C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Access to transport is an essential factor of social progress and economic development making it possible to access work, medical services, education, culture and leisure activities. As a historical player in the field of sustainable mobility, Alstom considers that it is its mission to support the transition to sustainable transport systems that are environmentally friendly, safe, efficient and inclusive.

Indeed, Alstom offers innovative and capacitive solutions that are attractive throughout their entire life cycle, based on electric and shared mobility, and responsive to social expectations. Every day around the world more than 90 million passengers are transported by Alstom's trains and systems.

- Alstom's trains and light rail vehicles provide the high-capacity backbone of the public transport systems for cities and suburban areas. Commuting passengers can rely on regional trains to bring them quickly and safely to their destinations. Intercity and high-speed trains connect the very hearts of cities with speed, comfort, and efficiency. By providing transport links within and between cities and regional areas Alstom's rail solutions facilitate economic activity and growth.
- The demonstrable advantages of Alstom's core portfolio of rail solutions encompass air quality, efficient use of space, safety, energy efficiency and emissions. Rail's ability to provide a transport alternative that brings substantial emission savings is being further enhanced by innovations delivering improved efficiency for electrical solutions, which can further reduce emission when powered by renewable energy. Proven alternatives to diesel power in rail like hydrogen fuel cells and batteries also offer further scope to lower rail already low emissions.
- Urban public transport projects based around Alstom's solutions contribute to the sustainable growth of cities by alleviating the social and economic costs of congestion and pollution, and by providing broader access to mobility. If sympathetically designed and developed these projects often offer the opportunity to anchor the sympathetic regeneration of urban landscapes.
- Large multi-year transport projects also offer the opportunity to leverage investment to deliver local development through the establishment of new industrial facilities, and the support and development of local supply chains. This is also accompanied by training and upskilling to increase the capability of the local labour force.

During fiscal year 2022/23, the company recorded sales of € 16.5 billion (€ 15.4 billion last year) and booked € 20.7 billion of orders. Headquartered in France, Alstom is now present in over 63 countries and employs more than 80,000 people.

All the data reported (indicators) are coming from different Alstom internal reporting systems, detailed in the respective questions. Data covering scope 1 and scope 2 emissions are gathered within the reporting and consolidation system so-called "Teranga" which is also used for financial reporting. As regards to the environmental performance, all production sites, all depots operated and managed by Alstom in the case of a contract of five years or more, all permanent offices occupied and managed by Alstom and all permanent sites of more than 200 persons are consolidated in the environmental reporting. For climate performance, the temporary construction sites and sites of less than 200 persons on which utilities are not managed by Alstom (both cases excluded from environmental reporting) are included in category 8 of Scope 3 (Upstream leased assets). Generally, data for the baseline year are recalculated to take into account the new sites and allow the performance to be measured on a constant scope. 2021/22 is established as the year of reference for scope 1, 2 and most scope 3 categories. Due to the resubmission of Alstom's climate target to the SBTi, methodological changes were made for 4 categories of scope 3 (purchased goods and materials, transportation and distribution, capital goods, business travel) and thus the new base year is set to 2022/23.

Environmental results cover 77% of Alstom employees. Newly acquired activities start to report after a full calendar quarter of presence for environmental results. The environmental results of newly acquired sites are consolidated after a full calendar year of reporting. Data for the baseline year are then recalculated to take into account the new sites and allow the performance to be measured on a constant scope.

The reporting year of our GHG emission (scope 1 & 2) and energy data corresponds to 2022 calendar year; whereas, some information provided in the questionnaire in financial terms, such as the investment in R&D, is reported according to Alstom's financial year (April 2022-March 2023).

C0.2

(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date
April 1 2022

End date
March 31 2023

Indicate if you are providing emissions data for past reporting years
No

Select the number of past reporting years you will be providing Scope 1 emissions data for
<Not Applicable>

Select the number of past reporting years you will be providing Scope 2 emissions data for
<Not Applicable>

Select the number of past reporting years you will be providing Scope 3 emissions data for
<Not Applicable>

C0.3

(C0.3) Select the countries/areas in which you operate.
Algeria
Australia
Austria
Belgium
Brazil
Canada
China
Czechia
France
Germany
Hungary
India
Italy
Kazakhstan
Mexico
Morocco
Netherlands
Philippines
Poland
Romania
South Africa
Spain
Sweden
Switzerland
Thailand
United Kingdom of Great Britain and Northern Ireland
United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.
EUR

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.
Operational control

C-TO0.7/C-TS0.7

(C-TO0.7/C-TS0.7) For which transport modes will you be providing data?
Rail

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	FR0010220475
Yes, a Ticker symbol	ALO

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual or committee	Responsibilities for climate-related issues
Board Chair	The highest level of responsibility on sustainability issues, including climate change, lies directly within the Board. The Board in its entirety bears this topic at its request. Therefore, the Board Chair oversees this topic. Sustainable development issues (including environmental issues) are directly included on the Board's agenda several times per year: - Once per year the Climate strategy is reviewed and approved by the Board; - The Board has annual presentations by product line and by region, that include ESG topics, including climate. The different topics reported to the Board of Directors allow it to determine the strategic orientations of the Group, to approve the CSR strategy, including the climate strategy. Work got under way on the structuring and composition of committees to take into account the growing importance of CSR issues in the broad sense, including climate issues, and regulatory developments in this area. Example of climate-related decisions that the position/committee has made or contributed to: - Review and approval of the Group's climate strategy. -As part of the Board of Directors' visit to the Saint Bruno (Canada) site: review was made of the sustainable development objectives and associated action plans (particularly as regards the fight against climate change, green mobility and innovation) concerning products and production processes, along with site visits and specific presentations.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Overseeing the setting of corporate targets Monitoring progress towards corporate targets Reviewing and guiding the risk management process	<Not Applicable>	Since the reshuffle of the Ethics, Compliance and Sustainable Development Committee, which has been renamed the Ethics and Compliance Committee, sustainability related topics (including environmental and climate related ones) have been integrated on the Board of Directors' agenda twice a year. Board members namely discuss progress on Alstom's Sustainability and CSR performance: the Board has annual presentations by product line and by region, that include ESG topics, including climate. In addition, they review CSR objectives, action plans and risk management processes. - Reviewing and guiding risk management process: As described in the annual report page 212, within the Board of Directors, the Audit Committee is in charge to follow the efficiency of the internal control and risk management systems including legal risks and those of social and environmental nature and to review the process of elaboration of financial and extra-financial information. 2 sessions in March and May 2023 integrated these aspects at the agenda this year. In addition, the Ethics & Compliance Committee of the Board of Directors analyses the Group's risk mapping in terms of ethics and compliance and reviews the risks thus identified. - Reviewing and guiding strategy: As described in the annual report page 212, it is the responsibility of the Board of Directors to define the strategic orientations of the Company and to approve the Corporate Social Responsibility strategy (including the climate strategy). This is done during the annual update on CSR. As stated page 215 of the annual report, this year the Board reviewed and approved the CSR strategy, including the climate strategy, in preparation for a presentation to the Shareholders' Meeting on 11 July 2023. - Overseeing the setting of corporate targets: Within the review and approval of the strategy the Board of Directors is reviewing the definition of corporate targets considering stakeholders feedback, benchmark and internal analysis. - Monitoring progress towards corporate targets: Within the review and approval of the strategy the Board of Directors is looking at the evolution of the performance against the targets. More specifically the Audit Committee of the Board of Directors is in charge to review the extra-financial performance declaration which provides a complete view on the annual performance against targets. This was done in May 2023 during a session of the Committee.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	To assess the competencies of its board members on climate-related issues, Alstom is looking at their education and previous work experiences. For instance, a board member can be considered as having competencies on climate-related issues if he/she has previously worked in a company dealing with climate-related issues (e.g., renewable energy, waste and water management...) or in an ESG investment company. Considering this criteria, 2 board members have skills regarding Climate change as they rely on their previous experiences (CEO of energy fuel companies).	<Not Applicable>	<Not Applicable>

