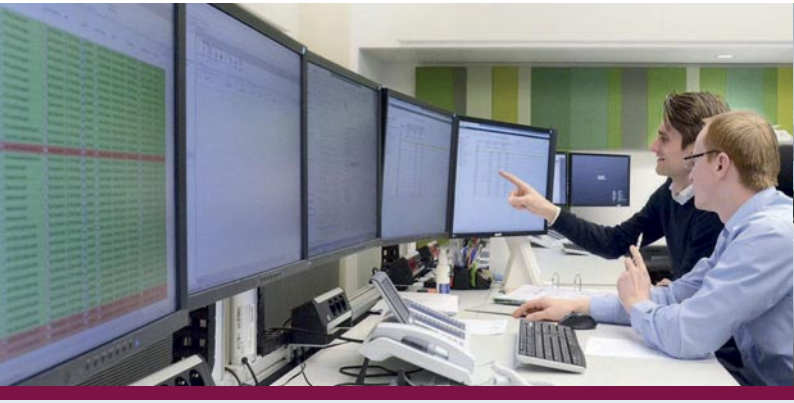
GASCADE

THE GAS COMPRESSOR STATION LIPPE

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 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.

LIPPE COMPRESSOR STATION

The Lippe compressor station is located near Teutoburg Forest, southwest of the town of Bad Salzuflen. It is where the MIDAL (Central Germany Pipeline Link) and WEDAL (West Germany Pipeline Link) pipelines meet. Gas can be sent from here in all directions.

A total of three compressors connected in a row compress the gas to generate higher pressure in the pipelines. This compression process allows WEDAL, for example, to transport considerably more gas.

A maximum capacity of 1.2 million cubic meters of natural passes through the station per hour. By comparison: The average European household uses around 2,700 cubic meters per year.

Safe on site

To make sure this gas reaches the respective destinations safely, the GASCADE employees in Lippe, in addition to the compressor station, also look after and monitor sections of the MIDAL and WEDAL pipelines covering a length of 456 kilometers.

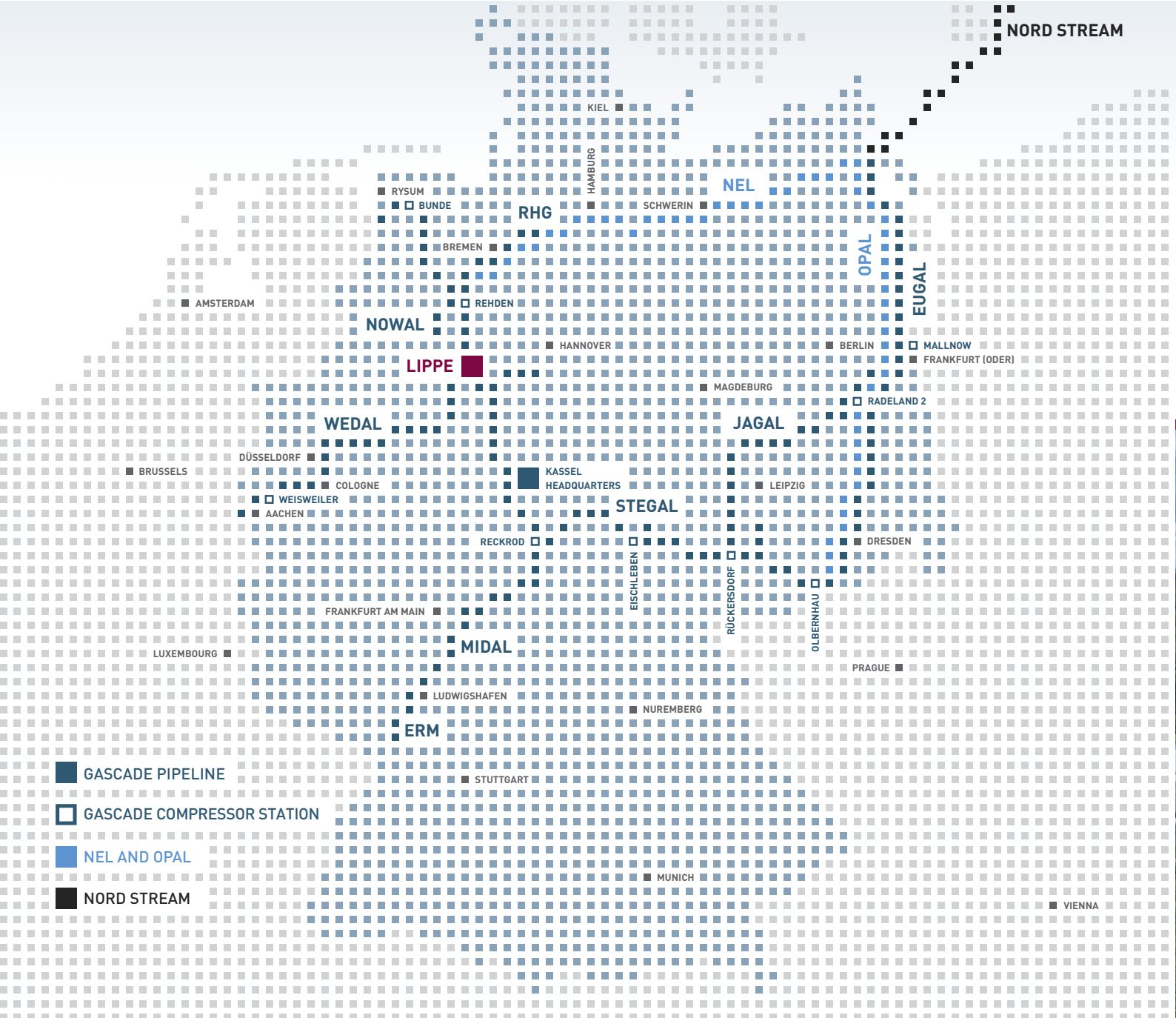
The compressor station has been connected to the network since 2006 and was expanded in 2013. The site covers eight hectares and, alongside the three gas compressors, has a utility and an operations building, and a workshop.

TECHNICAL INFORMATION

1 Fuel gas conditioning and warehouse
2 Service building and workshop
3 Compressor buildings
4 Gas coolers

TECHNICAL DATA	
Compressor output	40.8 MW (2 x 12.9 MW and 1 x 15 MW)
Number of compressors	3
Type of drive	Gas turbine SGT-400
Max. operating pressure	100 bar
Capacity (m^3/h at normal conditions)	1.15 million
Commissioned in	10/06

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

Lippe Compressor Station
Ellernbrede
32107 Bad Salzuflen, OT Lockhausen, Germany
Phone +49 5222 369694 2601

www.gascade.de