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Introduction

This volume is part of Appendix B of [draft] IFRS S2 Climate-related Disclosures and is an integral part of that [draft] Standard. It has the same authority as the other parts of that [draft] Standard.

This volume sets out the requirements for identifying, measuring and disclosing information related to an entity’s significant climate-related risks and opportunities that are associated with specific business models, economic activities and other common features that characterise participation in this industry.

The industry-based disclosure requirements are derived from SASB Standards (see paragraphs B10–B12 of [Draft] IFRS S2 Climate-related Disclosures). Amendments to the SASB Standards, described in paragraph B11, are marked up for ease of reference. New text is underlined and deleted text is struck through. The metric codes used in SASB Standards have also been included, where applicable, for ease of reference. For additional context regarding the industry-based disclosure requirements contained in this volume, including structure and terminology, application and illustrative examples, refer to Appendix B paragraphs B3–B17.
Rail Transportation

Industry Description

The Rail Transportation industry consists of companies that provide rail freight shipping and support services. Key activities include shipping containerized and bulk freight, including consumer goods and commodities. Rail companies typically own, maintain, and operate their rail networks, which may require significant capital expenditures. The U.S. operates the longest railroad network in the world, followed closely by Russia, China, India, Canada, Germany, and France. The industry exhibits economies of density due to its network effects, lending itself to natural monopoly conditions. Together with the large sunk costs of rail infrastructure, this provides a competitive advantage to incumbent firms in the industry and creates barriers to entry for new firms.

Note: The scope of the Rail Transportation industry does not include passenger rail transportation.

Sustainability Disclosure Topics & Metrics

Table 1. Sustainability Disclosure Topics & Metrics

<table>
<thead>
<tr>
<th>TOPIC</th>
<th>METRIC</th>
<th>CATEGORY</th>
<th>UNIT OF MEASURE</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenhouse Gas Emissions</td>
<td>Gross global Scope 1 emissions</td>
<td>Quantitative</td>
<td>Metric tons (t) CO₂-e</td>
<td>TR-RA-110a.1</td>
</tr>
<tr>
<td></td>
<td>Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets</td>
<td>Discussion and Analysis</td>
<td>n/a</td>
<td>TR-RA-110a.2</td>
</tr>
<tr>
<td></td>
<td>Total fuel consumed, percentage renewable</td>
<td>Quantitative</td>
<td>Gigajoules (GJ), Percentage (%)</td>
<td>TR-RA-110a.3</td>
</tr>
</tbody>
</table>

Table 2. Activity Metrics

<table>
<thead>
<tr>
<th>ACTIVITY METRIC</th>
<th>CATEGORY</th>
<th>UNIT OF MEASURE</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of carloads transported 125</td>
<td>Quantitative</td>
<td>Number</td>
<td>TR-RA-000.A</td>
</tr>
<tr>
<td>Number of intermodal units transported 126</td>
<td>Quantitative</td>
<td>Number</td>
<td>TR-RA-000.B</td>
</tr>
<tr>
<td>Track miles 127</td>
<td>Quantitative</td>
<td>Miles</td>
<td>TR-RA-000.C</td>
</tr>
</tbody>
</table>

125 Note to TR-RA-000.A – The scope of disclosure includes all carloads that the entity transported in conjunction with the shipping of freight (including freight that is not containerized) for its customers.

126 Note to TR-RA-000.B – Intermodal units include shipping containers and truck trailers that can be transported across modes of transportation.

127 Note to TR-RA-000.C – Track miles include route miles (the total extent of routes available for trains to operate) and take into account multiple track routes such that each route mile with double track is considered two track miles.
### Revenue ton miles (RTM)\(^{128}\)

- **Category**: Quantitative
- **Unit of Measure**: RTM
- **Code**: TR-RA-000.D

### Number of employees

- **Category**: Quantitative
- **Unit of Measure**: Number
- **Code**: TR-RA-000.E

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\(^{128}\) Note to TR-RA-000.D – A revenue ton mile (RTM) is defined as one ton of revenue traffic transported one mile. Revenue ton miles are calculated by multiplying the miles traveled on each leg by the number of tons of revenue traffic carried on that leg.
Greenhouse Gas Emissions

Topic Summary
The Rail Transportation industry generates emissions mainly through the combustion of diesel in locomotive engines. Despite relatively low emissions compared to other transportation industries, fuel management has implications for companies in the industry in terms of operating costs and regulatory compliance. Greenhouse gases (GHGs) including carbon dioxide (CO$_2$) are of particular importance to government regulators concerned about climate change. Intensifying regulation of locomotive exhaust emissions and high fuel costs provide incentives for rail companies to invest in fuel efficiency enhancements to manage emissions. This can increase operational efficiency and impact the cost structure of rail companies, with chronic and acute impacts on value and competitive position both within the industry and compared to other modes of transport.

Metrics

TR-RA-110a.1. Gross global Scope 1 emissions

1 The entity shall disclose its gross global Scope 1 greenhouse gas (GHG) emissions to the atmosphere of the seven GHGs covered under the Kyoto Protocol—carbon dioxide (CO$_2$), methane (CH$_4$), nitrous oxide (N$_2$O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF$_6$), and nitrogen trifluoride (NF$_3$).

