# SGS

# Translation of the Verification Statement n. IT23/99006603

SGS Italy declares that the "CO2 Tariff" developed by

# ITALFERR S.p.A.

Headquarter: Via G. Galati, 71 ROMA– Italia

According to the Technical Specification of ITALFERR S.p.A. (PPA.0000867-revJ): Methodology for quantifying and reporting, on a project basis, of Greenhouse Gas emissions generated by the design and construction of transport infrastructures with reference to the requirements of the standard UNI EN ISO 14064-1:2019

It has been verified in accordance with ISO 14064-3:2019 and has been consistent with the objectives and scope of application set out below:



CO2 Tariff

Methodology for calculating the climate footprint that applies to works and infrastructures in the design phase.

This certificate is valid from 20/12/2023 until 20/12/2025. Validity is subject to the satisfactory outcome of the periodic monitoring activity.

Rev. n.0, first issue of 20/12/2023

Up-to-date information on any changes in the status of the certificate can be obtained by sending a fax to the number shown on the certificate. This certificate is not valid without details concerning purpose, objectives, criteria and conclusions of the verification, which are described in pages 2 to 3 of this document.

Authorized by Paola Santarelli

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# Attachment to Verification Statement n. IT23/99006603

### Brief description of the verification process

SGS has been commissioned by ITALFERR S.p.A., with headquarter in Via G. Galati, 71 ROME to verify:

- "CO2 Tariff" developed by ITALFERR S.p.A., in accordance with the provisions of the Technical Specification of ITALFERR S.p.A. (PPA.0000867-revJ, based on the UNI EN ISO 14064-1:2019 standard, which defines a methodology for calculating CO2e emissions to be applied to works and infrastructures in the design phase. Based on the typologies or the bill of quantities, the tariff associates the quantity of CO2e with the production of the main materials constituting the work, the transport and processing of the materials at the construction site.
- the application of the calculation methodology defined by the Technical Specification of ITALFERR S.p.A. (PPA.0000867-revJ) and of the "CO2 Tariff" to the final project "NUOVO COLLEGAMENTO FERROVIARIO VAL DI RIGA".

# Roles and responsibilities

ITALFERR S.p.A. is responsible for the development of the GHG quantification and reporting system, and the development and maintenance of the registration and reporting procedures in accordance with this system, including the calculations relating to the CO2 equivalent emissions associated with the different tariffs used in the design phase.

SGS is responsible for formulating an independent verification opinion on the consistency of the "CO2 Tariff" with the methodology developed by ITALFERR S.p.A. in accordance with the ITALFERR S.p.A. Technical Specification (PPA.0000867-revJ) and the UNI EN ISO 14064-1:2019 standard, and on its application to the final project "NUOVO COLLEGAMENTO FERROVIARIO VAL DI RIGA".

SGS carried out an independent third-party verification of a project's CO2 equivalent claim in December 2023 in accordance with the requirements of ISO 14064-3:2019.

The evaluation was carried out through a documentary examination, interviews and collection of evidence with reference to the purpose, objectives and criteria as agreed between ITALFERR S.p.A. and SGS.

#### **Objectives**

ITALFERR S.p.A. has commissioned SGS to carry out an independent audit of the application of Italferr's Technical Specification on the quantification of CO2e emissions generated by the design and construction of transport infrastructures, to assess its consistency with the requirements of the UNI EN ISO 14064-1:2019 standard as part of the verification scope as described below. The data and information supporting the CO2 equivalent claim shall be supported by objective evidence.

This assignment concerns the verification:

- the Technical Specification "Methodology for the measurement of greenhouse gas emissions" and the "CO2 Tariff"
- Greenhouse gas emissions quantified and reported for the final project "NUOVO COLLEGAMENTO FERROVIARIO VAL DI RIGA" in accordance with the Technical Specification of Italferr S.p.A.

#### Criteria

Criteria with reference to which the verification activity was carried out are those of UNI EN ISO 14064-1:2019; ISO 14064-3:2019 methodologies were adopted to conduct the audit.

