

Public

Environmental and Social Data Sheet

Overview

Project Name:	<i>INNOVATIVE TRAINS - NORTH EAST GERMANY</i>
Project Number:	<i>2020-0890</i>
Country:	<i>Germany</i>
Project Description:	Financing of Regional Passenger trains with hydrogen and battery powered propulsion systems for the Heidekrautbahn and Netz Ostbrandenburg networks in Berlin and Brandenburg, Germany.
EIA required:	no
Project included in Carbon Footprint Exercise ¹ :	no

Environmental and Social Assessment

Environmental Assessment

The project consists of the purchase of two zero or low emission fleets: one of 26 battery powered multiple units (BEMUs) and one of six hydrogen powered electrical multiple units (HEMUs).

The first fleet will be 31 battery powered electrical multiple units operating on seven lines of the “Ostbrandenburg” network in Berlin and east Brandenburg (Berlin Ostkreuz to Templin Stadt, Berlin Werneuchen, Rheinsberg (Mark); Fürstenwalde (Spree) – Bad Saarow Süd, Schwedt – Angermünde, Angermünde – Prenzlau, Eberswalde – Joachimsthal (Templin).

The second fleet, which consist in six new hydrogen powered trains, is scheduled for use on the regional railway network “Heidekrautbahn” connecting centrally located Berlin Gesundbrunnen to Berlin-Karow, Basdorf, Groß Schönebeck and Schmachtenhagen. They will also operate on the by then reopened line between Berlin-Wilhelmsruh and Basdorf (“Stammstrecke”).

The project also implements an onsite-hydrogen electrolysis using track-adjacent windmills and the H2 distribution infrastructure to provide the HEMUs and other hydrogen consumers such as the busses and waste transporting vehicles of local municipality Barnim. This supports the local strategy to locally create vertical integration between renewable energy, hydrogen production and use in transport. The new vehicles therefore contribute to the shift from fossil fuels to renewable, emission free energy. The new battery powered trains will also contribute to this objective, changing about half of the prior traffic contract’s annual traffic volume from diesel to electric power.

¹ Only projects that meet the scope of the Carbon Footprint Exercise, as defined in the EIB Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: 20,000 tonnes CO2e/year absolute (gross) or 20,000 tonnes CO2e/year relative (net) – both increases and savings.

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The project's vehicles do not fall under either Annex I or II of the Environmental Impact Assessment (EIA) Directive 2011/92/EU as amended by 2014/52/EU. Manufacturing and use of rail rolling stock is not included in either list.

The new hydrogen electric multiple unit trains financed by the Bank may use the yet to be reopened railway line from Berlin Gesundbrunnen to Basdorf. Where the line is not operational by the time that the line is open, they can continue to operate on the existing infrastructure on the route Berlin Gesundbrunnen – Berlin Karow – Basdorf.

The project is in line with the long-term transport strategies for the Berlin and Brandenburg region. The region's aim is to improve rail transport and transition to zero emission railway services, as at the moment a large part of the regional railway network is not electrified and thus serviced by diesel trains.

The benefits of the project are twofold:

- the project will improve the attractiveness and competitiveness of the railway service, and thus potentially contributing to a modal shift from road to public transport, reducing energy consumption and associated emissions while improving transport safety.
- the project will improve the environmental performance of the train services, as the introduction of battery-electric and hydrogen powered trains, which are more fuel efficient compared to diesel trains, will reduce the use of fossil fuel. The intention of the promoter is to purchase predominantly 100% green hydrogen and electricity, i.e. produced from renewable sources), and therefore significant CO₂ emission reductions are expected. Additionally, hydrogen powered trains emit less noise than diesel trains.

The project will contribute to power trains with no emissions of pollutants (e.g. NO_x, particle matters) and hence will contribute to meet air quality standards as set out by the European Union (EU) and the World Health Organization (WHO).

Battery-electric and hydrogen powered trains are generally a new train for the German railway network and the homologation in terms of environmental and safety compliance of the trains may therefore take longer. The promoter will work closely with the responsible competent authorities.

Battery charging infrastructure in itself is not subject to environmental impact assessment processes under either Annex I or Annex II of the EIA Directive. However, the construction of wayside or track adjacent infrastructure or additional charging infrastructure in depots and/or their connections to the grid may be subject to screening by the Competent Authorities. The Bank will require in those cases to be informed.

The hydrogen refuelling station (HRS) is likely going to be a comparably small-scale construction, as such it is not expected to require an environmental impact assessment. The HRS will be compliant with the Alternative Fuel Infrastructure Directive (2014/94/EU), the SEVESO Directive (2012/18/EU), ISO standard 19880 and any specific relevant national legislation. The relevant permits will be acquired in due time.

The ongoing and envisaged tender requests rail services and allows operators to bid with new and used trains. The Bank will only finance the newly purchased vehicles of winning bidders of any of two lots and supporting infrastructure. The renewable energy production facilities are not financed by the Bank.

The winner(s) of the tender(s), i.e. the future operators, may have to arrange its own stabling and maintenance facilities. The future operator will decide if and where new maintenance depots are required as they may also use existing facilities. If a future operator decides to

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construct a new depot, then it will be obliged to provide evidence to the Bank that EU EIA, Habitats and Birds Directives have been followed.

The new trains will comply with the relevant European Technical Specifications for Interoperability (TSI) including those for noise emissions and accessibility for persons with disabilities and persons with reduced mobility (also referred to as the PRM TSI).

The Project is not expected to result in scrapping of life expired vehicles, but some of the incumbent vehicles may face scrapping due to limited residual life. Should scrapping be the case then this would happen within the applicable legal framework in Germany.

Conclusions and Recommendations

Battery-electric and hydrogen powered trains are new to the German railways in the Berlin area. Compliance with environmental and in particular safety legislation will be a requirement for all suppliers, who need to obtain homologation for the new rail vehicles from authorities.

The Borrower shall ensure that adequate environmental, social, health and safety management plans, defined according to the legal requirements and related documents, are implemented and monitored during the construction of the project, and will notify the Bank of any unexpected environmental impacts or incidents during the works.

If construction of new facilities and/or additional energy supply infrastructure will be required then the Borrower or those organisation(s) controlling it undertakes to inform the Bank on environmental compliance of these new facilities with relevant local legislation and related EU Directives. The Borrower shall ensure that such facilities or additional infrastructure is constructed and operated in compliance with Environmental Law; requisite Environmental Approvals for the Project are obtained and maintained; and any such Environmental Approvals are complied with.

The Borrower or those organisation(s) controlling it will inform the Bank (as soon as possible, but at the latest by the end of 2023) on environmental compliance by submitting a copy of the environmental screening decision and, if the project is screened in, the EIA and the final environmental decision, as well as evidence that the requirements of the EU Habitats Directive 92/43/EC and the EU Birds Directive 79/409/EC have been fulfilled (relevant documentation to the satisfaction of the Bank) – if applicable.

Under the conditions above, the project complies with relevant EU and national environmental legislation and is acceptable to the Bank from an environmental perspective.