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Position or committee
Chief Sustainability Officer (CSO)

Climate-related responsibilities of this position
Integrating climate-related issues into the strategy
Setting climate-related corporate targets
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities
<Not Applicable>

Reporting line
Other, please specify (Chief Strategy Officer reporting line)

Frequency of reporting to the board on climate-related issues via this reporting line
Half-yearly

Please explain
The Chief Sustainability Officer made a presentation to the Board in March 2023. The CSO also presents focuses on sustainability performance and especially climate to the Audit Committee which is now covering Sustainability risks in March 23 and May 23.
The CSO reports directly to the Chief Strategy Officer to integrate sustainability (including climate) into Alstom's strategy. It is also the CSO's responsibility to set corporate targets as this is integrated into their personal objectives of the fiscal year (see question 1.3a: define the detailed plan for scope 1, 2 and 3 emissions in accordance with the external commitment already taken).

Position or committee
Sustainability committee

Climate-related responsibilities of this position
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities
<Not Applicable>

Reporting line
CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line
Half-yearly

Please explain
Sustainability committee of the Alstom Leadership Team (Executive Committee): The Chief Executive Officer is sharing with the Board main non-financial KPIs including CO2 performance (GHG emissions accounting and evolution, risks and opportunities) ahead of financial disclosures every semester.

Position or committee
Other committee, please specify (Sustainability and CSR Steering committee)

Climate-related responsibilities of this position
Managing climate-related risks and opportunities
Other, please specify (Validating targets & strategy)

Coverage of responsibilities
<Not Applicable>

Reporting line
Corporate Sustainability/CSR reporting line

Frequency of reporting to the board on climate-related issues via this reporting line
Quarterly

Please explain
This operational committee is reporting to Alstom top management not directly to the Board.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	The compensation of Alstom's Chairman & Chief Executive Officer's includes both variable and fixed compensation. A part of his short-term variable compensation is based on the overall performance of the Group, which includes the reduction of its operations' greenhouse gas emissions. Financial incentives for the management of climate-related issues and on the attainment of these targets are also provided to Alstom's management team members. Indeed, since 2022, a part of their variable compensation is linked to the achievement of the reduction of GHG emissions in operations.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive
Chief Sustainability Officer (CSO)

Type of incentive
Monetary reward

Incentive(s)
Bonus - % of salary
Shares

Performance indicator(s)
Reduction in absolute emissions
Other (please specify) (Reduction of energy consumption of the solutions brought to the market)

Incentive plan(s) this incentive is linked to
Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)
As other corporate executive team member, Alstom's CSO benefits from a long-term variable compensation and a short-term one which is based on the achievement of the following sustainability objectives, in addition to the same ones as for other corporate executive team members:
- Define the detailed plan for scope 1, 2 and 3 emissions in accordance with the external commitment already taken;
- Review the ambition on ESG topics (beyond external commitment already taken, according to business choices and on remaining dimensions such as biodiversity);
- Define the governance to take the decisions in particular on scope 1, 2 and 3 emissions;
- Sustainability rating levels.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan
The performance indicators are in line with our commitment to be net zero by 2050 as they address key climate topics (including direct and indirect GHG emissions). The objectives of the CSO are aligned with Alstom's targets as they are focusing on defining detailed plans to reach or go beyond external commitments took by Alstom.

Entitled to incentive
Chief Executive Officer (CEO)

Type of incentive
Monetary reward

Incentive(s)
Bonus - % of salary
Shares

Performance indicator(s)
Reduction in absolute emissions
Other (please specify) (Reduction of energy consumption of the solutions brought to the market)

Incentive plan(s) this incentive is linked to
Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)
The compensation of Alstom's Chairman & Chief Executive Officer's includes both variable and fixed compensation. A part of his short-term variable compensation is based on the overall performance of the Group (including the reduction of greenhouse gas emissions), while the other part is based on his individual performance. In addition, his long-term variable compensation takes the form of a Performance Share Plan integrating a performance condition based on the achievement of objectives in terms of energy consumption reduction from solutions.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan
The performance indicators are in line with our emission and energy targets, which forms part of our climate transition plan:
- the reduction of GHG emissions in operations is directly linked with Alstom's absolute scope 1 & 2 emission reduction targets described in question C4.1a;
- the reduction of energy consumption of Alstom's solutions is directly linked with Alstom's intensity scope 3 emission reduction target described in question C4.1b.

Entitled to incentive
Corporate executive team

Type of incentive
Monetary reward

Incentive(s)

Bonus - % of salary
Shares

Performance indicator(s)
Reduction in absolute emissions
Other (please specify) (Reduction of energy consumption of the solutions brought to the market)

Incentive plan(s) this incentive is linked to
Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)
The remuneration of the management team members, i.e. 16 individuals excluding the Chairman and Chief Executive Officer consists of a fixed component and a variable component tied to the achievement of performance objective. On the one hand, corporate executive team members benefit from a short-term variable compensation, based on collective performance conditions (e.g., Alstom's percentage reduction in scope 1 & 2 emissions) and individual performance conditions. On the other hand, they benefit from a long-term variable compensation through Alstom's Performance Share Plan, granting shares on several conditions (including the achievement of objectives in terms of energy consumption of Alstom's products).

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan
The performance indicators are in line with our emission and energy targets, which forms part of our climate transition plan:
- the reduction of GHG emissions in operations is directly linked with Alstom's absolute scope 1 & 2 emission reduction targets described in question C4.1a ;
- the reduction of energy consumption of Alstom's solutions is directly linked with Alstom's intensity scope 3 emission reduction target described in question C4.1b.

Entitled to incentive
Management group

Type of incentive
Monetary reward

Incentive(s)
Shares

Performance indicator(s)
Other (please specify) (Reduction of energy consumption of the solutions brought to the market)

Incentive plan(s) this incentive is linked to
Long-Term Incentive Plan

Further details of incentive(s)
Top managers eligible to LTI benefit from a long-term variable compensation through Alstom's Performance Share Plan, granting shares on several conditions (including the achievement of objectives in terms of energy consumption of Alstom's products).

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan
The performance indicators are in line with our emission and energy targets, which forms part of our climate transition plan:
the reduction of energy consumption of Alstom's solutions is directly linked with Alstom's intensity scope 3 emission reduction target described in question C4.1b.

