

**GASCADE**

# THE GAS COMPRESSOR STATION RADELAND 2

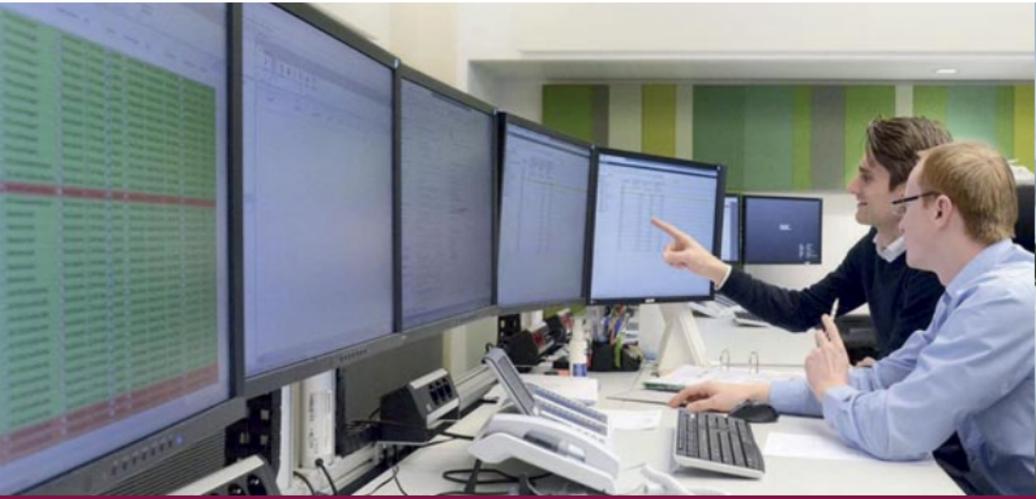


# GAS FOR EUROPE



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.

## RADELAND 2 COMPRESSOR STATION



South of Berlin in Baruth, Brandenburg, GASCADE has built one of the most modern compressor stations in Western Europe. The station is part of the infrastructure for EUGAL (European Gas Pipeline Link). On the site, covering an area of more than ten hectares, three compressors raise the pressure of the gas, after more than 270 kilometers of travel through EUGAL, back to around 100 bar. At the station, the gas can be routed both to the west and the south.

### **Step by step**

The gas is first cleaned in natural gas filtering systems, and part of it is processed for operating the gas turbines. The turbines drive the compressors. During the process, the gas heats up. Air coolers bring it back to the optimum operating temperature so that it can continue on its journey. A gas pressure control and measurement system also checks the quantity and quality of the gas before it flows westward through the JAGAL pipeline and southward through EUGAL.

# TECHNICAL INFORMATION

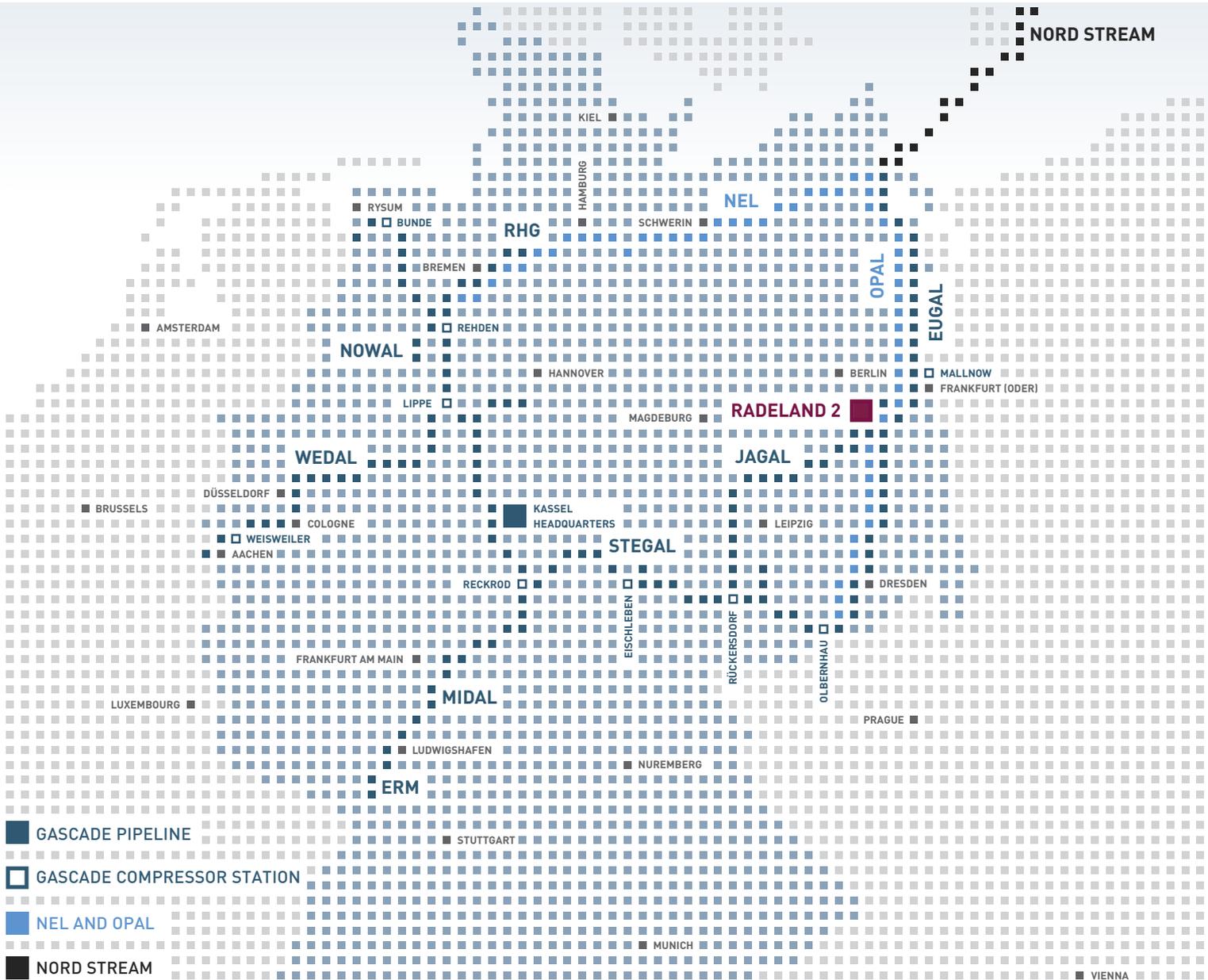


- |                         |   |
|-------------------------|---|
| 1 Operations building   | 6 Intake filters                              |
| 2 Workshop              | 7 Gas pressure control and measurement system |
| 3 Gas coolers           | 8 Boiler house                                |
| 4 Compressor buildings  | 9 Warehouse                                   |
| 5 Fuel gas conditioning |   |

## TECHNICAL DATA

Number of compressors	3
Compressor output	66.3 megawatts (3 x 22.1 MW)
Type of drive	Solar Titan 250 gas turbine
Max. operating pressure	100 bar
Capacity (m <sup>3</sup> /h at normal conditions)	5.25 million
Commissioned in	April 2021

# 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

### Radeland 2 compressor station

Zur Freileitung 2

15837 Baruth / Mark, Germany

Phone +49 33704 7088-0

[www.gascade.de](http://www.gascade.de)