



# SO THAT THE LIGHTS NEVER GO OUT

WHAT AMPRION IS DOING  
FOR THE POWER SUPPLY

**Amprion GmbH**

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[amprion.net](http://amprion.net)

# AMPRION - A BRIEF PROFILE

## 11,000 KILOMETRES

is the length of our transmission grid.  
It extends from the North Sea  
to the Alps.

## 29 MILLION PEOPLE

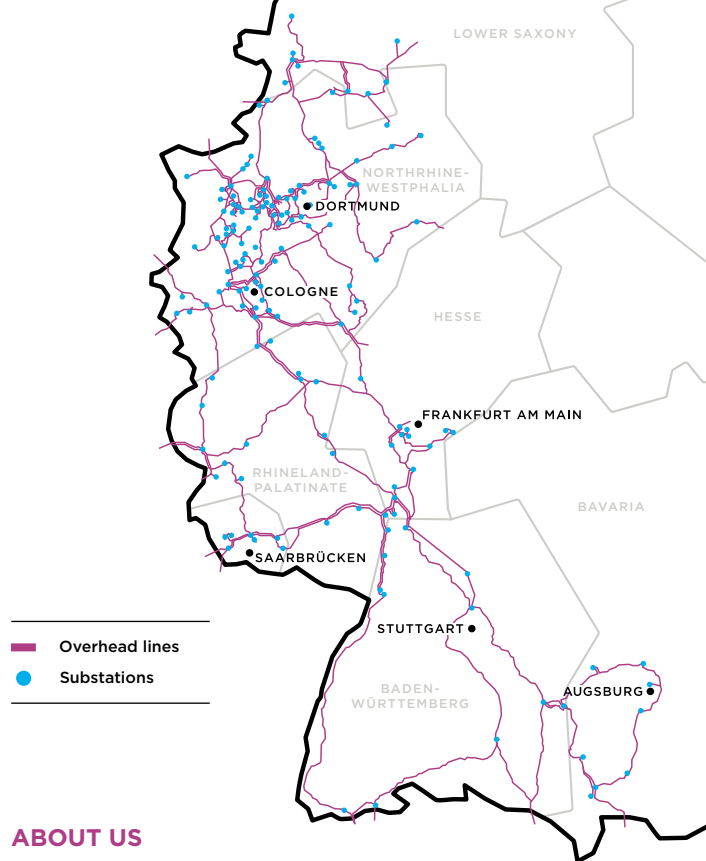
live in our grid area.  
Around a third of Germany's economic  
output is generated in this region.

## 27.5 BILLION EUROS

is the amount that we will be investing  
in upgrading and expanding our grid over  
the next five years until 2028.

## 2,700 EMPLOYEES

play their part in ensuring Amprion  
fulfils its legal mandate.



## ABOUT US

Amprion is one of four transmission system operators in Germany. Our extra-high-voltage grid transports electricity across an area which extends from the North Sea to the Alps. Our power lines are the lifelines of society, securing the quality of life and the jobs of millions of people.

Amprion is paving the way towards a climate-neutral energy system, where energy from the wind and sun can get safely and reliably to where it is needed. That's why we are expanding the grid and supporting industry in the transformation to a climate-friendly economy.

We are committed to mankind, the environment and the economy. It is out of this solidarity that we do what we do and work with others to find the best solutions.

So that the lights never go out.

Amprion connects.



# OUR MISSION

Our electricity grid has a similar structure to that of the road network: there are stretches for long-distance “traffic” – the transmission grid – and stretches for local “traffic” – the distribution grids. Amprion and three other transmission system operators are responsible for the “long-distance routes” in the German electrical network. We operate one of Germany’s largest transmission networks with 11,000 kilometres of overhead lines.

## WE SECURE THE QUALITY OF LIFE OF MILLIONS OF PEOPLE

Our overhead lines help to supply millions of people and thousands of companies with electricity, securing the quality of life and jobs in a region that generates around one third of Germany’s economic output. Amprion’s transmission network connects large electricity generators with large electricity consumers. This includes both distribution system operators, which are responsible for the regional power supply, and electricity-intensive enterprises from the chemical industry and aluminium- and steel-producing companies.

We keep the power grid stable and safe. This task is more than just a legal mandate. We bear the responsibility for ensuring that electricity flows to millions of people. To this end, our experts play a key role in system management. They monitor and control the transmission grid, keeping power generation and consumption in equilibrium at all times, so that the grid frequency remains constant and the grid stable.