Entitled to incentive
Other, please specify (Bonus-eligible managers)

Type of incentive
Monetary reward

Incentive(s)
Bonus - % of salary

Performance indicator(s)
Reduction in absolute emissions

Incentive plan(s) this incentive is linked to
Short-Term Incentive Plan

Further details of incentive(s)
The remuneration of managers eligible to a short-term incentive consists of a fixed component and a variable component tied to the achievement of performance objective. They therefore benefit from a short-term variable compensation, based on collective performance conditions (e.g., Alstom's percentage reduction in scope 1 & 2 emissions) and individual performance conditions.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan
The performance indicators are in line with our emission and energy targets, which forms part of our climate transition plan:
- the reduction of GHG emissions in operations is directly linked with Alstom's absolute scope 1 & 2 emission reduction targets described in question C4.1a

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C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?
Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	3	Alstom standard processes include preparation of a 3 year plan. Delivery Plans for functions are also prepared for 3 years (by Finance and Operations) which is relevant for example to Ecodesign, Environment Health and Safety, and Sustainability &CSR functions assessing and managing risks and opportunities in relation to climate change.
Medium-term	3	10	Alstom mid-term objectives are set on a 3 to 10 year timeline. Several examples can be outlined for medium-term climate-related measures: - Alstom's new SBTi-validated targets set to 2030 are midterm emission reduction initiatives set to reach Alstom's longer-term net zero commitment; - A study on climate adaptation is also going towards 2030 and has been started in FY2022/23 to adapt Alstom's activities and assets to climate change; - An objective on electricity supply from renewable energy sources has been fixed for 2025 as a mid-term objective resulting from the updated analysis of midterm opportunities in the field; - Lastly, in Alstom in Motion strategy, non-financial goals were set with a 5-year horizon by 2025.
Long-term	10	30	Alstom also reviews long term aspects and identifies potential long-term risks and opportunities beyond 10 years in accordance to risk mapping and strategy processes. For example, Alstom is committed to achieve carbon neutrality in its value chain by 2050.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

Alstom defines substantive financial or strategic impacts on the business as those generating an impact/damage/disruption that would exceed existing contingencies, currently worth 50 M€. The indicator used to define substantive financial/strategic impact is the quantity of contingencies caused by this impact (that is to say, % loss of revenue or % of direct overcost).

To evaluate the risk, Alstom has defined a matrix where:

- the likelihood is classified as probable (Very likely to occur / >50%), possible (Fairly likely to occur / 20 – 50%), unlikely (Not likely but may occur / 5 – 20%) and improbable (Will reasonably not happen / <5%).

- the impact is evaluated as very high (Catastrophic event resulting in high monetary impact, affecting health & environment of nearby population & image/credibility), high (Likely to Cause discontinuity of operations, resulting in monetary impact and Alstom activities being questioned), medium (Likely to cause disruption more than planned contingencies, health of few employees & negative advertisement) and low (Likely to cause disruption which can be recovered, No health & environment (H&E) impact or effect on company reputation). One of the components of the impact evaluation is the estimated financial impact.

Finally, to define the level of risk the Likelihood x Impact result in the Criticality or Severity : top risks are the ones that are either possible/probable and with a high/very high impact, or the ones that are unlikely with a very high impact.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered
Direct operations
Upstream
Downstream

Risk management process
Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment
More than once a year

Time horizon(s) covered
Short-term
Medium-term
Long-term

Description of process
Risk assessment and management are embedded in the Group's operational and strategic objectives. Climate is part of the risks analysed at company level. The main two climate-related risks evaluated at company level are transition risk to our solutions and physical risk to our assets.

1) Process used to determine which risks and opportunities could have a substantive financial or strategic impact
>>> Identify: Risks and opportunities are identified by Risk Officers (by region, function and product lines), with a monthly or quarterly review. Alstom regularly reviews the risks it faces within the framework of risk management and controls, based on an assessment taking the risks impact level and probability of occurrence into account , as well as the actions and measures designed to manage and mitigate risks implemented by Alstom: assessment review and consolidation is done quarterly by the risk committee, then Alstom's leadership committee annually reviews and validates top risks management.
>>> Assess: Identified risks and opportunities are assessed for substantive impact (those generating an impact/damage/disruption that would exceed existing contingencies, currently worth 50 M€, see question C2.1b).

2) How your organization makes decisions to mitigate, transfer, accept or control the identified climate-related risks/opportunities
The Managing Director of each reporting unit formally certifies that the unit under his/her responsibility has correctly self-assessed its control environment and commits to implementing action plans to correct internal control deficiencies identified during the self-assessment. The results of these self-assessments and the action plans are presented to the Audit Committee.
Risks that are identified as significant under the global risk mapping process are addressed by risk owners who are responsible for defining and steering action under coordination and with support of the Risk Management Department. Risk response actions (avoidance, reduction, sharing and acceptance) are then defined depending on

the severity of the risk and on the effort required to mitigate the risk (very significant = no risk management in place, very poor control; Important = poor risk management in place, lack of internal control; Marginal = marginal improvement identified; None).

3) Explanation of the frequency of assessment and time horizons
The self-assessment of the units is done at least once a year but it can be more frequent, there reviews at several level during the year and the results of the self-assessments are presented annually to the Audit Committee.
The risk assessment presented at this governance level is the one done with climate projections with horizon 2030.

4) Example
In 2022, the physical climate risk was evaluated as having a High impact (Likely to cause discontinuity of operations, resulting in monetary impact and Health & Safety (H&S) issues for our employees) and a Possible occurrence, therefore being part of the company main risk factors. The risk is classified in “Asset resilience”: Acute and chronic events from climate change might result in damage to Alstom installations, processes or projects, decrease of production capacity, impact on supply chain or workforce (e.g. health, safety, etc.), need for adaptation of operational ways of work and installations with potential increase of operating costs, among others.

Value chain stage(s) covered
Direct operations
Upstream
Downstream

Risk management process
A specific climate-related risk management process

Frequency of assessment
Annually

Time horizon(s) covered
Short-term
Medium-term
Long-term

Description of process
The CSR team also has a risk management process. During the Sustainability and CSR Risk Mapping exercise, focus was placed on ensuring global alignment between the different Company risk mapping exercises. This affirmed that the mapping remains fully aligned with the Group’s global risk management methodology described previously.

1) Process used to determine which risks and opportunities could have a substantive financial or strategic impact
>>> Identify: To ensure that the sustainability and CSR risk mapping is kept up to date, the Sustainability and Corporate Social Responsibility Steering Committee reviewed the list of 26 risks previously established, taking into account emerging trends and stakeholder feedback collected during the 2020/21 fiscal year stakeholder dialogue campaign and update of the Group’s Materiality Matrix.
>>> Assess: Risks and opportunities are assessed by the teams in charge of the management of each risk in the Sustainability and Corporate Social Responsibility Steering Committee: Sustainability and CSR, Procurement, Human Resources, Marketing, Environment Health and Safety, Ecodesign, Communication, Ethics and Compliance as well as by the Internal Audit and Risk Management Department. The two criteria used to asses risk criticality remain unchanged: risk likelihood – four levels from “improbable” to “probable"; impacts – profit and loss, operational, human and environmental, image and reputation, health and safety impacts from “low” to “very high”, aligned with the group procedure for risk management. Identified risks and opportunities are assessed for substantive impact (those generating an impact/damage/disruption that would exceed existing contingencies, currently worth 50 M€, see question C2.1b).
The associated risks evaluated on climate on this process are: Energy and Greenhouse gas emissions performance of operations (Energy costs, contribution to climate change and reputational damage if environmental performance was not in line with target), Low carbon solutions (Energy consumption and indirect emissions from solutions contributing to climate change-opportunities for low carbon solutions answering market needs to mitigate climate change) and Asset resilience (Operational impacts on installations, solutions and supply chain resulting from weather events in relation to climate change). The latest, being one of the main company risks as described in the previous process.

