

INTERVIEW WITH DR MICHAEL SCHÄFER, STRATEGIC GRID PLANNING

DR SCHÄFER, GERMANY HAS A TARGET OF GENERATING 80 PERCENT OF ITS NATIONWIDE POWER SUPPLY FROM RENEWABLES LIKE SOLAR OR WIND POWER BY THE YEAR 2050.

AS AN EXPERT IN STRATEGIC GRID PLANNING, OUR QUESTION FOR YOU IS: WHAT DOES THIS ENERGY POLICY TARGET MEAN FOR THE TRANSNET BW TRANSMISSION SYSTEM?

As a transmission system operator, we at TransnetBW have two key tasks:

We are responsible for ensuring **security of supply at all times in Baden-Württemberg**, with a population of eleven million and countless internationally significant industrial companies.

In addition, we work in tandem with our neighbours in France, Austria and Switzerland to transmit electrical power throughout our entire network to ensure a functioning electricity market. **That makes us part of the European transmission system.**

The process of **energy transition is creating huge changes in the energy landscape**: nuclear power plants are disappearing and coal-fired power plants are generating less and less electricity. The huge wind farms along the North Sea and Baltic Sea and solar panels in the south are creating new centres of renewable energy generation. These new generation hubs now have to be linked to the consumer centres in metropolitan areas.

So in future we will have to generate increasingly large volumes of power from renewables and transport it over longer and longer distances. The power fed into the grid fluctuates according to the weather conditions and seasons. **To avoid bottlenecks and overloading, we will have to continually adapt our transmission network to meet these new challenges.**

TRANSNET BW AND THE THREE OTHER GERMAN TRANSMISSION SYSTEM OPERATORS WILL INCLUDE ALL GRID ADJUSTMENT MEASURES IN THE GRID DEVELOPMENT PLAN. CAN YOU BRIEFLY SKETCH FOR US THE PROCESS OF DEVISING THAT COMPLEX MASTER PLAN?

In the **Grid Development Plan we define on a statutory basis** a needs-based target grid for the future, with due consideration of the climate-change goals of the energy transition. **The Grid Development Plan is devised by a systematic process with clearly defined roles.** Every two years, Transnet BW will work with the other three transmission system operators on the measures required to meet our obligations in the future.

Grid Development Planning is based forecasting future energy generation volumes and future energy consumption. This **future scenario** is then compared to the current state of

the grid and its transmission capacity. This allows us to establish which points are likely to cause bottlenecks or overloading in the future.

We then plan and define the **required measures** to avoid any future vulnerabilities. **In doing so, we strictly adhere to the NOVA principle**, which means that before building any additional lines, we first check that the current grid is optimised and strengthened.

WHY IS THE NOVA PRINCIPLE A SENSIBLE APPROACH?

NOVA allows us to meet the central imperative **of the German Energy Industry Act, that of economic efficiency**. It also means that we apply the most space-saving approach possible in our densely populated country and thus keep the impact on people and the environment as minimal as possible.

Another reason why the NOVA principle is very applicable for us at TransnetBW, is that we have recourse to a very robustly planned grid. In some cases our systems are already many years old but they are in good condition and the power line routes are still up-to-date. So in many places we can use clever ideas and innovations to come up with **good retrofitting solutions**. **This is also reflected in our statistics**, as most grid development measures taken by TransnetBW are measures to optimise and strengthen the grid.