

## REDUCING OUR CARBON FOOTPRINT IN STADE

*This sustainability story is one of many that shows how Olin products, technologies, ideas, and people are having a positive impact on our world.*

### SUSTAINABILITY CHALLENGE

- For several years, Olin relied on natural gas to provide all of the heat energy for Olin's chlorinated organics operations in Stade, Germany.
- Natural gas was used in hot oil furnaces for the production plants, resulting in more than 24,000 metric tons of CO<sub>2</sub> emissions per year – not to mention considerable fuel costs.

### POSITIVE IMPACT

- After converting to hydrogen, CO<sub>2</sub> emissions were reduced from more than 24,000 metric tons per year to less than 400 metric tons per year.
- The conversion also reduced fuel prices and yielded substantial savings in CO<sub>2</sub> certificates, which are part of the EU's Emissions Trading program to combat climate change.

### OLIN'S SOLUTION

- Olin considered converting to hydrogen as an energy source, which would alleviate both CO<sub>2</sub> emissions as well as fuel costs. But existing furnace coils were damaged and could not run with hydrogen due to its higher burning temperature.
- Olin launched a project to investigate the coil damage and invest in new equipment during an annual turnaround to allow for conversion from natural gas to hydrogen.
- The team in Stade also negotiated for more favorable service and pricing to supply hydrogen for plant operations.
- A monitoring system was implemented to prevent damage to the newly installed furnace coils in the future.

**DID YOU KNOW?**

Hydrogen is a clean fuel – and when it is consumed as energy, the only emission is plain water.