2) How your organization makes decisions to mitigate, transfer, accept or control the identified climate-related risks/opportunities
Risks that are identified as significant under the global risk mapping process are addressed by risk owners who are responsible for defining and steering action plans under coordination and with support of the Risk Management Department. Risk response actions (avoidance, reduction, sharing and acceptance) are then defined depending on the severity of the risk and on the effort required to mitigate the risk (very significant = no risk management in place, very poor control; Important = poor risk management in place, lack of internal control; Marginal = marginal improvement identified; None).

3) Explanation of the frequency of assessment and time horizons
The self-assessment of the units is done at least once a year but it can be more frequent, and the results of the self-assessments are presented annually to the Audit Committee.
The risk assessment is done with climate projections with horizons 2030 and 2050 covering all time-horizons (short-, mid- and long-term).

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	As a company within the transport sector, Alstom's activities are subject to numerous legal requirements, including regulations related to climate change and energy. As an example, Alstom is under regulations in Europe (which represent half of its revenue) and France related to the publication of a carbon footprint assessment of its activities, or the implementation of energy diagnostics on sites, as well as the publication of information related to CO2 emissions of Alstom's products and services. Moreover, European legislation on disclosure of ESG indicators requires more transparency on climate mitigation and adaptation, included in the EU taxonomy.
Emerging regulation	Relevant, always included	Incoming regulation to support the global climate ambition will have an impact on Alstom's operations. As an example, the incoming legislation of the Carbon Border Adjustment Mechanism will have an impact on a number of suppliers that work with the company, especially critical materials for Alstom's activities such as steel and aluminium coming from outside the EU This will result in a direct cost increase but also in administrative indirect costs. The increase of disclosure level for investments and sales required by European CSRD reporting will result as well in a strategic impact for the company. Since Europe is leading the climate legislation, it can be expected that other markets will follow and require that Alstom adapts its offer as well as supply chain.
Technology	Relevant, always included	An example of Technology risk for the Group is the obsolescence of diesel products. Indeed, considering the reinforced pressure on diesel for environmental and public health reasons, Alstom expects to see a progressive phasing out of diesel on the markets it is serving in this segment, mainly Europe, by 2035. A transition from diesel to low-carbon fuels such as e-fuels or biofuels could generate a need for engine change as diesel engines are not suitable for these fuels. Moreover, today electrical rail solutions and systems represent most of the Company's orders. The supply of diesel rolling stock (locomotives or trains) represented less than 5% of Alstom's revenues over the last three years. The Group is ready to accompany its clients in this major transition by offering efficient alternatives to diesel trains, such as: electrification, hybrid traction and fully autonomous zero-emissions trains based on hydrogen fuel-cells or battery-powered solutions.
Legal	Relevant, always included	Potential non-compliances could negatively impact Alstom's image/reputation, business results, financial position and cashflows. In the ordinary course of business, the Group is committed to fulfil various types of obligations arising from customer contracts (among which, full performance and warranty obligations). Obligations may also arise from leases and regulations in respect of tax, custom duties, environment, health and safety. These obligations may or may not be guaranteed by bonds issued by banks or insurance companies. It is not possible to provide any assurance that Alstom will not be required to bear the costs of or will not be found liable for environmental matters, including in relation to past cases of pollution caused by third-parties, past activities or assets sold, to the business activities of its subsidiaries or subcontractors, or to its obligations concerning health and safety. Furthermore, Alstom cannot guarantee that amounts budgeted or provisioned for renovations and investments in projects associated with the environment, health and safety will be sufficient enough to cover such an unforeseen expense or necessary investment. In addition, the discovery of new conditions or facts, or future changes in environmental (including climate change and energy) regulations or case law may result in increased liabilities or the required costs to bear that are likely to have a material effect on the business activities, financial position, earnings or future outlook of the Company, as well as on its reputation. Last but not least, a non-compliance or failure to properly disclose climate-related information of their products, against existing regulation and customers' expectations, exposes Alstom to potential legal actions, similar to the ones that faced other transportation-sector companies (e.g. Volkswagen) and large companies in the context of the French law on the Duty of Vigilance.
Market	Relevant, always included	The evolution of the markets in which Alstom operates is driven by a variety of complex and inter-related external factors, such as economic growth, political stability, public policies and the availability of lines of credit. The rail transportation market is highly dependent on public policy regarding the environment and transportation, and the increasing urbanization. An example of risk due to market, is the decrease in demand for carbon emitting technologies: governments/regions' engagements toward climate will directly impact their orders to Alstom through decreasing demand for diesel technologies. According to the IEA 'Future of rail', the majority of energy demand growth is met in the form of electricity, especially in passenger transportation.
Reputation	Not relevant, included	Alstom's products and solutions portfolio offering is in line with the global ambitions and countries' commitments to transition to a low carbon economy by 2050. Thus, reputation is not considered as a relevant risk type in relation to climate change, as the products/solutions Alstom offers support society's transition towards a low carbon economy model. As stated before, the supply of diesel rolling stock (locomotives or trains) represented less than 5% of Alstom's revenues over the last three years. However, Alstom is getting some signals from a few projects on the importance of having targets aligned with the Paris agreement and on the transparency of a carbon inventory of a project. Thus, Alstom has a validated target from the SBT initiative and is currently doing LCA when requested (81% of products have a LCA). Nevertheless, not reaching the climate targets or not reducing the carbon content from the components of the train would have a negative effect on Alstom's reputation.
Acute physical	Relevant, always included	An assessment of risks related to natural hazards on the full perimeter has been launched in the 2021/22 fiscal year in order to develop and implement a full prevention programme for climate change risks for Alstom's new perimeter of activities. Alstom mandated AXA XL and AXA Climate to start and conduct a new exhaustive climate change related exposure analysis of more than 900 sites, operated by Alstom as well as a few from suppliers and partners. The analysis also aimed at identifying countries and sites with the highest potential exposure to natural disasters, in the current climate conditions and future ones. All climate projections are computed for time horizons in 2030 and 2050. The climate projections are also computed under two global warming scenarios RCP4.5 (end of century warming to reach 2.1 to 3.5°C) and RCP8.5 (end of century warming to reach 3.3 to 5.7°C). The main acute risks found after this study are increase in capital expenditures due to the risk of destruction of installations and supply chain elements and the risk of product damage on-site during the execution of contracts in the context of exceptional events, such as riverine flood and tropical cyclones windgust, which are localised in some of Alstom's main countries, where industrial sites are present. The company will proceed to a follow-up study to mitigate the risk. Riverine Flood hazard represents flooding from river overflow and occurs in river basins with an area of at least 10,000 km2 (Return period T =100 years). Cyclonic wind gust is the windspeed faced with a 100-years return period due to tropical cyclones.
Chronic physical	Relevant, always included	An assessment of risks related to natural hazards on the full perimeter has been launched in the 2021/22 fiscal year in order to develop and implement a full prevention programme for climate change risks for Alstom's new perimeter of activities. Alstom mandated AXA XL and AXA Climate to start and conduct a new exhaustive climate change related exposure analysis of more than 900 sites, operated by Alstom as well as a few from suppliers and partners. The analysis also aimed at identifying countries and sites with the highest potential exposure to natural disasters, in the current climate conditions and future ones. All climate projections are computed for time horizons in 2030 and 2050. The climate projections are also computed under two global warming scenarios RCP4.5 (end of century warming to reach 2.1 to 3.5°C) and RCP8.5 (end of century warming to reach 3.3 to 5.7°C). The main chronic risks found after this study are decrease of production capacity and increase of cost due to rising in mean temperatures. For example, extreme heat can affect production processes and products such as spared part inventories (with plastic materials or electronic/electric components) and have potential impact on plastic sheeting quality in some of Alstom's main countries, where industrial sites are present. The company will proceed to a follow-up study to mitigate the risk. Heating/Cooling degree days (< 18°C): weather-based technical index designed to describe the need for the heating/cooling energy requirements of buildings. Hot days (> 35°C): the number of days where maximum temperature is above 25 °C. Dangerous days (or Heat index): Average number of days per year where the sultry index (combination of hot temperatures and high relative humidity) is above 40.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Market	Changing customer behavior

