

JSC Georgian Railway



Green Bond Framework

May 2021

1. Overview

JSC Georgian Railway (“GR”) is Georgia’s only railway operator. It principally provides freight services, transshipping a variety of cargo, originating principally in the east from the Caspian Sea and Central Asia to the Black Sea. The Company also provides passenger services. It has a vertically-integrated business model, and owns and operates fully electrified tracks, stations, terminals, other infrastructure and rolling stock that comprise the entire national railway system. The Company is also engaged in the freight forwarding business through its subsidiaries.

The Company’s mainline rail network, together with that of CJSC Azerbaijan Railway forms the Caucasus railway corridor, a key segment of the Transport Corridor Europe-Caucasus-Asia (TRACECA). The Company’s mainline rail network is thus a link in the shortest route from the Caspian region and Central Asia to the Black Sea and the Mediterranean Basin. As a key link in the transportation chain between Europe and Central Asia, the Company’s management believes that it is uniquely positioned to capitalise on trade between Europe, the Caspian region and Central Asia. Currently, Georgian Railway’s network is fully electrified and has access to three ports at the Georgian port cities of Batumi, Kulevi and Poti all of which are on the Black Sea. Georgian Railway also has a direct connection with Turkey Railways through Marabda-Kartsakhi railway section. Access to these connections allows easy shipment of transit cargo to/from the Mediterranean Basin and Europe.

2. GR Assets

GR owns and operates a 1,436-km railway network, 296 km of which is double-track line. The Company’s network is fully electrified. GR’s network is connected to Azerbaijani, Armenian and Turkish railways.

The Company’s infrastructure capacity varies across different lines. The main bottleneck of the infrastructure is a mountainous region located in the centre of Georgia, referred to as the gorge section. Most of the Group’s freight is transported through this region, as the gorge section is part of the network’s main line. Currently, the estimated annual capacity of the gorge section is 27 million tonnes of cargo. The ongoing works on the Modernisation Project are designed to increase the possible throughput capacity of the rail line to 48 million tonnes annually, with the potential to increase the capacity to 100 million tonnes.

The company owns around 5000 active freight railcars and 40 active passenger wagons. In addition, in 2014 the Group purchased 480 containers to facilitate container transportation within the corridor.

As at 31 December 2020, the Company owned 24 units of EMUs, and 153 active locomotives of which 96 were electric and 65 were diesel locomotives. Diesel locomotives are mainly used for shunting operations at stations and depots, while electric locomotives are used to move railcars along the railway network.

As at 31 December 2020, the Company owns and operates 95 freight and 51 passenger stations within Georgia. The Group’s headquarters is located in the centre of Tbilisi.

The Company’s infrastructure assets comprise 40 railroad tunnels and 1,320 railroad bridges. It also owns signal equipment and other assets related to ensuring the safety of operations.

3. Industry GHG emission challenges

The transportation sector accounts for nearly 23% of energy-based Co2 emissions according to the International Energy Agency (IEA) of which road, maritime and air transport are the leading contributors. Therefore, achieving the ambitious goals of the Paris Agreement will require a transport modal shift, particularly from road and air transport to rail. An IEA report states boosting investment in railways could significantly reduce carbon dioxide (CO2) emissions from transport. The IEA analysis further concluded that if all services currently performed by railways were carried by road vehicles, then the world’s transport-related oil

consumption would be 15% higher and transport-related greenhouse gas (GHG) emissions would increase by 1.2 gigatonnes (Gt) CO₂-equivalent on a well-to-wheel basis.¹

4. GR's focus on Sustainable Development

Since its incorporation in mid 1990s, GR is fully electrified, environmentally friendly mode of transport. GR operates both freight and passenger transportation using electric locomotives and EMUs and using diesel locomotives only for shunting operations and on non-electrified sidings.