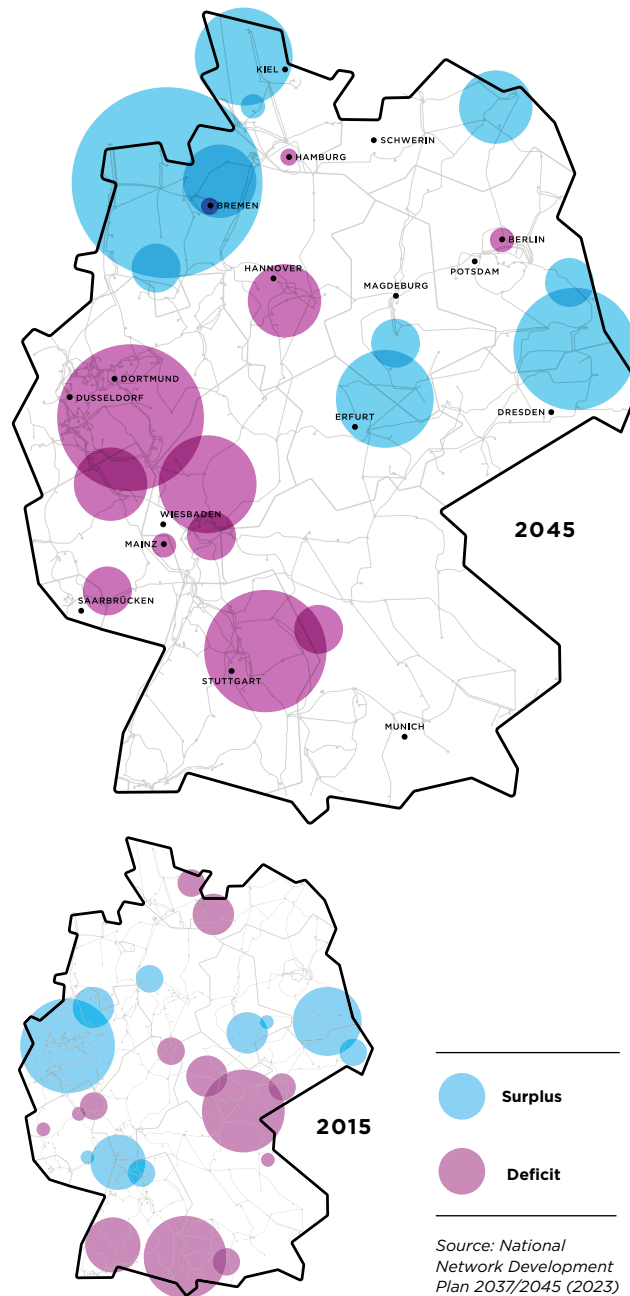
## WE ARE PAVING THE WAY TOWARDS A CLIMATE-NEUTRAL ENERGY SYSTEM

Germany is to become energy-neutral by 2045. Amprion is paving the way towards a climate-neutral energy system. Electricity from renewable energies must be able to reach the areas where it is needed – safely and reliably. To ensure this, over the next five years, we intend to invest over 27.5 billion euros in upgrading and expanding our grid. In the future, offshore wind farms in the North Sea will also be connected, via Amprion's overhead lines, to centres of consumption in western and southern Germany, where industrial companies are increasingly wishing to use renewable energies in their production processes. We are planning more efficient grid connections together with these companies.

At the same time, the energy transition is presenting our transmission grid with new challenges: wind farms and photovoltaic power plants feed electricity into the grid at levels that fluctuate greatly depending on the weather, while elsewhere, power plants that continuously generate electricity are being taken off the grid. Complexity in the grid is clearly increasing. Innovative technologies such as reactive power compensation systems are helping to tackle these challenges. This is how we are uniting climate protection with grid stability. And we are continuing to work on new ideas for a climate-neutral, safe and efficient energy system.

By 2045, electricity from renewable energies will be generated in areas where the weather is most favourable rather than in areas where there is the greatest need. The energy landscape is changing in a fundamental way: in the North, the expansion of wind farms will lead to high electricity surpluses on a yearly basis. Meanwhile, the industrial consumer centres are located in the West and South and will become regions into which electricity is imported. Amprion is expanding the transmission grid so that these energy surpluses and deficits can be balanced out.