Primary potential financial impact
Decreased revenues due to reduced demand for products and services

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Cities alone account for about two thirds of energy consumption and more than 70% of CO2 emissions worldwide. The most advanced ones are showing their ambitions in terms of carbon neutrality, setting up restricted or low-emission traffic zones, encouraging the use of shared mobility solutions or the transition to electric power. For example, the Fossil-fuel free streets initiative of the C40 Cities Climate Leadership Group now brings together 34 cities committed to zero emission mobility to promote the development of soft and shared modes and the procurement of zero-emissions vehicles (e.g. Los Angeles, Cape Town, Mexico City, Paris, London or Milan). Cities are also taking up the challenge and planning a ban of diesel or fossil-fuel vehicles at local level (e.g. Madrid, Paris, Amsterdam, Athens, Mexico, Munich). This could affect the market for diesel trains limiting Alstom's ability to sell such trains as these cities could request train operators to stop using them. Other cities/countries could follow. Alstom has currently solutions that would be impacted by this risk, specifically Coradia Lint regional trains, that are supplied in Germany, or the VLocity regional trains supplied to the Department of Transport (DoT) in Victoria for the State's regional rail network.
Considering the reinforced pressure on diesel for environmental and public health reasons, Alstom expects to see a progressive phasing out of diesel on the markets it is serving in this segment, mainly in Europe, in the medium term, and aims to accompany its customers to phase out diesel by 2035. Pure-diesel trains represent today less than 5% of Alstom revenue.

Time horizon
Medium-term

Likelihood
Very likely

Magnitude of impact
Medium-low

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
825000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
The supply of diesel rolling-stock (locomotives or trains) has represented less than 5% of Alstom's revenues over the last three years on the legacy perimeter. The risk is the loss of these activities. Financial impact figure is therefore calculated as 5% of the reporting year sales revenue on legacy perimeter. The reporting year sales revenue was € 16.51 billion, 5%* € 16.51billion = € 825,000,000.

Cost of response to risk
39000000

Description of response and explanation of cost calculation
1) Description of response
The Group is ready to accompany its clients in this major transition by offering efficient alternatives to diesel trains, such as: electrification, hybrid traction and fully autonomous zero-emissions trains (hydrogen or batteries). Alstom also intends to enlarge its offer of electrical mobility solutions (including electrical and driverless shuttles and electrical highway infrastructure solutions), to limit the development of diesel solutions and to focus on the environmental performance of its existing trains or alternative solutions to diesel. This is fully integrated in the company's Climate change and energy transition strategy which has a "Global contribution to Net Zero mobility" pilar. It should be noted that R&D spent on alternatives to diesel not only prevents risk of business reduction but also generates new business opportunities.

2) Case study providing a description of company-specific activities, projects, products and/or services
> Situation: Alstom clients are concerned about reducing emissions associated to the use of their products.
> Task: Alstom needs to increase its offer in zero-emissions mobility solutions.
> Action: Alstom has recently enlarged its offer of electrical hybrid and autonomous zero-emissions mobility solutions, including electrical and driverless shuttles systems in its portfolio, electrical highways infrastructure solution as relevant alternatives to road solutions powered by fossil fuel and battery (Coradia Continental battery-electric trains for regional traffic) and hydrogen (Coradia iLint) solutions for non-electrified sections.
> Result: Alstom will invest in R&D to increase its offering in zero-emissions mobility solutions (horizon 2025).

3) Explanation of cost calculation
Alstom does not disclose detailed figures on R&D per type of programs. Total R&D spend for FY2022/23 was 519 million euros, which represent 3.1% of sales. Estimated cost is an order of magnitude rounded from an estimated yearly average 5-10 % of global R&D budget dedicated to development and expansion of green innovation, green traction, energy efficiency and ecodesign : 519*0,05 = 26M€ & 519*0,1 = 52M€, so average is 39M€.

It must be noted that R&D spent on alternatives to diesel should not only prevent risk of business reduction but also generate new business opportunities. Alstom does not intend to develop diesel solutions in the future and want to focus on the development of alternative solutions to diesel.

Comment
N/A

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Acute physical	Flood (coastal, fluvial, pluvial, groundwater)

Primary potential financial impact
Increased capital expenditures

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Riverine flood and Tropical cyclones Windgust, which are localised in some of Alstom's main countries, where industrial sites are present .
Countries like the United States, Italy or China, with Alstom's activities on Rolling Stock and Services are threatened by river overflow and tropical cyclones. Those hazards may damage water sensitive areas with specific installations such as cofferdams, leading to an increase of capital expenditure.
Riverine Flood hazard represents flooding from river overflow and occurs in river basins with an area of at least 10,000 km2 (Return period T = 100 years). Cyclonic wind gust is the windspeed faced with a 100-years return period due to tropical cyclones.

Time horizon
Long-term

Likelihood
Unlikely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
224000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Our study on physical impact of climate change towards our assets takes into account the asset value and the criticality of the risk to allocate a level of risk. After the exposure, level of hazard and vulnerability were assessed, a list of "High risk" sites was established. Then, the sites went under an evaluation to consider their level of readiness towards the risk that was identified. For example, for a site in the United States, the questions were to know how much their building, procedures and employee training were prepared in case of a riverine flooding. Based on the evaluation, sites were either kept in the "high risk" list, while others were taken out. Taking into account the sites that are still considered at "High risk" from acute and chronic exposure, the maximum potential impact is of 224 million euros if the whole asset value was exposed.