GR is fully devoted to avoid, minimise and mitigate the environmental impact caused by its activities and to improve overall environmental performance. Effective measures are carried out to protect the environment, this is reflected in the implementation of long-term plans and effective emergency response measures. GR acts with the slogan - "Green is our choice" and makes a significant contribution to all the initiatives of the state to activate environmental policy

GR has the waste management plan in order to properly utilise wastes, generated during its operations. Annual plan is prepared in compliance with "Waste Management Code" of Georgia requirements and includes:

- waste management goals and objectives,
- hierarchy and principles of waste management,
- information on waste generation,
- information about the measures considering waste prevention and recovery,
- description of generated waste separation methods,
- methods and conditions for temporary storage and waste,
- waste transportation rules and waste treatment methods used,
- information about organisation who will be responsible for further treatment of waste
- requirements for the safe handling of waste and waste control methods.

Once a year GR transfers the hazardous wastes for disposal and/or remediation.

Health and safety of employees and operations is critical for the Company and is in full compliance with Local and International law requirements. Each incident is thoroughly investigated to identify causes and take appropriate measures to prevent them in future.

ISO 9001:2015 is introduced in GR on a Corporate governance department level and in Passenger SBU. Risks are identified on an annual basis, are agreed with the management and action plans are implemented in accordance with Chapter 6.1 of the standard.

GR offers medical insurance to its employees together with their family members and finances certain healthcare expenditure not covered by insurance. In 2020, the amount spent on employees' healthcare expenses, over the insurance costs, amounted GEL 350,000 as compared to GEL 214,000 in 2019. The Company also offers other financial incentives for occasions such as the birth of a child and a child's first day at school, and offers other bonuses to employees for certain holidays, events, and special occasions.

In order to meet the needs of the public and the State in the field of railway transport, JSC "Georgian Railway" together with the Ministry of Education and Science of Georgia and the Georgian Technical University, co-founded the Railway Transport College ("RTC"). The purpose of RTC is to supply the Company's operations with qualified graduates with relevant vocational backgrounds that meet the requirements of the modern international labour and rail market, reflecting national and international values, and to create conditions for achieving their educational goals and successful employment. In addition, RTC building has been renovated and adapted to the necessary standards for inclusive learning, in order to better accommodate students with a range of disabilities

¹ <https://www.iea.org/reports/the-future-of-rail>

5. Previous Projects financed by Eurobonds

In 2010 GR started two large infrastructure projects: Main Line Modernisation and Tbilisi Bypass. To partially finance the project, the Company issued unsecured bonds in 2010. In 2012, the Company redeemed the bonds issued in 2010 by issuing new 10-year Eurobond with total amount of USD 500 million. Proceeds from the borrowing was roughly equally used for the mentioned two projects.

5.1. Railway Modernisation Project

The Railway Modernisation Project is designed to modernise existing infrastructure, increase safety and capacity of the main line. The project could be divided into two major parts: first part is concentrated on the improvement of the rail lines along the Company's main line, while the second is concerned with debottlenecking the line by building a new, fully electrified, railway and thereby increasing its capacity. The main bottleneck is in a mountainous region in the centre of Georgia, referred to as the gorge section (40-km long). The topography of the mentioned region complicates rail operations, causing delays, quickening the depreciation of the tracks and rolling stock, and increasing the need for additional pulling locomotives. One of the key aims of the project is to decrease the track gradient in the gorge section, which is intended to reduce electricity consumption. A flatter gradient is expected to reduce wear and tear on wheels and tracks, which would decrease maintenance expenses, decrease the need for extra locomotives and reduce the extra stops needed to cool the brakes on the trains.

The cost of the project is over USD 300 million (preparation of new subgrade on a new route, plus track, plus electricity lines) and at the moment 96% of works are completed. We expect project to be finalised in 2022.

Benefits of the project:

- Reduced electricity consumption, and therefore lower CO2 emissions
- Greater resource efficiency, resulting from less wear and tear on wheels and tracks
- Reduced air pollution from electrification of the rail
- Increase the capacity of the Group's infrastructure;
- Eliminate the need for extensive capital expenditures for the maintenance of existing tracks;
- Increase transportation speed along the line, offering improved services for freight and passenger customers;
- Further increase the safety level of transportation; and
- Reduce operational expenses.

5.2. Tbilisi Bypass project

The main objective of Tbilisi Bypass Project is to relocate the capital city's main railroad to the suburbs and is mostly a municipal project.

