VTG POLICY BRIEF

ENERGY SECURITY IN GERMANY AND THE ROLE OF RAIL

Dear Reader,

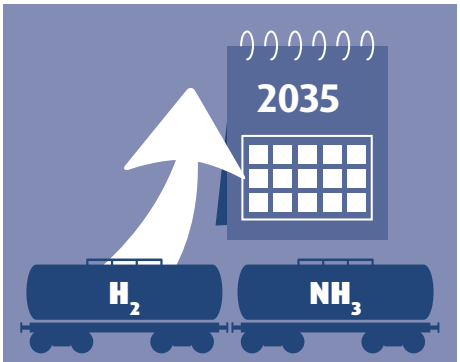
Russia's war of aggression against Ukraine has had a massive impact on energy transport flows in Germany. Gas is no longer imported mainly by pipeline, but is increasingly arriving at European seaports in the form of liquefied natural gas (LNG). Coal-fired power generation is experiencing a temporary renaissance to guard against blackouts in the winter.

Rail is the ideal medium of transport to handle the logistical needs of energy supplies. Rail freight companies carry large volumes over long distances – safely, reliably and sustainably. As such, they play a critical role in securing the supply of energy. To guarantee that things stay this way in the medium term, alternative energy sources such as hydrogen will in future also need rail to move them from ports to production facilities throughout the country.

This Policy Brief examines rail-based energy transportation in Germany and discusses what must happen to increase its capacity. Because there can be no doubt: The energy supply needs a robust rail network – both today and tomorrow.

I wish you a thought-provoking read.

Sven Wellbrock
Chief Operating Officer Europe &
Chief Safety Officer of VTG



19,000

trips by entire block trains could be needed every year as of 2035 to transport hydrogen.

Source: SRP Consulting (August 2022)
https://srpconsulting.de/wp-content/uploads/2022/08/SRP-Consulting_DB-Netz-AG_H2-Transporte-auf-der-Schiene.pdf

CONVENTIONAL ENERGY TRANSPORTATION: STRONG DEMAND BUT CONGESTED TRACKS

Without rail freight, Germany's energy supply would currently be in danger: Of all modes of transport, rail accounts for the highest share of coal transports, for example. However, strong demand runs into the problem of insufficient capacity. **RAIL FREIGHT IS THUS UNABLE TO REALIZE ITS FULL POTENTIAL, FOR SEVERAL REASONS:**

20.000
tons of coal are needed every day by a power plant working at full capacity

120
trucks are needed to replace a single coal block train

3.000
tons of coal can be transported by a single block train

EXPANDING AND MAINTAINING THE RAIL NETWORK HAS BEEN NEGLECTED FOR TOO LONG. While too few new lines have been built, existing lines have been closed down.

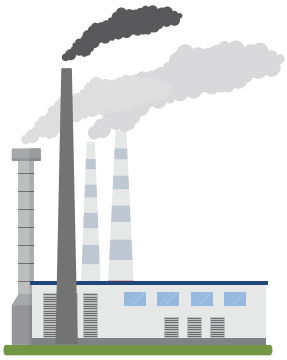
INEFFICIENT CONSTRUCTION SITE MANAGEMENT blocks important supply routes for months on end.

Since freight wagons have lifecycles of 40 years and more, it is **NOT POSSIBLE FOR COMPANIES TO SOURCE NEW WAGONS AT SHORT NOTICE TO TRANSPORT COAL.**

NEW ENERGY: DEMAND FOR TRANSPORT BY RAIL WILL CONTINUE TO INCREASE

Coal to be phased out by 2030, climate neutrality to be achieved by 2040: The path ahead is abundantly clear, and (organic) LNG, hydrogen, ammonia and synthetic fuels will already play an important role in the next few years. By 2030 at the latest, Germany will have to import a large proportion of these low-emission energy sources, adding to demand for transportation from seaports to consumers. However, rail can fulfill its potential only if the necessary infrastructures and regulatory conditions are put in place now.

CARBON CAPTURE STORAGE: TRANSPORTING CO_2 EFFICIENTLY BY RAIL



Industrial processes (in cement and lime production, for example) cannot be made carbon-neutral in the foreseeable future. Carbon capture and storage is therefore essential if we are to meet climate targets. Countries such as Norway are already implementing concepts to store CO_2 – and are using rail to transport it. The new value chains that are emerging as a result must be factored into the planning of infrastructure.

SAFEGUARDING ENERGY SUPPLIES BY STRENGTHENING RAIL

Going forward, a robust rail system will be critical to our energy supply. Government and industry must work together to chart the right course today.

THE INFRASTRUCTURE MUST BE MODERNIZED AND EXPANDED AS A MATTER OF URGENCY – not just tracks, but also modern sidings. Existing lines should be shut down only in exceptional and well-justified cases. The build-up of a transshipment infrastructure for new energy forms at ports must be accelerated, with due provision made for a reliable energy supply.

DIGITAL, CROSS-BORDER SITE MANAGEMENT IS IMPERATIVE to minimize impairments to rail freight traffic. Modernization programs must be announced in advance and coordinated with all stakeholders in order to avoid delays and cancellations, but also to ensure that energy transports run smoothly.

TRACTION CURRENT MUST BE MORE ATTRACTIVELY PRICED. Persistently high electricity prices pose a threat to the energy transition. We therefore welcome plans for a cap on industrial electricity prices as a way to keep rail competitive. That said, attractive traction current prices are also needed beyond 2024 to avoid freight from being taken back off the rails.

RAIL TRANSPORT MUST BE FACTORED INTO FRAMEWORK CONDITIONS AND PILOT PROJECTS. The markets for transporting LNG, H_2 and CO_2 are a work in progress, so investors need certainty. Specifically, a clear political commitment to rail is needed together with selected programs to promote technical innovation.

TALK TO VTG!

We want to talk to you and hear what you have to say. Please contact us if you have any questions about rail freight. We will be happy to provide you with facts, figures and expert assessments.

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