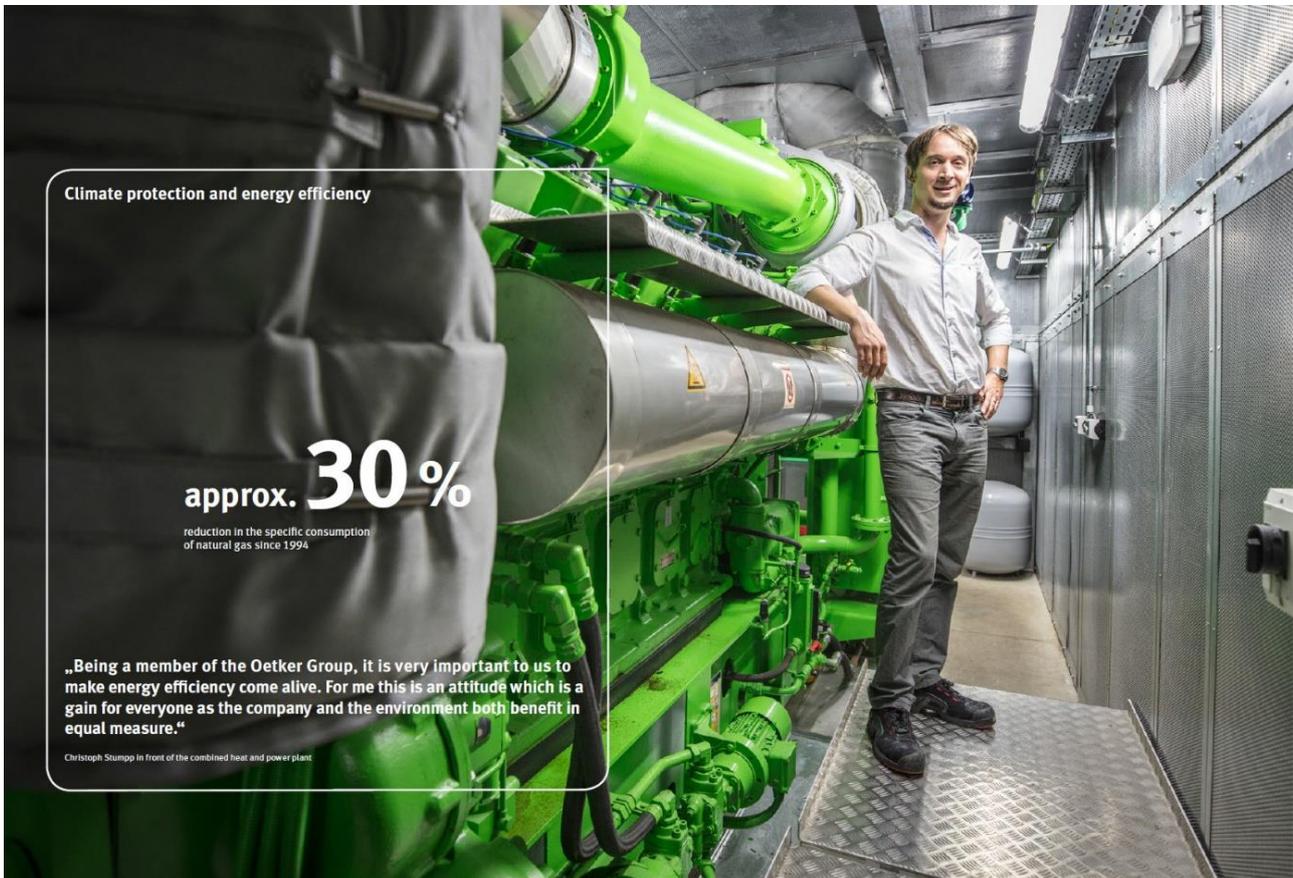


Environmental Statement 2021

Climate protection and energy efficiency



Budenheim Germany consumes a total of about 270,000 megawatt hours per year. Budenheim uses natural gas and electric power as energy sources; some of the forklifts are operated with diesel oil. The energy source percentage, i.e. the share of the individual energy sources in the overall quantity has not substantially changed since 1994. The majority of the required energy is generated from environmentally friendly natural gas (approx. 85 %). The relative share of electric energy has risen from approx. 5 % to approx. 15 % since 1994. The increasing automation of production facilities during this time has been a major contributing factor to this growth. The share of diesel oil amounts to considerably less than 0.1 %.

The list of environmental impacts brought about by today's energy supply ranges from soil, water and air pollution, via adverse effects on the ozone layer and the greenhouse effect to the risks of using nuclear power. The Federal Immission Control Act and the Energy Conservation Act both make requirements on the efficient use of energy, thermal insulation and heat recovery.

