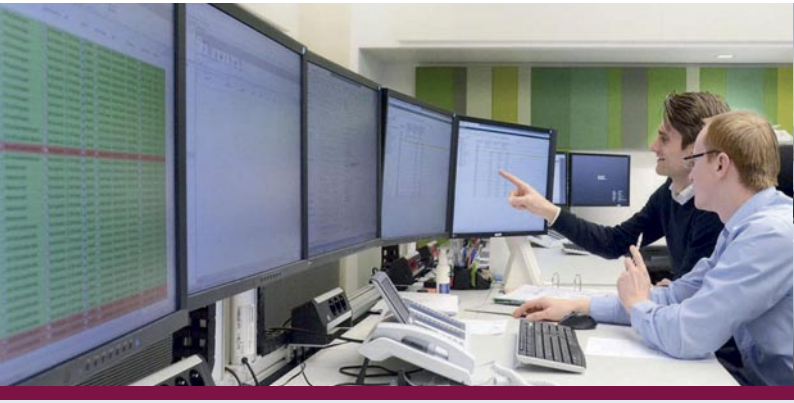
GASCADE

THE GAS COMPRESSOR STATION WEISWEILER

NATURAL GAS FOR EUROPE

On the path to climate-neutral supply with renewable energies, in other words, solar, wind and water, gas plays an important supporting role in Europe, since it acts as a bridge, scoring points with its large reserves, low emissions and secure transport routes. And GASCADE guarantees the latter: We make sure that gas within Germany's borders reliably reaches its respective destinations. After all, while both industrial and private demand for gas is going up, the production volume within Europe is going down. That's why gas in our pipeline network moves from the major sources in Russia and Northwest Europe both to consumers in Germany and its neighboring countries of Belgium, France, the Netherlands, Poland and the Czech Republic, and on to Southeastern Europe.

PRESSURIZING GAS



From the source to where it's used, natural 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 natural gas compressors.
These are the core of 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 natural gas quantities in Western Europe.

Compressed safely

The compressors compress up to a million cubic meters of natural 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.

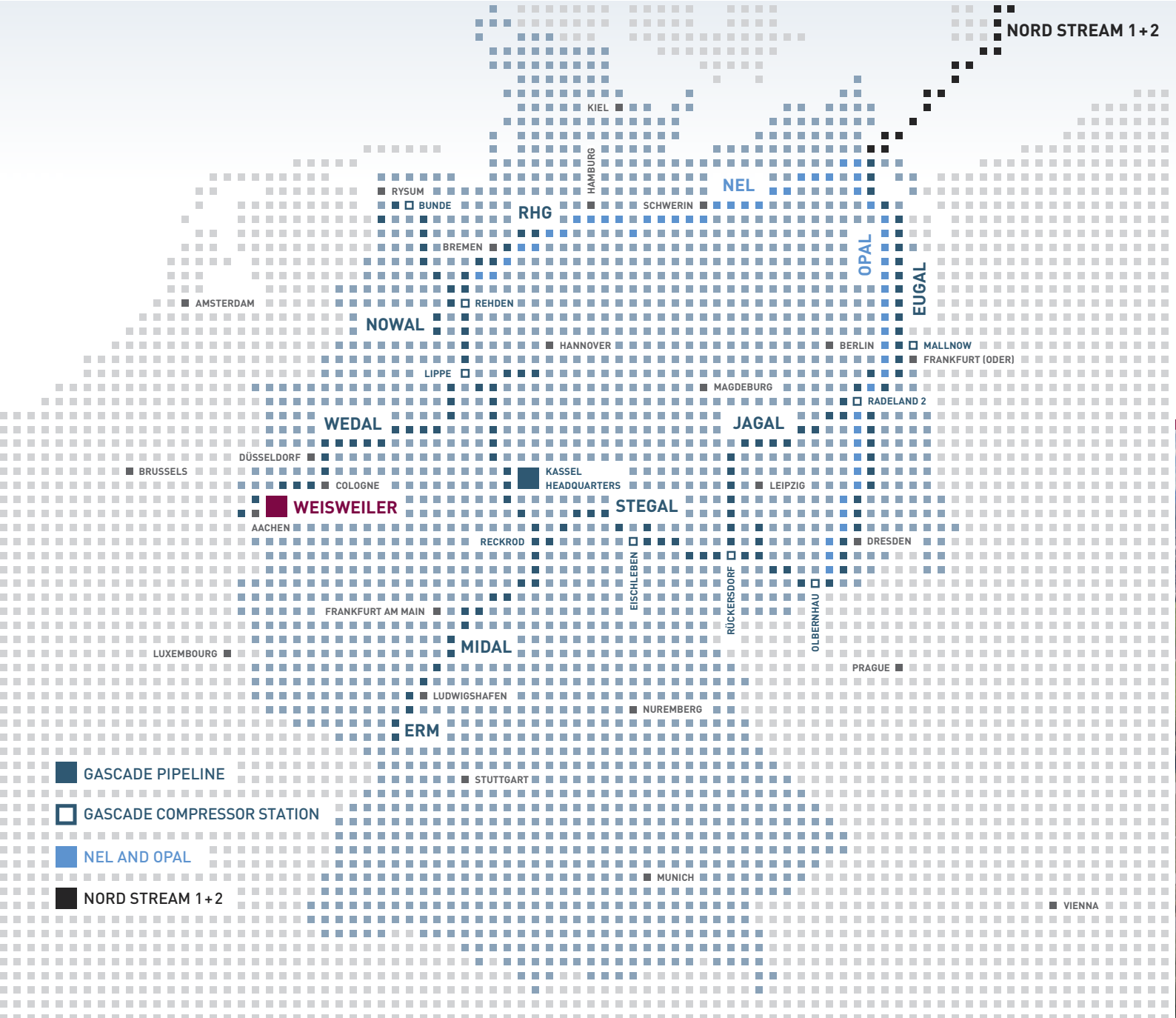
The station has already been connected to the network since 1999, and a further compressor unit was added to it in 2013. The site covers around 0.8 hectares and currently has a utility and an operations building, as well as a workshop and a warehouse, among other things.

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



CONTACT

GASCADE Gastransport GmbH

Headquarters
Kölnische Straße 108–112
34119 Kassel, Germany
Phone +49 561 934 0
Fax +49 561 934 1208

Weisweiler Compressor Station
Am Kraftwerk 1
52249 Eschweiler, Germany
Phone +49 2403 99001 24 01

www.gascade.de