## REGIONAL POWER BALANCE FOR THE YEAR AS A WHOLE



## WE BEAR RESPONSIBILITY FOR THE ENTIRE GRID

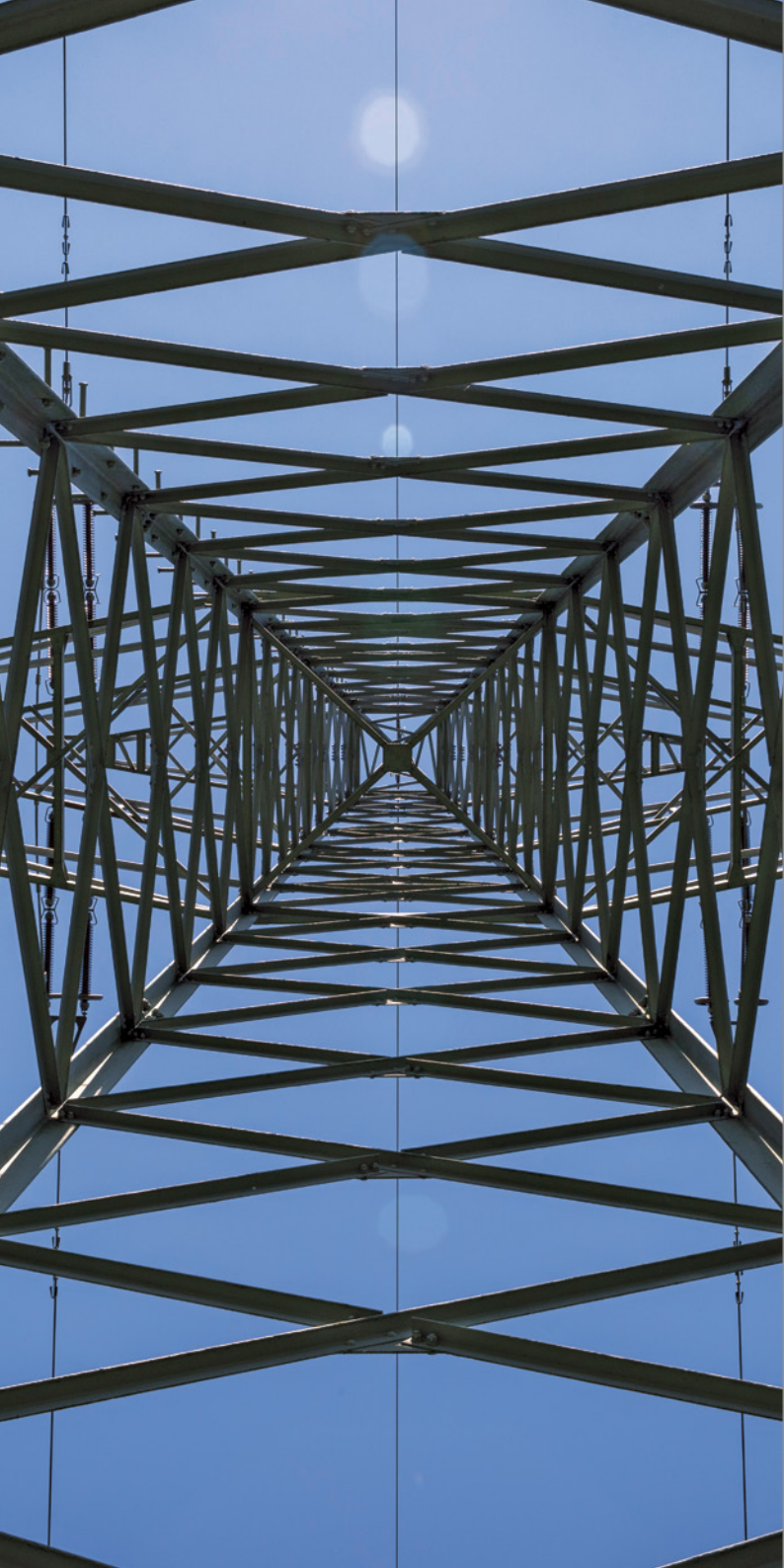
Our grid is part of the German and European interconnected grid. It is connected to other transmission systems in Germany and Europe by what are known as “interconnection lines”.