1.1 Emissions of all GHGs shall be consolidated and disclosed in metric tons of carbon dioxide equivalents (CO$_2$-e), and calculated in accordance with published 100-year time horizon global warming potential (GWP) values. To date, the preferred source for GWP values is the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (2014).

1.2 Gross emissions are GHGs emitted into the atmosphere before accounting for offsets, credits, or other similar mechanisms that have reduced or compensated for emissions.


2.1 Acceptable calculation methodologies include those that conform to the GHG Protocol as the base reference, but provide additional guidance, such as industry- or region-specific guidance. Examples include, but are not limited to:

2.1.1 GHG Reporting Guidance for the Aerospace Industry published by International Aerospace Environmental Group (IAEG)

2.1.2 Greenhouse Gas Inventory Guidance: Direct Emissions from Stationary Combustion Sources published by the U.S. Environmental Protection Agency (EPA)

2.1.3 India GHG Inventory Program
TR-RA-110a.2. Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets

1 The entity shall discuss its long-term and short-term strategy or plan to manage its Scope 1 greenhouse gas (GHG) emissions.


1.2 The scope of GHG emissions includes the seven GHGs covered under the Kyoto Protocol—carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃).

2 The entity shall discuss its emission reduction target(s) and analyze its performance against the target(s), including the following, where relevant:

2.1 The scope of the emission reduction target (e.g., the percentage of total emissions to which the target is applicable);
2.2 Whether the target is absolute- or intensity-based, and the metric
denominator, if it is an intensity-based target;
2.3 The percentage reduction against the base year, with the base year
representing the first year against which emissions are evaluated toward
the achievement of the target;
2.4 The timelines for the reduction activity, including the start year, the target
year, and the base year;
2.5 The mechanism(s) for achieving the target; and
2.6 Any circumstances in which the target or base year emissions have been,
or may be, recalculated retrospectively or the target or base year has been
reset.
3 The entity shall discuss the activities and investments required to achieve the
plans and/or targets, and any risks or limiting factors that might affect
achievement of the plans and/or targets.
3.1 Relevant activities and investments may include, but are not limited to,
operational improvements (such as decreased idling, trip optimization,
and maximizing loads) and fleet enhancements (such as new engines, fuel
optimization technology and aerodynamic fleet modifications, and
upgrading the fleet with new locomotives).
4 The entity shall discuss the scope of its strategies, plans, and/or reduction targets,
such as how they relate to different business units, geographies, or emissions
sources.
5 The entity shall discuss whether its strategies, plans, and/or reduction targets are
related to, or associated with, emissions limiting and/or emissions reporting-based
programs or regulations (e.g., the EU Emissions Trading Scheme, Quebec Cap-and-
Trade System, California Cap-and-Trade Program), including regional, national,
international, or sectoral programs.
6 Disclosure of strategies, plans, and/or reduction targets shall be limited to
activities that were ongoing (active) or reached completion during the reporting
period.

TR-RA-110a.3. Total fuel consumed, percentage renewable
1 The entity shall disclose the total amount of fuel consumed from all sources as an
aggregate figure, in gigajoules (GJ).
1.1 The calculation methodology for fuel consumed shall be based on actual
fuel consumed as opposed to design parameters.
1.2 Acceptable calculation methodologies for fuel consumed include, but are
not limited to, methodologies based on:
1.2.1 Adding fuel purchases made during the reporting period to
beginning inventory at the start of the reporting period, less any
fuel inventory at the end of the reporting period
1.2.2 Tracking fuel consumed by vehicles
1.2.3 Tracking fuel expenses

The entity shall disclose the percentage of fuel consumed that is renewable fuel.

2 Renewable fuel is generally defined by the U.S. Renewable Fuel Standard (U.S. 40 CFR 80.1401), as fuel that meets all of the following requirements:

2.1.1 Produced from renewable biomass;

2.1.2 Used to replace or reduce the quantity of fossil fuel present in a transportation fuel, heating oil, or jet fuel; and

2.1.3 Achieved net lifecycle greenhouse gas (GHG) emissions reduction on a lifecycle basis that are at least 20 percent less than baseline lifecycle GHG emissions, unless the fuel is exempt from this requirement pursuant to U.S. 40 CFR 80.1403.

2.2 The entity shall disclose the standard or regulation used to determine if a fuel is renewable.

The scope of renewable fuel includes fuel that qualifies for Renewable Identification Numbers (RINs) under the U.S. Renewable Fuel Standard.

2.3 The percentage shall be calculated as the amount of renewable fuel consumed (in GJ) divided by the total amount of fuel consumed (in GJ).

3 The scope of disclosure only includes fuel directly consumed by the entity.

4 In calculating energy consumption from fuels, the entity shall use higher heating values (HHV), also known as gross calorific values (GCV), which are directly measured or taken from the Intergovernmental Panel on Climate Change, the U.S. Department of Energy, or the U.S. Energy Information Agency.

5 The entity shall apply conversion factors consistently for all data reported under this disclosure, such as the use of HHVs for fuel usage (including biofuels).