

GASCADE

THE GAS
COMPRESSOR
STATION
WEISWEILER

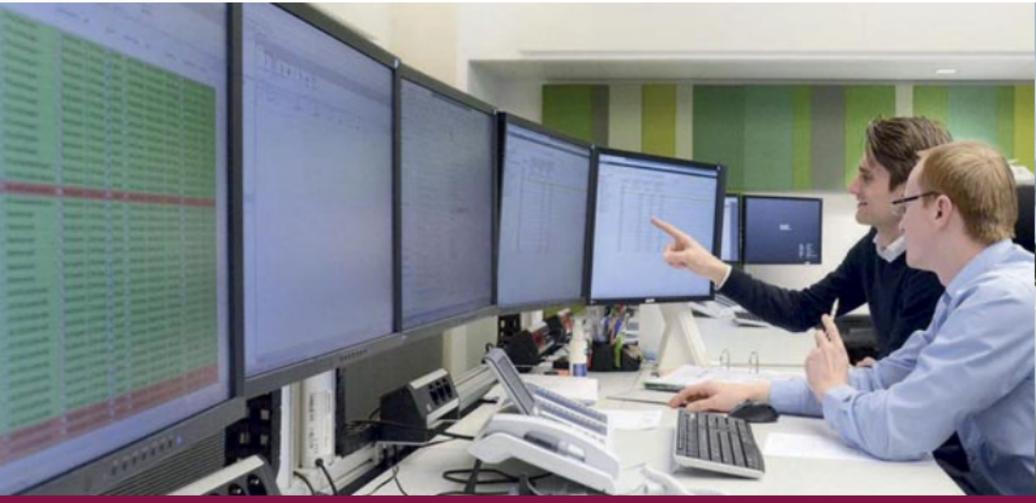


GAS FOR EUROPE



On the path to climate-neutral supply with renewable energies, the gas market is changing: Declining natural gas production within Europe, the diversification of supply sources, and the development of new sources such as hydrogen and climate-neutral gases are issues that also concern GASCADE. In line with the climate targets, we are already developing approaches to make our pipeline network in the middle of Europe fit for the energy future. We take natural gas and climate-neutral gases to where they are needed. Our system receives the gas from transit pipelines at Germany's borders and transports it reliably to consumers in Germany and Europe. We directly connect a total of five European countries, thus making a significant contribution to supply security, both now and in the future.

PRESSURIZING GAS



From the source to where it's used, the gas travels many thousands of kilometers in pipelines measuring up to 1.4 meters in diameter. During this journey it loses pressure as the molecules rub against each other and the inside of the pipe.

To keep the density and hence the transport speed of the gas constant, it is compressed in gas compressors.

These are the core of the eleven GASCADE compressor stations that are spaced at around 250 kilometers apart in the pipeline network.

What happens in the compressor?

Several impellers are securely arranged behind each other on a rotating, cylindrical shaft in a steel casing and rotate at a speed of up to 3,600 and 10,300 revolutions per minute. This spins the molecules of the inflowing gas outward, thus compressing them more densely together. The compressors are driven by gas or electric motors located in enclosures in compressor houses for the purpose of noise control. The gas' volume is reduced when it is compressed. That means more energy can be transported through the pipeline. The pipeline's capacity increases – and so does supply security for customers.

WEISWEILER COMPRESSOR STATION



In North Rhine-Westphalia, the Weisweiler compressor station situated between Cologne and Aachen ensures the right pressure in the WEDAL (West Germany Pipeline Link) pipeline. Three compressor driven by electric motors compress the gas that the employees transport from here both to the west and the east, guaranteeing the exchange of gas quantities in Western Europe.

Compressed safely

The compressors compress up to a million cubic meters of gas an hour – with a maximum pressure of up to 100 bar. By comparison: The average European household uses around 2,700 cubic meters per year.

With gas quantities like this, safety at the compressor station has top priority, and that's exactly what the GASCADE employees on site ensure. In addition, they look after a 120-kilometer-long section of the WEDAL pipeline and several customer stations.

The station has already been connected to the network since 1999, and a further compressor unit was added to it in 2013. The site covers around 0.8 hectares and currently has a utility and an operations building, as well as a workshop and a warehouse, among other things.

