

# A Visionary Approach to Climate Action



→ Paper manufacturing has always required large amounts of energy in the form of steam and electricity. At the Koehler Group, we started producing our own energy to cover that demand at an early stage, with a particular focus on renewable sources. With the founding of Koehler Renewable Energy in 2012, we also established energy generation as a separate business unit. This made us pioneers in the area of climate action, and we want to continue making an even greater contribution.

## Efficient Savings

**~3.19 million**

kilowatt hours of electricity were saved in paper production in 2023.

**~11.07 million**

kilowatt hours of heat were saved in paper production in 2023.

Reducing emissions of greenhouse gases into the atmosphere is one of the most important means of halting man-made climate change. We are making our contribution to this objective by constantly increasing the efficiency of our facilities. We are replacing fossil fuels with bio-based ones, and we generate our own hydroelectric and wind power. The roadmap we created as part of our Climate Strategy 2030 sets out the following objectives:

For direct emissions falling under Scope 1, we plan to reduce greenhouse gas emissions from production by 80% by 2030 compared to 2022; by 2045 we want to achieve net zero. Since 2020 we have been keeping an inventory of our emissions based on the Greenhouse Gas Protocol.

In 2023, the Koehler Group directly released around 250,000 metric tons of fossil CO<sub>2</sub> equivalents, either through the use of fossil fuels – for example at the power plant in Oberkirch – or through the use of gas-powered drying hoods for coat drying. Greenhouse gas emissions were down 10% compared to the previous year. This decrease is proportional to production output. For 2024, we expect emissions to fall even further as a result of our decarbonization projects: At our Greiz mill, we are in the process of replacing the fossil fuel lignite with preprocessed wood dust, and in Oberkirch we are using wood chips, green waste, and mill residue.

Scope 2 covers emissions generated as a result of the use of purchased electricity and heat. We want to fully offset these by 2030. Our original objective was to achieve 90% offsetting by 2025, but we already achieved this in 2023 by

purchasing green electricity and using Guarantees of Origin for regenerative energy in order to make our electricity consumption “greener”.

All other emissions along the value chain are covered by Scope 3. We have no direct influence over them, so they are difficult to calculate and reduce. This is particularly true for raw materials that we only use in small quantities. However, we are also endeavoring to reduce our Scope 3 emissions by 20% by 2030 compared to 2022. We have been continuously improving our data basis for this purpose since the first greenhouse gas inventory we carried out in 2020.

### New Technologies Save Energy

We are always striving to make our production processes even more efficient. The Energy Working Groups set up in connection with our certified energy management system have a key role to play in this regard, as they allow experts from the fields of industrial engineering, technical infrastructure, and manufacturing to meet regularly at each of our sites. They know every process like the back of their hand, so they are the best placed to make proposals for optimization. Smaller-scale measures are implemented immediately. In 2023, for example, we updated a hydraulic unit that was no longer state of the art to the latest technology and replaced air compressors for more energy-efficient models.

Approximately 3,193,159 kilowatt hours of electricity and 11,067,274 kilowatt hours of heat energy were saved in paper production in 2023 as a result of these measures. Since 2003, we have been monitoring certain indicators per metric ton of ready-for-sale paper. We have since reduced specific electricity consumption by 21.1%, and specific heat use by 22%.

### New Types of Energy on the Horizon

The conversion of the Greiz and Oberkirch power plants to run on biogenic fuels will represent a huge step forward in terms of achieving our climate objectives. In addition, we are continuing to invest in other renewable forms of energy. Work on the Wetzlar-Blasbach wind farm has now been completed. The two wind turbines with a total output of 8.4 megawatts are to be connected to the grid in 2024 and are predicted to generate 23,000 megawatt hours of electricity per year. Preparations have now begun for construction of further wind turbines in Lich and Waldeck. We are also checking whether any roof areas or other open spaces are suitable for installing solar panels. Moreover, we are investigating whether and how we can use hydrogen as an energy source for coat drying.

### Koehler Promise

“Koehler is committed to generating more energy from renewable sources by 2030 than is required for its paper production operations.”