Cost of response to risk
56000000

Description of response and explanation of cost calculation
1) Description of response
Alstom conducted a climate scenario analysis to assess the exposure level of its sites. The analysis was done on Global Warming Scenario SSP2 4.5 and SSP5 8.5; the second one being selected for the analysis. The future climate risk screening assessed the physical vulnerability to both acute and chronic events towards 2030.

2) Case study
> Situation: Some of Alstom's sites are at high physical risk (acute) due to Riverine flood.
> Task: The company is trying to protect its asset to prevent damage.
> Actions: The assets that were identified at risk went through a first screening to evaluate their preparedness to potential climate hazard that was identified from the assessment. The main climate perils for Alstom assets can be summarized in: Heat Wave, Cold Wave, Tropical cyclone and Flooding. For each of the assets, the main risk was signalled and a climate adaptation survey was answered.
> Results: Alstom's sites are currently deploying adaptation initiatives to ensure business continuity and the safety of employees. For example, sites that are exposed to heat waves have already deployed actions like flexible working hours for employees, extreme weather event training annually and individual protection equipment. The buildings themselves are also equipped to have a controlled ambient temperature or are built to withstand extreme weather as local legislation requires. Critical equipment is also identified and actions like storage in temperature-controlled rooms or special protection can be carried out. Finally, almost all screened sites have an alert system managed by local authorities, which allows to be better prepared in case of extreme weather event. Additional mitigation measures will be considered after this year survey in the emergency procedure of the concerned sites (to be done during 2023). Alstom's physical risk strategy will be conducted up to 2030.

3) Explanation of cost calculation
According to an analysis by the National Institute of Building Science benefit-cost ratio (BCR) of 4:1 can be attributed to mitigation actions. Therefore, every euro spent saves at least four euros in future disaster cost. The cost of response to risk is estimated through this principle, taking into account the potential financial impact stated above: 224,000,000€/4 = 56,000,000€.

Comment
N/A

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Current regulation	Carbon pricing mechanisms

Primary potential financial impact
Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Our manufacturing activities and assets are subject to regulations at European and national levels that are pushing companies to complete energy/GHG diagnosis and action plans to reduce energy consumption and/or GHG emissions. Moreover, companies are under carbon tax regulations in many countries, increasing the price of energy.
In particular, carbon pricing mechanisms are developed and strengthened all around the world, for example in France, the United Kingdom, Mexico and South Africa where Alstom has manufacturing activities that represent around 40% of the fossil fuel consumption of the group. This represents a risk for Alstom as it will increase the carbon price. In France, for example, Alstom is subject to the French carbon tax that applies to fossil fuel consumption, mainly natural gas. Alstom estimates that by 2030, all countries where it has activities will set a carbon price. The increase of the carbon prices will lead to an increase of indirect operating costs for Alstom if the company does not decarbonize its operations.

Time horizon
Long-term

Likelihood
Likely

Magnitude of impact
Low

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
5640000

Potential financial impact figure – maximum (currency)
288580000

Explanation of financial impact figure
Alstom 2022 scope 1 emissions were c. 94,000 tons CO2e.
Using the NGFS scenarios Divergent net zero (aligned 1.5°C) and Current policies (consistent with SSP5 – 8.5 used by Alstom in its scenario analysis), in average across all regions, in 2035, carbon price will be:
- 307€ for the Divergent net zero scenario;
- 6€ for the Current policies scenario (this is highly unlikely as in the EU the carbon price is already around 100€).
- This would result in an annual additional cost of: 94 kt x 307€/t = 28.9M€ for the Divergent net zero scenario;
- 94 kt x 6€/t = 0.564M€ for the Current policies scenario.
Hence between 564,000 € x 10 = 5,640,000€ and 28,858,000 x 10= 288,580,000€ over the next 10 years (conservative values as the carbon price would be increasing progressively and not be at the 2035 price during the 10 years).

Cost of response to risk
35000000

Description of response and explanation of cost calculation
1) Description of response
In order to reduce its exposure to an increase in carbon tax costs, Alstom began implementing several projects that contribute to reducing its scope 1 emissions.
Alstom has deployed an energy saving plan, through which sites evaluate the costs and benefits of potential implementation of different energy saving initiatives. A set of indicators and criteria is used to prioritize the initiatives and proceed with the implementation if approved. With this plan Alstom can keep track of the actions under consideration, in progress, the expected and real economic and energy savings, and even initiatives that might have been rejected because main criteria were not met.
Moreover, the Group has set a target to reduce its CO2 emissions of operations by 40% by 2030 vs. 2021/22.

2) Case study
> Situation: Alstom faces risk of increased costs due to carbon tax.
> Task: Alstom wishes to reduce its GHG emissions to avoid any additional cost.
> Action: In order to reduce its GHG scope 1 emissions and its exposure to an increase in carbon tax costs, Alstom implemented, improved thermal insulation of both buildings and steam pipes and other efficiency measures.
> Result: The CO2 emissions reflect the decrease in the energy consumptions due to the implementation of energy saving actions in 2022 in the major energy consumers. At the end of 2022, the GHG emissions from energy consumption have decreased by 22% compared to 2021 (including Scope 1&2). These energy saving actions will continue according to the energy saving plan that goes up to 2030.

3) Explanation of cost calculation
Management cost is highly dependent on site's characteristics and what actions are eligible for implementation. Management costs also include employees responsible for facilities' energy management, such as Environment, Health and Safety (EHS) managers accountable for energy surveys, facility managers performing energy surveys, energy officers delivering the energy saving plan, etc.
Calculation: 500 EHS personnel, 20% of their time dedicated on such projects, annual cost of 100,000 euros per employee: 500 x 20% x 100,000 = 10 million euros. In addition to the personnel costs, an evaluation on CapEx requirement to reduce the utilisation of natural gas was estimated at 25 million euros, over several years and for several sites. This estimation is a wide figure as further studies are necessary to calculate the exact cost depending on the site process and configuration.

Comment
N/A

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?
Yes

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier
Opp1

Where in the value chain does the opportunity occur?
Downstream

Opportunity type
Products and services

Primary climate-related opportunity driver
Development and/or expansion of low emission goods and services

Primary potential financial impact
Increased revenues resulting from increased demand for products and services

Company-specific description
According to the latest UNIFE (Association of the European Rail Industry) study, the perspectives on the rail market are good and indicate that it should grow at an average annual rate of 3% over 2025-2027 period (source: UNIFE Market Study 2022).
Main climate change-related opportunities are linked to: 1) Need to decarbonize transport and to favour low carbon emission modes through public policies, regulations and/or the implementation of carbon pricing in the transport sector; 2) further integration of transport targets and action roadmaps in the NDCs of which most already identify transport as a key mitigation source and some refer specifically to rail; 3) transport operators' willingness to deploy alternative technologies to fossil fuels and the latest energy efficiency solutions/services. Energy efficiency is a major challenge for the transport operators who are sometimes among the largest energy consumers in a country. Aware of this issue, Alstom makes constant efforts to reduce the energy consumption of its rolling stock and systems. In the past years, Alstom managed to reduce the energy intensity of its trains sold for passenger transportation by 23.4% compared to 2014. Alstom's portfolio of highly energy efficient electric rail solutions and innovative solutions to support energy transition in the rail sector and towards electrical solutions in urban environment and long-distance transport is very well positioned to seize these opportunities. For example, the first TGV M test train, from Alstom's Avelia Horizon range, has been at the Velim test site in the Czech Republic. The Avelia Horizon™ addresses ambitious goals in terms of competitiveness of the rail sector and profitability: thanks to its aerodynamic design and a more efficient traction drive, Avelia Horizon™ will consume 20% less energy compared to the previous generation. Alstom considers that the context abovementioned will raise the following opportunities for the company:
• the financing of low carbon sustainable transport projects as well as financing of R&D projects on innovative technologies for sustainable mobility;
• the willingness of transport operators to deploy alternative technologies to fossil fuels and the latest energy efficiency solutions and services;
Alstom offers innovative capacitive solutions that are attractive throughout their entire life cycle, are based on electric and shared mobility and are responsive to social expectations.