TECHNICAL INFORMATION

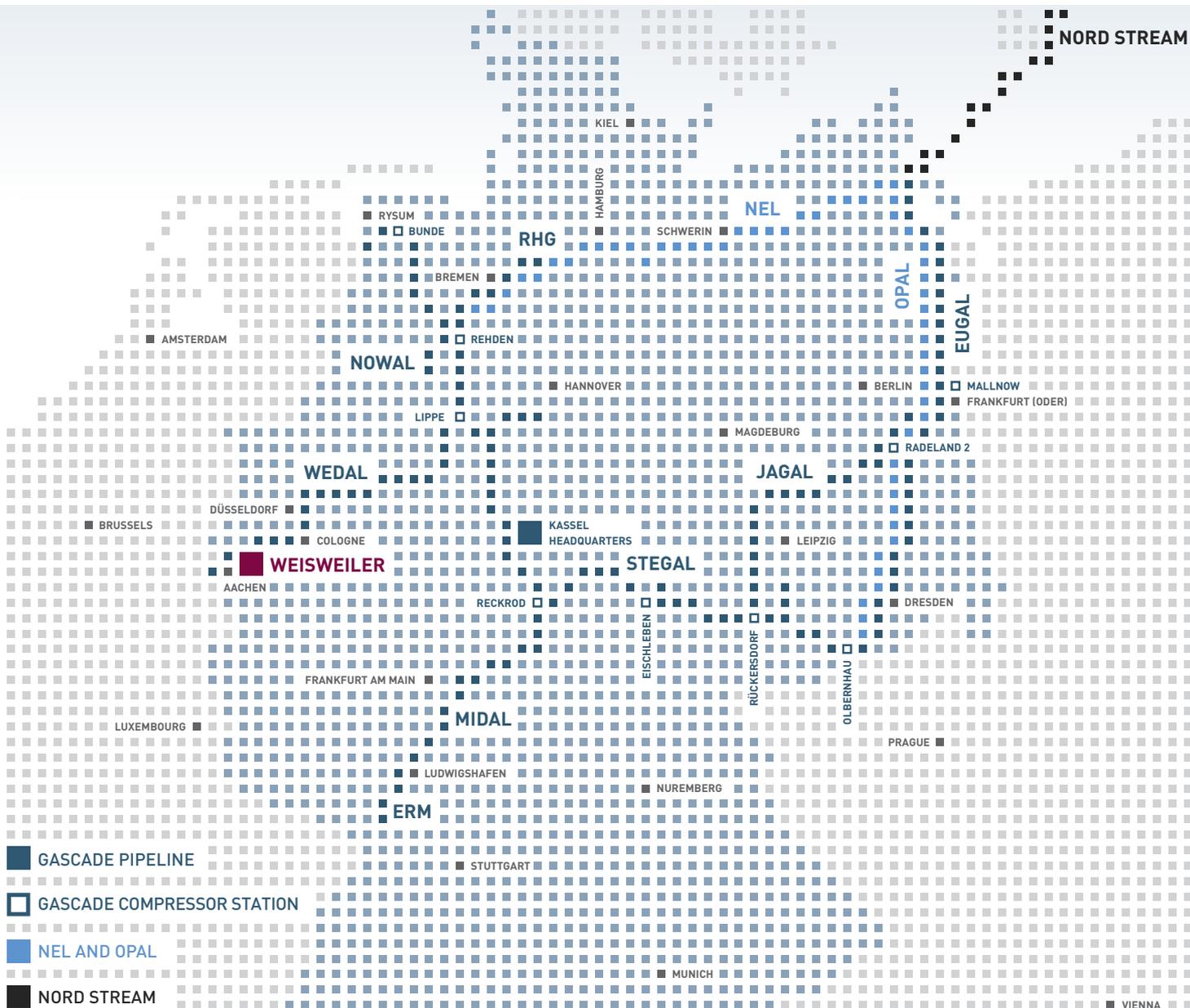


- 1 1 Service building and workshop
- 2 Compressor buildings
- 3 Gas coolers

TECHNICAL DATA

Compressor output	37.5 MW (3 x 12.5 MW)
Number of compressors	3
Type of drive	Electric motor
Max. operating pressure	100 bar
Capacity (m ³ /h at normal conditions)	0.85 million
Commissioned in	01/99

GASCADE'S PIPELINE NETWORK



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