The benefits for the shareholder include:

- Relocating certain railway infrastructure components from the centre of Tbilisi to the northern part of the city will free up land for urban regeneration in Tbilisi centre, which is currently used for railroad infrastructure;
- Improving Tbilisi residents' quality of life by reducing noise;
- Improving public transportation infrastructure and the growing traffic problems in the centre of the city

At the same time, the benefits for the Company is mostly the proceeds from the sales of the land in the centre of city.

In March 2014, the Government of Georgia decided to suspend constructions works until the redesigned project would be presented. During 2015 and 2016, the Group was in discussions with Tbilisi City Hall and the Government of Georgia about various scenarios for the completion of the project. However, as of today, no decision had been made by the Government of Georgia about the redesign of the Tbilisi Bypass Project. At the same time, the Company holds valid construction agreement which obliges construction company to finalise the project within 18 months after recommencing the works.

6. Use of proceeds

Georgian Railway will allocate an amount equivalent to the net proceeds of its Green Bond(s) to finance and/or refinance, in whole or in part, Georgian Railway's expenditures relating to the Eligible Green Project Categories as detailed below, which provide distinct environmental benefits. In the case of refinancing existing Eligible Projects, expenditures, which have been made within 3-years preceding the year of issuance of a Green Bond, shall be considered as an Eligible Green Project.

Eligible projects include existing, ongoing, and/or future projects as categorised below.

Green Bond Principles Eligible Green Project Categories	Use of proceeds	Example Eligible Green Projects	Example Impact Metrics	Relevant SDGs
Clean transportation (such as electric, hybrid, public, rail, non-motorised, multi-modal transportation, infrastructure for clean energy vehicles and reduction of harmful emissions)	Financing and/or refinancing expenditures related to the construction, modernisation, maintenance and extension of new and existing zero direct emission railway lines – electrified interurban railway lines for passenger, freight and supporting infrastructure.	<p>Modernisation , maintenance and energy efficiency of existing electrified interurban railway lines</p> <p>Investments related to new railway line and extensions,</p> <p>Acquisition and maintenance cost of freight and passenger rolling stock.</p> <p>Acquisition, modernisation and maintenance cost of trackside infrastructure (e.g. signalling systems)</p>	GHG/CO2 emissions reduced/avoided	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

7. Eligibility under the EU Taxonomy Regulation Delegated act 2021 Annex I²: Transport

6.1 Passenger interurban rail transport

The activity complies with one of the following criteria:

- (a) the trains and passenger coaches have zero direct (tailpipe) CO₂ emissions;
- (b) the trains and passenger coaches have zero direct (tailpipe) CO₂ emission when operated on a track with necessary infrastructure, and use a conventional engine where such infrastructure is not available (bimode).

- Yes – Georgian Railway owns and operates fully electrified railway network and owns electric locomotives and EMUs for transporting the freight and passengers. GR uses diesel locomotives for shunting operations and for non-electrified sidings. Expenditures related to the diesel locomotives will not be financed with GR's green bond issuances.

6.2 Freight rail transport.

The trains and wagons are not dedicated to the transport of fossil fuels

- No – Georgian Railway operates both freight and passenger trains. Out of the total trains that run on the railway network, around 25% is passenger and 75% is freight trains. Around 20% of total trains are dedicated to the transport for fossil fuels.

6.14 Infrastructure for rail transport

1. The activity complies with one of the following criteria:

(a) the infrastructure (as defined in Annex II.2 to Directive (EU) 2016/797 of the European Parliament and of the Council²⁷⁵) is either :

(i) electrified trackside infrastructure and associated subsystems: infrastructure, energy, on-board control-command and signalling, and trackside control command and signalling subsystems as defined in Annex II.2 to Directive (EU)2016/797;

- GR may include expenditure related to infrastructure to support the electrified railways, such as signalling etc.

(b) the infrastructure and installations are dedicated to transshipping freight between the modes: terminal infrastructure and superstructures for loading, unloading and transshipment of goods;

- GR may include expenditure related to freight railway stations and logistic terminals.

(c) infrastructure and installations are dedicated to the transfer of passengers from rail to rail or from other modes to rail

- GR may include expenditure related to passenger station and platforms

2. The infrastructure is not dedicated to the transport or storage of fossil fuels

- a. No – Georgian Railway operates both freight and passenger trains. Out of the total trains that run on the railway network, around 25% is passenger and 75% is freight trains. Around 20% of total trains are dedicated to the transport for fossil fuels.