Time horizon
Short-term

Likelihood
Very likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
620000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Alstom's revenue was 16.51 billion Euros during fiscal year 2022/23. Alstom makes the assumption that its sales could increase by 5% until fiscal year 2025/2026, and that in 2025, 75 % of its products and solutions will be classified as low carbon according to the European Green Taxonomy (see question C3.5a).
Calculation details: 2022/23 revenue: 16.51 billion Euros. 5% increase leads to a 2025/2026 revenue of 17.34 billion Euros (=16,51*1,05), hence a net increase of 0.83 billion Euros 0.83 *75% = 0.62 billion Euros.

Cost to realize opportunity
519000000

Strategy to realize opportunity and explanation of cost calculation
1) Description of strategy to realize opportunity
Alstom's wide range of railway products, services and solutions allows the company to be well prepared to benefit from new opportunities arising from the reinforcement of public policies that will promote the use of rail as a low carbon transport mode. In addition, Alstom has set an objective to reduce the energy consumption of its transport solutions by 25% by 2025 (vs. 2014 baseline) measured in Wh/passenger.km. Innovation is one of the three pillars within Alstom's business strategy and is key in improving its existing line of products and services to meet customers' requirements. To this extent, Alstom invested 3.1% of its revenues in R&D, in order to support the development of new products and services.

2) Case study

>>> Situation: Alstom intends to seize new opportunities arising from the reinforcement of public policies that will promote the use of rail as a low carbon transport mode
>>> Task: The company wants to improve the footprint of its current products
>>> Action: Alstom has invested in innovation in order to enhance efficiency through improved traction systems, weight reduction, improved aerodynamics and heating/air conditioning systems, ecodriving (through assistance to drivers), breaking energy recovery and storage, and optimization at system level.
>>> Result : Today the solutions that Alstom is able to offer to its customers are currently 23.4% more energy efficient on average than in 2014. For example, with its new regional train, Coradia Stream™, Alstom has reached an energy reduction of almost 36 % thanks to efficient traction and auxiliaries, electrical braking and enhanced HVAC and energy management provisions.

3) Explanation of cost calculation
As most of the solutions are considered low carbon solutions, most of the R&D can be considered globally to support the development of low carbon products to generate new business opportunities. Alstom does not disclose detailed figures on R&D per type of programs. Alstom invested around 519 million euros in its R&D activities in 2022/23, which represents 3.1% of sales. More specifically a portion of R&D budget is dedicated to development and expansion of green innovations, green traction, energy efficiency and ecodesign which is included in this figure.

Comment
N/A

Identifier
Opp2

Where in the value chain does the opportunity occur?
Downstream

Opportunity type
Products and services

Primary climate-related opportunity driver
Development of new products or services through R&D and innovation

Primary potential financial impact
Increased revenues resulting from increased demand for products and services

Company-specific description
It has been increasingly recognized that the contribution of the transport sector will be crucial if the world is to reach the target set in the Paris Agreement. It is one of the only sectors where emissions are still growing, even in developed countries. Railway will be a key contributor to reducing GHG emissions of the transportation sector. It is indeed already largely electrified and provides motorized transport service with CO2 emissions per passenger*kilometres amongst the lowest of the sector. As part of the research on decarbonized transport services, Alstom investigates train relying on hydrogen as the main source of energy.
Alstom is well prepared to benefit from new opportunities arising from the reinforcement of public policies and will be in a good position to contribute to this transition. As emissions from transport continue to rise, it becomes essential to succeed in decoupling mobility from emissions growth by favouring modes with the lowest carbon footprint, meaning shared and electrical transport. Ultimately decarbonization of transport will involve electrical traction which is the core of Alstom's expertise.
The European Parliament endorsed in February 2021 the Regulation of the Recovery & Resilience Facility (RRF) which will make available a total of €672.5 billion to Member States to contribute to their national recovery plans. Member States need to allocate at least 37% of their envelope for green investments. Rail is in a good position, with the European Smart and Sustainable Mobility strategy which sets concrete milestones to keep the European transport system’s journey towards a smart and sustainable future on track. Additionally, the OEM market should benefit directly or indirectly of investments in public transports and hydrogen infrastructure. For instance, in countries where Alstom is developing hydrogen solutions:
• France is planning to spend €7 billion in hydrogen by 2030 and heavy mobility use cases such as railway.
• In Germany, €9 billion is to be spent on hydrogen.
• Spain foresees a mobilization of nearly €9 billion during the period 2020-2030 in industrial, mobility and electricity sectors.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
10000000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Assumptions taken and figures used:
• 6,000 new hydrogen trains by 2040 (result from a market study done by Alstom) and 5-10 million Euros per train.
• 33% market share for Alstom.
Calculation: 6,000 * 5,000,000 * 33% = 10 billion Euros, which is a potential market size

Cost to realize opportunity
519000000

Strategy to realize opportunity and explanation of cost calculation
1) Description of strategy to realize opportunity
Innovation is at the core of Alstom’s strategy and is fully integrated into the business activities. New Alstom in Motion strategy reinforce focus on innovation and R&D on low-carbon mobility solution (Green traction, road electromobility and ecodesign) to support energy efficiency for rail and energy transition in transport. Expanding the range of solutions for low carbon mobility is also fully part of Climate Strategy. Alstom strives to develop its range of low-carbon rail offers by developing electric mobility solutions and alternatives to fossil fuel powered products.
2) Case study
>>> Situation: Alstom intends to develop new low carbon products to benefit from the reinforcement of low-carbon policies and be ready to meet its customers needs.
>>> Task: Develop hydrogen trains.
>>> Action: Alstom invests in hydrogen R&D projects: a specific example of Alstom’s innovation to develop new low carbon products is the development of Coradia iLint – which positions Alstom as the first manufacturer in the world to offer regional trains powered by hydrogen fuel cells (zero emissions).
>>> Result: The development of Coradia iLint has been carried out through collaborations with other business partners, such as the hydrogen supplier, enabling for the first time the coupling of the transport sector to hydrogen infrastructure. This solution has attracted a lot of customers’ attention resulting in discussions on potential applications in a range of countries. In September 15, 2022, this low-noise, zero-emission train travelled the record distance of 1,175 kilometres without refuelling. In Germany, a first 100 per cent hydrogen line was launched with 14 Coradia iLint trains gradually replacing 15 diesel trains by 2023.

