

Environmental and Social Data Sheet

Overview

Project Name:	NETZ ELBE SPREE ROLLING STOCK
Project Number:	2018-0074
Country:	Germany
Project Description:	This operation will finance newly purchased rolling stock for the winners of the presently pending tender for the operation Netz Elbe Spree (NES). The NES network provides regional rail services in Berlin and three surrounding federal states Mecklenburg-Vorpommern, Brandenburg and Sachsen-Anhalt. Under the tender there are four lots to provide rail services on 18 railway lines; 17 regional railway lines and the BER airport rail express (FEX) to the new airport.

EIA required:	no
Project included in Carbon Footprint Exercise ¹ :	yes

Environmental and Social Assessment

Environmental Assessment

The tender for the services is issued by the federal state of Berlin and the three surrounding states Mecklenburg-Vorpommern, Brandenburg and Sachsen-Anhalt. The tender is led by the Verkehrsverbund Berlin Brandenburg (VBB), which is the Public Transport Authority (PTA) and has two of the four states as owners. The 18 railway lines contribute significantly to commuter rail for the wider Berlin area and for other cities served.

The services estimate the fleet size at around 160 trains. Up to 10 trains are needed for non-electrified parts of the network. Here diesel multiple units (DMUs) might be deployed, but offers that include alternatively fuelled trains with electric drive-trains that draw energy from a hydrogen fuel cell or a battery, qualify for credits in the award procedure.

The project does not fall under either Annex I or II of the Environmental Impact Assessment (EIA) Directive 2011/92/EU as amended by 2014/52/EU, as manufacturing and use of rail rolling stock is not included in either list. Therefore, no EIA is required for the project.

The project is in line with the Landesnahverkehrsplan 2018 of Brandenburg and other long term plans of the four above mentioned states. These plans and other studies have established that there is CO₂ abatement potential in the field of rail public transport. These new public transport contracts can contribute to reducing CO₂ emissions by promoting a shift from private to public rail transport.

The new rolling stock will be operated on the regional railway lines that are part of this Network Elbe Spree and will contribute to the efficiency, quality and transport capacity of the

¹ Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO₂e/year absolute (gross) or 20,000 tons CO₂e/year relative (net) – both increases and savings.

Luxembourg, 17.07.2018

railway services. The main benefit of the operation consists of improving the attractiveness and competitiveness of the railway service. The project is expected to prevent a modal shift of existing passengers towards road and also to allow an increase of the rail modal share, hence to have positive impact in terms of energy consumption and associated emissions, transport safety and noise.

The ongoing 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 four lots that are now being tendered. This operation may replace quite new rolling stock that can be deployed elsewhere. The rationale for allowing the deployment of new trains is to improve competition as more bidders are able to participate in the ongoing tender. Improved competition leads to better railway services, which improves the competitiveness of rail compared to private cars.

The winner(s) of the tender(s), i.e. the future operator, will 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 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).

EIB Carbon Footprint Exercise

Based on assumptions of the Bank's Services, the GHG emission has been estimated.

In case the Bank will finance all four lots of the ongoing tender and all vehicles would be electric, then the estimated annual emission would be 190kt CO₂e per year. This is based on the annual train traffic of 27.9m train km in the first full year of operation (2025) and estimated CO₂ intensity of about 6,800 g CO₂e per train.km. As the energy intensity of the trains will be determined only later, this is now based on an assumed energy intensity of 13.2 kWh/train km (based on an average 4-car-train) and an average grid emission factor for Germany of 516 gCO₂e/kWh in accordance with EIB methodology². The outturn footprint will be dependent on how many of the four lots the EIB will finance.

As for the relative change, the following factors could change the emissions (compared to the without project scenario):

- The current amount of train km for the lines under the NES network are not known, most probably there is an increase of train km. Furthermore, there is an increase in train km of 0.9m between 2022 and 2025.
- The current fleet is on average quite new and thus improvements in energy efficiency cannot be assumed to be high, however there will most probably be some.
- There will be a seat capacity increase on many lines; longer trains and more double deck trains will be deployed to alleviate capacity constraints and meet future expected increase in demand.
- The longer and bigger trains may have higher energy usage, but similar or even lower energy usage can also be expected as trains are redesigned to be more energy efficient as was done for instance for the trains developed for the Rhein Ruhr Express (RRX).

² <http://www.eib.org/about/documents/footprint-methodologies.htm>

Luxembourg, 17.07.2018

- The capacity increase will accommodate passenger growth. This may be induced growth, however some modal shift from road to rail is also expected.

Limited reliable information on the future environmental performance of the recent trains is available at this stage, but it has been estimated on the basis of sector data that there will be a reduction of less than 20kt CO₂e per year. This is below the threshold to include any relative emissions in the Carbon Footprint Exercise.

For the annual accounting purposes of the EIB Carbon Footprint, the project emissions will be prorated according to the EIB lending amount signed in that year, as a proportion of project cost.

Conclusions and Recommendations

The project is expected to avoid a modal shift from the passenger railways towards road, and contribute to some strengthening of the rail modal share, resulting in positive environmental impacts. By comparison with the “without project” scenario, and to a lesser extent, with the current situation, the project is expected to have some positive environmental impact in terms of energy savings, air pollution, transport safety, noise and CO₂ emissions.

The purchase of rolling stock does not fall under either Annex I or II of the Environmental Impact Assessment (EIA) Directive 2011/92/EU, as amended; so an EIA is not required.

The railway undertaking that leases the rolling stock will have to arrange its own stabling and maintenance facilities. Such elements could fall under Annex II of the EIA directive, and therefore may be subject to an EIA procedure. This may also require an assessment in the context of the Habitat and Birds directives of the EU. If construction of new facilities will be required, the Promoter undertakes to inform the Bank on environmental compliance

Considering the above, the project is acceptable for Bank financing from an environmental and social point of view.