² https://ec.europa.eu/finance/docs/level-2-measures/taxonomy-regulation-delegated-act-2021-2800-annex-1_en.pdf

Exclusions:

For the avoidance of doubt, financing related to the following activities are excluded from the financing by Georgian Railway's Green Bonds:

- Fossil fuel energy
- Fossil fuel reliant transport
- Nuclear energy
- Alcohol
- Defence

8. Process for Project Selection & Evaluation

Georgian Railway's Corporate Department, together with the Economic Department will evaluate projects against the eligibility and exclusion criteria defined in this framework under section 6. Projects that meet the criteria will be eligible for the green bond financing/refinancing. The Eligible Projects will be tracked using an internal register.

Georgian Railways' Corporate and Economic Department will annually review the list of Eligible Projects against the eligibility and exclusionary criteria. If a project no longer meets the criteria set forth in this framework the project will be removed from the register and replaced as soon as a substitute has been identified.

9. Process for Environmental and Social Risk Mitigation

GR carries out Environmental Impact Assessment ("EIA") at the beginning of each large construction projects, based on which Ministry of Environmental Protection and Agriculture of Georgia issues permits. GR carries out EIA on every variation of respective project to minimise the environmental and social impact on local communities and informs them through public hearings.

Together with initial EIA, GR commits to the mitigation actions throughout the life cycle of the project (construction and operation).

Each and every employee and contractor is requested to incorporate occupational safety methods, sort our potential risks and report incidents. The monthly inspections are conducted on the workplaces and monthly incidents reporting system established. Specialists in operation, maintenance, projects, engineering, occupational health safety and environment are involved in the process. direct and systemic causes are constantly being analysed, GR identify problem areas, agree and implement remedial measures. Company continues to raise awareness of the Company's employees and contractors on important experience and safety issues such as potentially serious incidents, including high safety, confined space, electrical, poisonous gases, transportation, manual manipulation, hazardous waste, and more.

10. Management of Proceeds

To ensure an amount equivalent to the net proceeds of Georgian Railway's Green bonds are allocated in accordance with this Green Bond Framework, GR Economic Department, together with Accounting and Corporate Departments, will track expenditure to eligible projects using an internal register. Georgian Railway will strive to have expenditures on Eligible Green Projects match or exceed the total proceeds raised by the issuance of the Green Bond within 3 years of issuance of each Green bond.

Pending full allocation of an amount equivalent to the net proceeds of outstanding Green Bonds, the proceeds will be held in temporary investments such as cash, cash equivalent, other liquid marketable investments in

line with Georgian Railway's treasury management policies or used to repay portions of outstanding indebtedness.

11. Reporting

For each Green Bond, Georgian Railway commits to publish an annual Green Bond Allocation and Impact Reports on the Company's website, until full allocation of the proceeds, and in the event of any material changes until the maturity date of the bond.

The allocation and impact report which will include:

1. Details of Eligible Green Projects and allocations
2. Relevant environmental outcomes/impacts (e.g. Co2 emissions avoided comparing fossil fuel transport compared to total rail transport). On a best efforts basis and where feasible GR intends to align its impact reporting with the Handbook for 'Harmonized Framework for Impact Reporting', December 2020 version.³ GR also intends to include the methodology used to calculate the environmental impacts in the annual report.
3. The proportional allocation of proceeds between existing projects (refinancing and new projects)
4. Amount of cash or cash equivalents remaining to be allocated.

12. External Review

GR's Green Bond Framework is supported by the following external reviews:

a) Second Party Opinion ("SPO")

GR has retained Standard & Poors to provide a Second Party opinion on the Green Bond Framework, to confirm alignment with the ICMA Green Bond Principles ("GBP") 2018.

b) Post Issuance External Verification on Reporting

GR will request on an annual basis, starting one year after issuance and until full allocation, an assurance report on the allocation of the Green Bond proceeds to eligible projects, provided by its external auditor.

³ <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Handbook-Harmonized-Framework-for-Impact-Reporting-December-2020-151220.pdf>