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### Description of the "CO2 Tariff"

The scope within which the methodology is developed includes the activities that are carried out during the construction phases of the work, such as:

- the production of building materials,
- the transport of these materials from the place of production to the construction site.
- the work carried out on site.

The design, use/maintenance, dismantling and end-of-life phases of the work are excluded from the reporting.

The "CO2 Tariff" guarantees a minimum coverage of 80% of the economic value of the work. Have been defined the "CO2 Tariff" items associated with the Italian Railway Network Tariffs (hereinafter RFI Tariffs) of greatest interest and use, a management model that provides for a minimum coverage of 80% of the work in economic terms.

The emissions calculation model involves the use of unit emission factors, relating to materials, transport and processing produced during the construction of the infrastructure work, expressed according to the type of inventory flow considered in terms of TCO2e/t, TCO2e/m3, TCO2e/kWh, TCO2e/l. These factors derive mainly from the following official sources recognized by the scientific community: SINANET and ISPRA - Emission factors for the production and consumption of electricity in Italy; Ministry of the Environment and Protection of Land and Sea - Table of national standard parameters; ISPRA - Emission factors for stationary combustion sources in Italy; EPDs issued by manufacturers; Ecoinvent Database v3.9.1

During the audit, activities were carried out to verify the logic of elaboration and reporting of the "CO2 Tariff" with respect to the scope of application with reference to the ISO 14064-1:2019 standard.

In particular, the method of calculating CO2 equivalent was verified with respect to the three main processes included in the quantification, and in particular:

- materials: for all the main materials constituting the infrastructures (identified on a historical basis and on the RFI Tariffs), have been identified the specific reference databases to be adopted for the establishment of the inventory (Ecoinvent 3.9.1) and the relative value in terms of CO2e obtained from the application of the chosen characterization factors (IPCC 2021 AR6: GWP 100) to the inventory.
- transport: the method involves the quantification of the emissions generated by the transport process to and from the construction site and related to the main materials constituting the work, including waste (the impacts deriving from the use of fuels in means of transport have been calculated by adopting a WTW approach).
- work: the quantification of the emissions generated by the on-site work processes was carried out taking into account the necessary works as per tariff items (e.g. earth handling, material transport, energy consumption required by the machinery and equipment used on site).

Application of the "CO2 Tariff" and the methodology to the final project "NUOVO COLLEGAMENTO FERROVIARIO VAL DI RIGA".

For the quantification of the CO2e emissions of the final project "NUOVO COLLEGAMENTO FERROVIARIO VAL DI RIGA", Italferr S.p.A. has applied the methodology defined by the Technical Specification, which provides for drawing on the items from CME associated with the project in question, correlating them through the CO2 Tariff to the corresponding GHG emissions.



The CO2e values for the project are as follows:

Phase List	tCO2e
Extraction of Raw Materials (pre-production) and Industrial Production	140.876
Material Transport	16.347
Realization of the Works	17.485
ASSESSED SOS ASSESSED TOTAL	174.708

#### Conclusions

ITALFERR S.p.A. has developed a CO2e quantification tool, called "CO2 Tariff", which makes it possible to determine the CO2e of an infrastructure on a project basis (consistent with the perimeter, including limits and exclusions).

ITALFERR S.p.A. has provided an assertion relating to GHGs based on the requirements of UNI EN ISO 14064-1:2019 relating to the following final project:

### "NUOVO COLLEGAMENTO FERROVIARIO VAL DI RIGA"

for which the total emissions value has been verified by SGS in accordance with what has been agreed in terms of purpose, targets and verification criteria.

SGS's approach was based on an assessment of the inherent risks and control risks associated with the organization's GHG information management model and the controls it carries out to mitigate these risks.

#### Note

This Statement is issued, on behalf of Client, by SGS Italia Spa, via Caldera 21, 20153 Milano (MI) (hereinafter SGS) with reference to the document containing the "General Conditions of Service". The results and conclusions are based on a verification carried out by SGS.

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