To reduce energy consumption, a number of measures have been implemented. One of the first important measures was the implementation of an online energy data acquisition system for steam, natural gas, pressurised air and other data for live tracking the energy consumption of each operational area. Further

Any information contained herein and any advice given by Budenheim is made to the best of our ability on the basis of current industrial practice and our own knowledge and experience. Any responsibility for damages resulting from the use of or reliance upon such information or products such information refers to is limited pursuant to our Conditions of Sale and Supply. Neither our advice nor any information contained herein shall cause the purchaser or any other person or entity using or intending to use our products to refrain from testing our products, verifying any suggestions contained in our information and/or reviewing (and, if relevant, respecting) any conflicting patent and other proprietary rights; and we expressly request and invite the customer or such other user of our products to perform such tests, have such tests performed prior to any commercial use or other application of our products for the specific use and application intended and to review (and, if relevant, to respect) any conflicting patent and other proprietary rights relevant for the specific product and/or use.

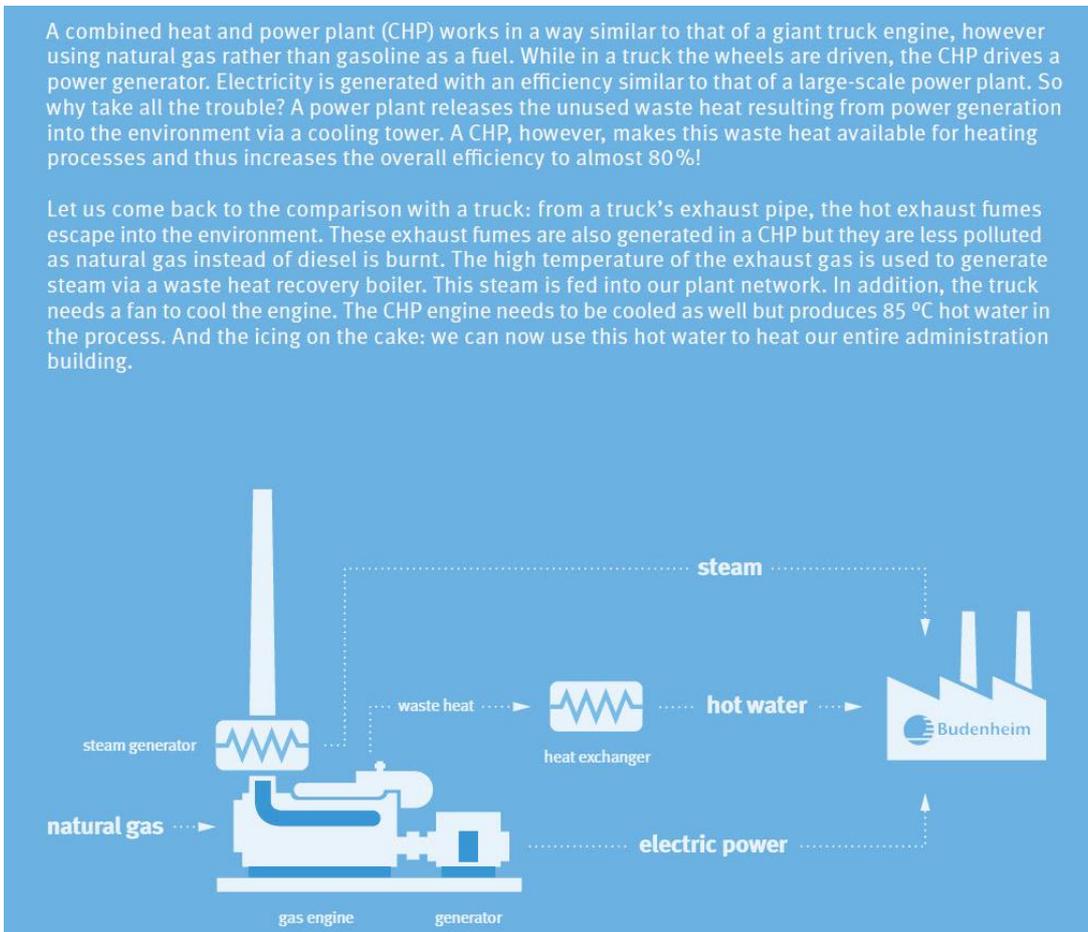
Environmental Statement 2021

Climate protection and energy efficiency

examples are the central compressed air supply, which was completely rebuilt in 2013, the exhaust air heat exchanger in operational area 2 taken into operation in 2015, which can recover more than 2,600 MWh heat per year on its own, and the combined heat and power plant (CHP) with an electrical power amounting to 2 MW.

