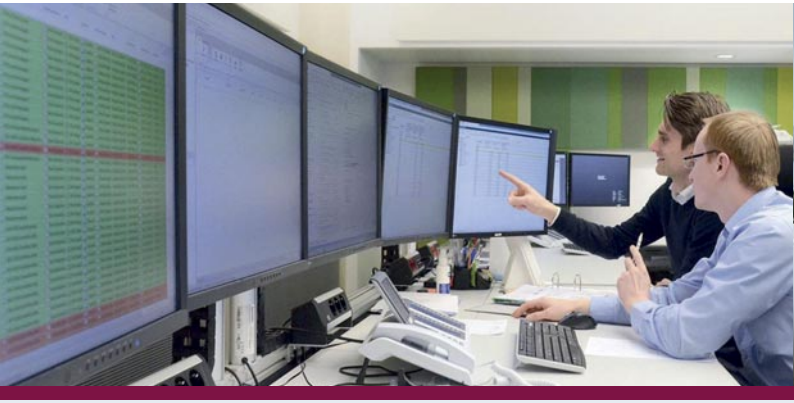
GASCADE

THE GAS COMPRESSOR STATION EISCHLEBEN

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.

EISCHLEBEN COMPRESSOR STATION

Three gas turbine-driven compressor units in Eischleben close to Erfurt, the capital of the federal state of Thuringia, have been ensuring the right pressure in the GASCADE pipeline network since 2006. Over an area of 7.5 hectares in total are, alongside the compressor buildings, a utility and an operations building.

Link between STEGAL and MIDAL

This location plays an important role in the transportation of gas through STEGAL (Saxony-Thuringia Gas Pipeline). The pipeline is 314 kilometers in length and connects Olbernhau with MIDAL (Central Germany Pipeline Link) near Reckrod in Hesse.

The STEGAL loop went on stream in March 2006 to satisfy growing demand for import capacities for Russian natural gas. The Eischleben station is located on this parallel route. As purely a pressure-boosting station, it was connected to the GASCADE Gastransport network in spring 2005. Three gas turbines of different types with a total combined output of 85 megawatts can compress up to 1.9 million cubic meters of natural gas an hour here from around 50 to 90 bar. By comparison: The average household uses around 2,700 cubic meters per year.

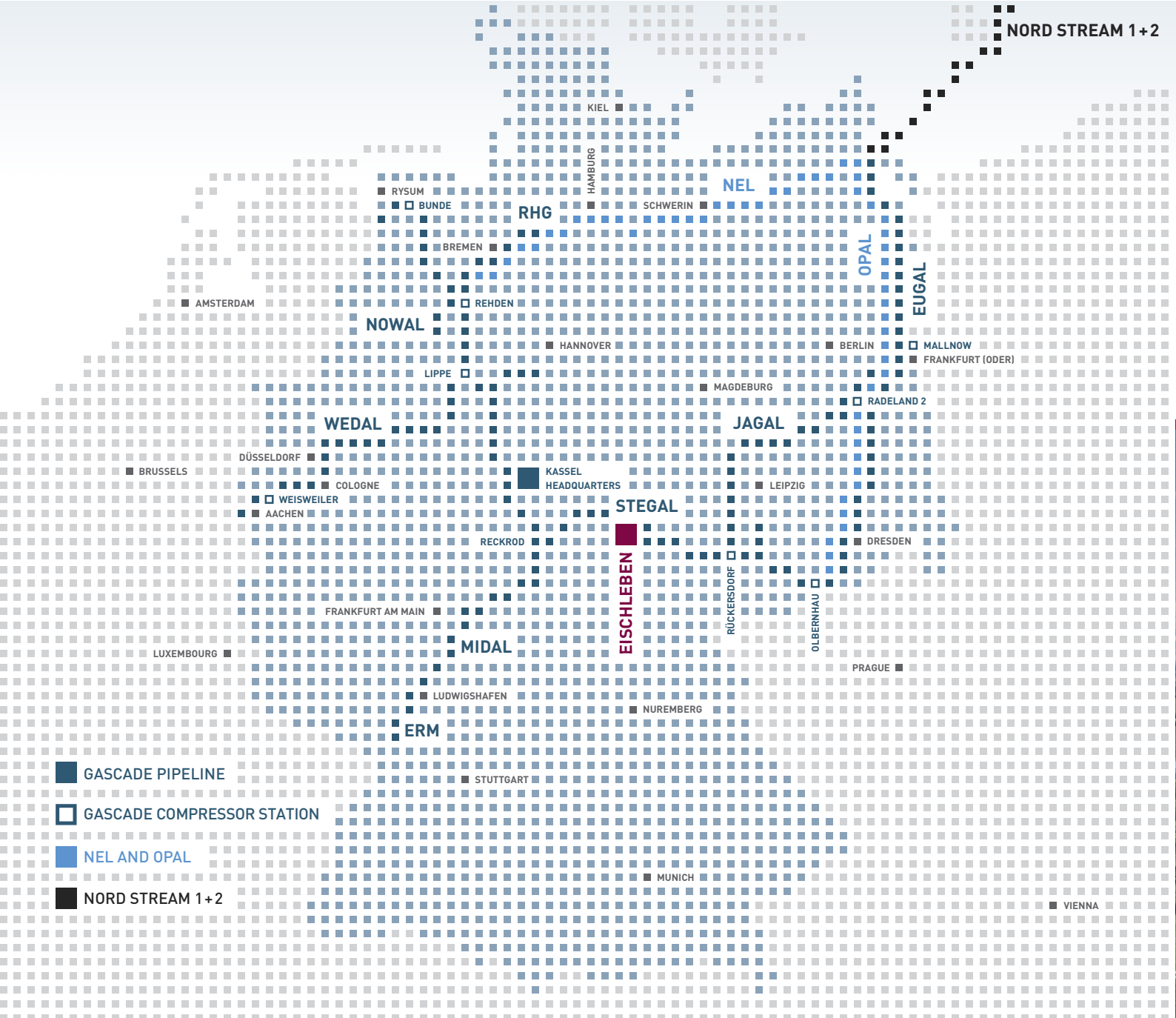
The GASCADE employees at the Eischleben site ensure that everything runs smoothly.

TECHNICAL INFORMATION

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

TECHNICAL DATA	
Compressor output	Approx. 85.4 megawatts (2 x 30 MW and 1 x 25.4 MW)
Number of compressors	3
Type of drive	Gas turbine SGT 700, gas turbine FT8
Max. operating pressure	90 bar
Capacity (m^3/h at normal conditions)	1.91 million
Commissioned in	04/05

GASCADE'S PIPELINE NETWORK



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