### Status 2023



### Koehler Group Greenhouse Gas Emissions

in metric tons



## Closing Loops

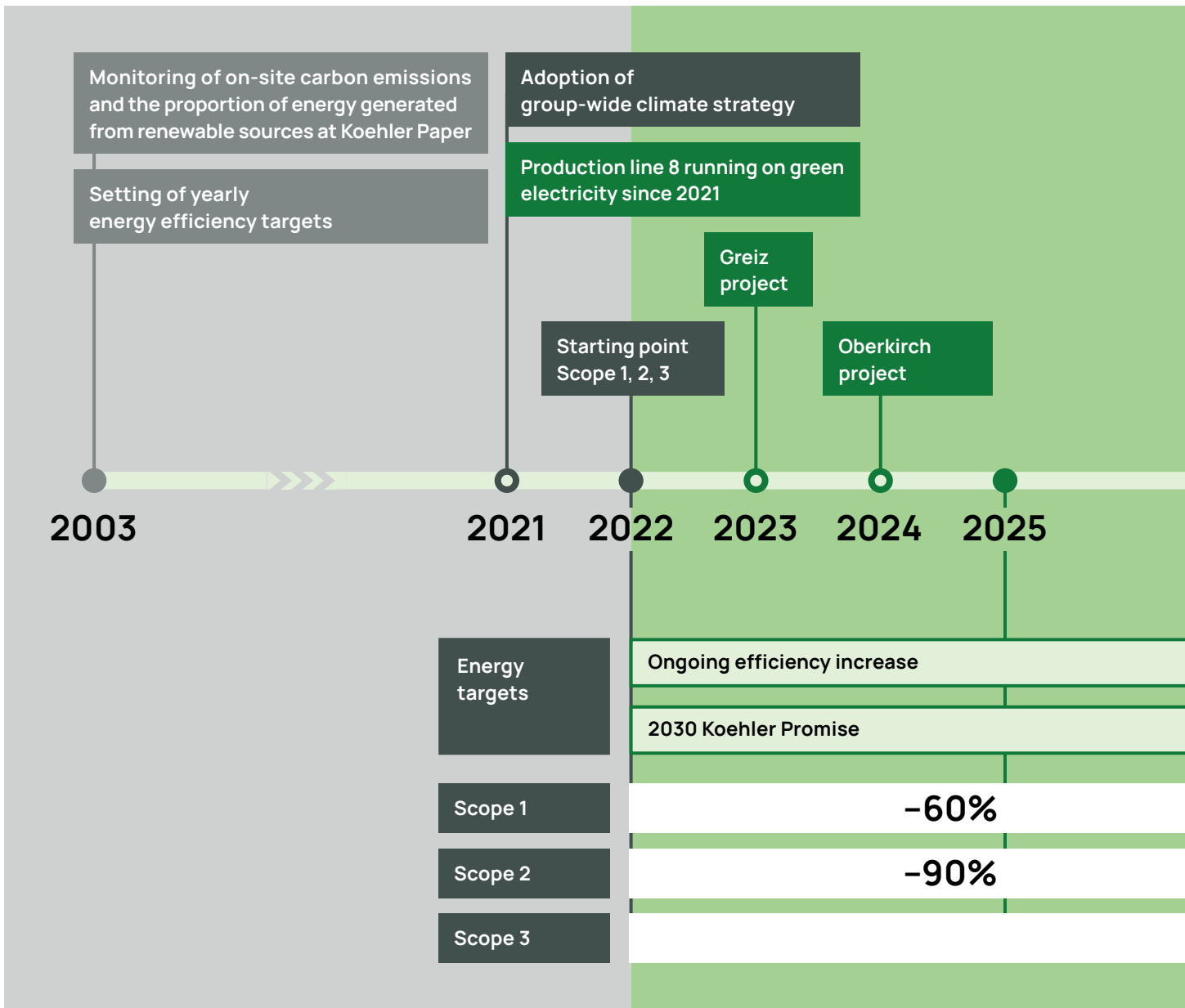
In Kehl, Schaefer Koehler Onsite converts the carbon dioxide in the flue gas from the biomass combined heat and power plants into precipitated calcium carbonate (PCC). We use this as a filler and a pigment in paper production.

We can also test the recyclability of any new products like our Blue4est® and Koehler NexPlus® paper at a commercial scale at our Greiz mill. Having this competence within our own network of plants will help us to develop the circular products of the future.

## Showing Our Commitment in Baden-Württemberg and Thuringia

The Thuringia Sustainability Agreement (NATHüringen), which we signed in 2023, brings together politicians, administrators, and businesses. The aim is to incentivize all industries to consider issues like climate and environmental protection, energy efficiency, and social sustainability, and to promote networking.

We have been involved in the Baden-Württemberg Climate Alliance since 2021. This is an initiative from the Ministry of the Environment that aims to promote climate action in Baden-Württemberg. The regular exchanges with other medium-sized family businesses are always valuable and strengthen our resolve to continue on our path.



Wind power is only one of many renewable sources from which we generate energy.



# Climate Strategy Roadmap

