

11.7 ENERGY

Because it is both an environmental and a cost factor, the consumption of energy is a material parameter in steel production. Activities aimed at the efficient use of energy thus have a long tradition at voestalpine. In conventional, integrated steel mills, efficiency gains are achieved through the continual optimization of process gas recycling, the use of waste heat potentials, and comprehensive energy management systems.

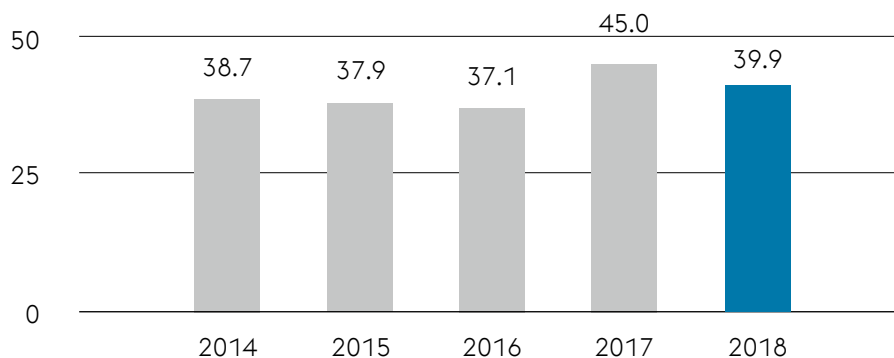
The total energy consumption of the voestalpine Group in the calendar year 2018 was 39.9 TWh (4.1 MWh/t of product), with Linz and Donawitz (the two facilities producing crude steel) as well as the newly built direct reduction plant in the United States recording the highest energy consumption by far.

Due to the extended operational shutdown during the complete overhaul of the Group's largest individual blast furnace (Blast Furnace A) in Linz, Austria, total energy consumption in absolute terms declined in 2018, but specific consumption remained largely unchanged year over year.

Coal (47.2%), coke (14.4%), and natural gas (31.1%) are the sources of energy that account for the lion's share of the energy consumed. By-product gases resulting from processes are fully reused in the steelmaking facilities' own power plants, with the result that their power needs are covered almost entirely through the in-house generation of electricity. Externally sourced electricity accounts for a mere 6.4% of total energy consumption.

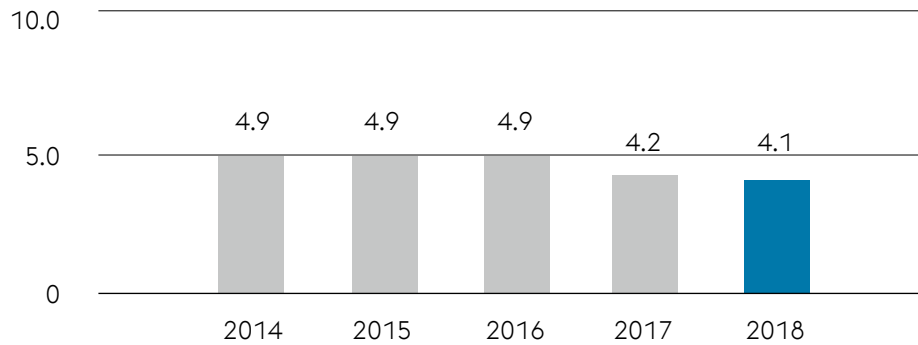
TOTAL ENERGY CONSUMPTION

TWh

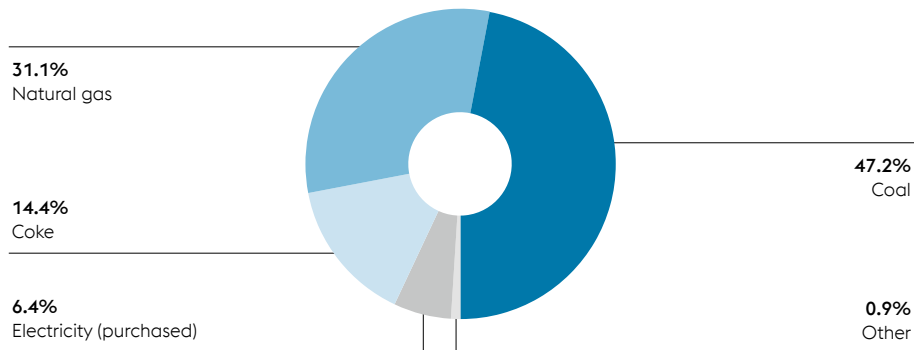


SPECIFIC TOTAL ENERGY CONSUMPTION

MWh/t of product



PERCENTAGE OF ENERGY SOURCES 2018



11.8 BIODIVERSITY

voestalpine treats all local ecosystems at its production facilities responsibly and contributes actively to the maintenance of biodiversity.

For example, some 20,000 m² of flower pastures were created in Linz, the Group's largest production site. The resulting wildflower pasture provides an additional source of food for many types of insects—especially bees. "Insect hotels"

also provide breeding spaces for rare species. A project for establishing and managing several bee colonies at the site is currently being implemented; voestalpine employees with many years of beekeeping experience take care of them.