We perform overarching tasks in the German interconnected grid, coordinating flows of electricity between the grid areas of Germany’s four transmission system operators. This involves coordinating all planned transmissions of electricity between the control areas for the following day, as each supplier must have a corresponding recipient so that power generation and consumption are in equilibrium at all times. We also check that the planned transmission of electricity

is carried out correctly as part of what is known as “system balancing”. We also carry out similar tasks for the interconnected operation of the transmission network of Belgium, Bulgaria, Denmark, Luxembourg, the Netherlands, Austria, Poland, Romania, Slovakia, the Czech Republic and Hungary. Therefore, unlike any other grid operator, Amprion stands for a well-functioning interconnected network in Germany and Europe.

By helping to operate the European interconnected network safely and efficiently, we nurture the European internal market for electricity. Our grid also functions as a physical platform for the continuously growing electricity trade. We make it accessible to all market participants – on a non-discriminatory basis and at fair market prices.





## HOW WE FULFIL OUR OBLIGATIONS

As a transmission system operator, Amprion carries particular responsibility for the power supply. This is described by the legislator in the German Energy Industry Act (Energiewirtschaftsgesetz): “Operators of energy supply systems are obligated to operate and maintain, as well as optimise, strengthen and develop as needed, a safe, reliable, and efficient energy supply system in a non-discriminatory manner to the extent that this is economically feasible.” The legislator also specifies how we are to fulfil our obligations.

### WE WORK IN A REGULATED MARKET

As a natural monopoly, Amprion does not operate on a free market basis, but is a regulated company in accordance with our legal mandate. This means that: We have no competitors in our grid area which is judicious from the point of view of macroeconomics. Our customers pay grid fee for the transmission of electricity, which are monitored by the Bundesnetzagentur as the regulating authority. In a figurative sense, it sets the boundaries within which we are to conduct our business.

Like any other company, Amprion can generate profit by conducting business in a cost-conscious and efficient manner. In this respect, the legislator introduced an incentive regulation scheme in 2009 with regular cost and efficiency checks: The Federal Agency specifies an upper limit for revenues from grid fees for a specific time frame in the future – known as “regulation periods” – based on the anticipated costs. If the actual costs turn out to be lower, Amprion can make a profit.

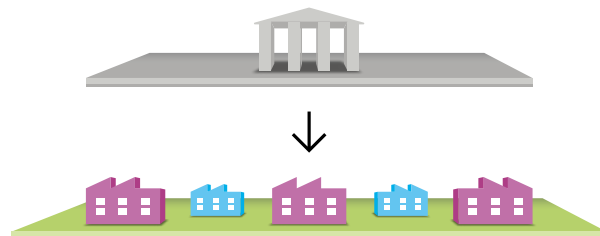
## OUR SHAREHOLDERS CONTRIBUTE EQUITY TO EXPAND THE GRID

Amprion is 74.9%-owned by a consortium of predominantly German institutional investors from the insurance sector and pension funds. RWE AG holds a 25.1 share in Amprion. We receive equity from our shareholders so that we can invest in the grid's expansion.

If we build a new overhead line, we can use up to 40% equity. And we take out credit to cover the remaining maximum 60% of the investment amount. The Bundesnetzagentur checks that the lending rates that we pay are in line with market requirements. It also specifies the interest rate that we receive for any equity that we use for the grid expansion investments.

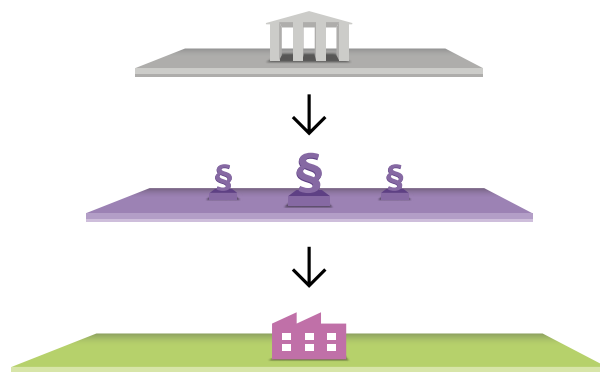
## THE DIFFERENCE BETWEEN A REGULATED MARKET AND A FREE MARKET

 Government  Market  Regulatory authority



### Competitor on the free market

Many companies share a market between them and are in competition with each other. The government lays down the legal framework conditions.



### Monopoly in a regulated market

Only one company supplies the market. The government commissions a regulatory authority to monitor the natural monopoly.



# DO YOU HAVE ANY OTHER QUESTIONS?

## PLEASE FEEL FREE TO CONTACT US

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## PHOTOS

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