A combined heat and power plant (CHP) works in a way similar to that of a giant truck engine, however using natural gas rather than gasoline as a fuel. While in a truck the wheels are driven, the CHP drives a power generator. Electricity is generated with an efficiency similar to that of a large-scale power plant. So why take all the trouble? A power plant releases the unused waste heat resulting from power generation into the environment via a cooling tower. A CHP, however, makes this waste heat available for heating processes and thus increases the overall efficiency to almost 80%!

Let us come back to the comparison with a truck: from a truck's exhaust pipe, the hot exhaust fumes escape into the environment. These exhaust fumes are also generated in a CHP but they are less polluted as natural gas instead of diesel is burnt. The high temperature of the exhaust gas is used to generate steam via a waste heat recovery boiler. This steam is fed into our plant network. In addition, the truck needs a fan to cool the engine. The CHP engine needs to be cooled as well but produces 85 °C hot water in the process. And the icing on the cake: we can now use this hot water to heat our entire administration building.



Efficiency is our energy of the future

We introduced an energy management system according to ISO 50001 at Budenheim Germany already in 2011 and, for the first time, defined a strategic energy and climate goal. The Steering Committee Energy, also founded, meets regularly to drive this issue forward systematically and intensively.

Strategic greenhouse gas and energy goals

Due to the growing importance of climate protection we set our own greenhouse gas reduction and energy efficiency improvement goals as early as 2011. That was very ambitious for Budenheim as a producing business using mainly energy-intensive processes. From 2011 to the end of 2020, a total of more than 80 energy efficiency projects were successfully implemented.

Any information contained herein and any advice given by Budenheim is made to the best of our ability on the basis of current industrial practice and our own knowledge and experience. Any responsibility for damages resulting from the use of or reliance upon such information or products such information refers to is limited pursuant to our Conditions of Sale and Supply. Neither our advice nor any information contained herein shall cause the purchaser or any other person or entity using or intending to use our products to refrain from testing our products, verifying any suggestions contained in our information and/or reviewing (and, if relevant, respecting) any conflicting patent and other proprietary rights; and we expressly request and invite the customer or such other user of our products to perform such tests, have such tests performed prior to any commercial use or other application of our products for the specific use and application intended and to review (and, if relevant, to respect) any conflicting patent and other proprietary rights relevant for the specific product and/or use.

Environmental Statement 2021

Climate protection and energy efficiency

The energy savings achieved with natural gas and electricity add up to over 34 GWh per year. In the coming years, too, Budenheim will demonstrably and significantly improve energy efficiency in all relevant areas every year by implementing appropriate projects and measures. The greenhouse gas savings reached a total of 44,800 tons. The determined savings consider scope 1 and 2 according to the GHG protocol. Since the implemented projects remain active, Budenheim will continue to save around 6,800 tons of greenhouse gas emissions per year from 2021. It has been our active contribution to climate protection worldwide and to energy transition in Germany.

It is our long-term goal to produce in a climate-neutral manner. In order to achieve this goal, our current strategy aims not only to improve energy efficiency and use regenerative energy sources, but also to use all the technological possibilities that are technically and economically available at Budenheim.

By implementing its greenhouse gas and energy efficiency targets, Budenheim contributes to climate protection and clean energy. It also supports sustainability in the community and cooperation with the community.

**7 AFFORDABLE AND
CLEAN ENERGY**



**11 SUSTAINABLE CITIES
AND COMMUNITIES**



**13 CLIMATE
ACTION**



**17 PARTNERSHIPS
FOR THE GOALS**



+++ This statement is computer generated and therefore not signed. +++

Created by Jens Voigt, Head of E&U
Approved by Dr. Andre Seemann, Member of General Management Budenheim Germany

Valid until further notice from August 2021

Any information contained herein and any advice given by Budenheim is made to the best of our ability on the basis of current industrial practice and our own knowledge and experience. Any responsibility for damages resulting from the use of or reliance upon such information or products such information refers to is limited pursuant to our Conditions of Sale and Supply. Neither our advice nor any information contained herein shall cause the purchaser or any other person or entity using or intending to use our products to refrain from testing our products, verifying any suggestions contained in our information and/or reviewing (and, if relevant, respecting) any conflicting patent and other proprietary rights; and we expressly request and invite the customer or such other user of our products to perform such tests, have such tests performed prior to any commercial use or other application of our products for the specific use and application intended and to review (and, if relevant, to respect) any conflicting patent and other proprietary rights relevant for the specific product and/or use.