3) Explanation of cost calculation
Alstom does not disclose detailed figures on R&D per type of programs Alstom invested around 519 million euros in its R&D activities in 2022/23, which represents 3.1% of sales. More specifically a portion of R&D budget is dedicated to development and expansion of green innovations, green traction, energy efficiency and ecodesign which is included in this figure.

Comment
The Hydrogen Council, of which Alstom is a member, released in November 2017 its “Scaling up” report which concluded that hydrogen had the potential to decarbonize the economy up to about 20%. This report also noted that, by 2030, one in ten trains/locomotives sold for currently non-electrified railways could be powered by hydrogen to fully decarbonize operations on non-electrified lines, Alstom is the first manufacturer in the world to offer regional trains powered by hydrogen fuel cells.

Identifier
Opp3

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Use of more efficient production and distribution processes

Primary potential financial impact
Reduced indirect (operating) costs

Company-specific description
Regulations at European (EU Energy Efficiency Directive (2012/27/EU)) and national levels are pushing companies to complete energy/GHG diagnosis and action plans to reduce energy consumption and/or GHG emissions. While Alstom is obliged to conduct energy surveys, these surveys represent at the same time an opportunity to reduce costs in Alstom's operations by identifying areas of improvement for energy consumption. Due to the energy crisis in 2022 impacting natural gas and electricity, energy saving plans were implemented in 2022. The volume of steam consumed for heating has also slightly decreased due to the adjusted temperature set point applied in European countries and saving actions on sites, especially in Germany where urban heating is quite common. Moreover, Alstom deployed specific energy efficiency plans in the European global region in order to face the energy crisis and allow to reduce the energy intensity by 15%, on this perimeter, between 2021 and 2022.

Time horizon
Short-term

Likelihood
Very likely

Magnitude of impact
Low

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
21380000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Energy bill for Alstom is around € 95 M per year. Achieving a 15% energy efficiency gain between 2021 and 2023 as aimed by Alstom would represent a saving of:
- in 2022: € 95 M*7.5% = € 7.13 M (assuming that the 15% decrease will be linear over the 2 years)
- in 2023: € 95 M*15% = € 14.25 M
Overall, the financial impact is 14.25+7.13=21.38M€

Cost to realize opportunity
26000000

Strategy to realize opportunity and explanation of cost calculation
Description of strategy to realize opportunity
Energy intensity is defined by the quantity of energy consumed related to Alstom’s activity. Activity is measured in hours worked (employees and contractors). The quantity of energy consumed is recalculated in order to integrate the climate factor. Thus, the share of energy used for heating is retreated to take into account the impact of winter temperatures on heating energy consumption. This retreatment is made on a monthly basis using the “Unified Degree Day” factor that estimates on a daily basis the difference (by geographical zone) between a baseline temperature and the average of the measured temperatures.

Case study
> Situation Alstom energy bill accounts for 95 million Euros per year. Because of regulations, Alstom has to reduce its energy consumption, which will allow the company to reduce its expenses.
> Target: Alstom is developing an energy-saving plan to reduce its energy consumption. Alstom wishes to generate savings on its energy bill, and therefore reduce its energy consumption.
> Action: LED, HVAC optimization, improved building insulation , site compacting analysis for unused space, switch off unused industrial equipment and installation of thermostat on radiators.
> Result: Alstom’s energy-saving plan targets the 40 largest consumers (85% of energy consumption). The deployment, monitoring and sharing of best practices has generated a strong dynamic to make progress, as such the LED lighting deployment initiative continues at Group level, deployed on 8 sites. A first milestone on energy saving plans is piloted for 2025.

Explanation of cost calculation
Management costs include employees responsible for facilities' energy management, such as EHS managers, Facility managers, energy officers, etc.
Calculation: 500 EHS managers, with each a salary of 100,000 € per year, and 20% of their time dedicated to identifying opportunities, designing and implementing energy saving actions.
In addition, an evaluation on CapEx requirement to reduce the use of natural gas was estimated at 25 million € over 3 years, in order to reduce the consumption in several sites. To account for the same period of time as the calculation of the financial impact (2 years), CapEx is estimated at 25*2/3=16M€. This estimation is a wide figure,

further studies are necessary to calculate the exact cost depending on the site process.
> 500 * 100,000 * 20% + 16,000,000 = 10,000,000 + 16,000,000 = 26 million Euros.

Comment
-

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a climate transition plan that aligns with a 1.5°C world?

Row 1

Climate transition plan
Yes, we have a climate transition plan which aligns with a 1.5°C world

Publicly available climate transition plan
Yes

Mechanism by which feedback is collected from shareholders on your climate transition plan
We have a different feedback mechanism in place

Description of feedback mechanism
A Board Meeting is organized annually during which the Chief Strategy Officer (in charge of CSR topics) shared the Climate strategy, the targets and the results reached to date. The shareholders challenge the strategy during the meeting by asking questions.

Frequency of feedback collection
Annually

Attach any relevant documents which detail your climate transition plan (optional)
Section 'A proactive policy of corporate social responsibility (CSR)' – URD p258-334
Alstom_2022_2023_Universal_Registration_Document_URD_EN.pdf

Explain why your organization does not have a climate transition plan that aligns with a 1.5°C world and any plans to develop one in the future
<Not Applicable>

Explain why climate-related risks and opportunities have not influenced your strategy
<Not Applicable>

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios: IEA NZE 2050	Company-wide	<Not Applicable>	In this scenario: - rail and modal shift are a main part of the solution to decarbonise the transport sector; - an important parameter that is taken into account for Alstom is the share of electrification and fossil-free solutions that need to be available in the market to reach net zero emissions (NZE). The 2019 IEA Future of rail states that reducing oil demand and GHG emissions from the transport sector in line with the Paris Agreement targets requires a combination of measures including modal shifts, improved vehicle efficiency, low-carbon fuels and power sector decarbonisation for rail, when analysing the "High rail scenario". We make an analytical choice that by 2050 technology maturity, policy preferences, and market conditions are in line with a phase-out of fossil fuel utilisation on rail. All climate projections are computed for time horizons in 2030 (relevant for climate prevention and climate adaptation strategies to be implemented as soon as possible) and 2050 (relevant time horizon when strategic decisions need to be taken such as expansion, acquisition, prevention or closure). Our analysis using this scenario was both quantitative and qualitative.
Transition scenarios: IEA STEPS (previously IEA NPS)	Company-wide	<Not Applicable>	Parameter: The main parameter taken into account is the GHG emissions per MWh from the production of electricity in the countries where Alstom operates. Assumptions: Our reduction trajectory is composed mainly of two elements: reduce GHG emissions by continuing its efforts to improve the energy performance of its solutions; and an analysis of the expected evolution of emission factors for electricity was also completed for countries where Alstom has developed projects, based on national commitments under the Paris Agreement (NDCs). Analytical choices: Alstom assumes that the IEA STEPS scenario is applicable in 2030, target year of our emissions reduction objectives. Our analysis using this scenario was both quantitative and qualitative.
Physical climate scenarios: RCP 4.5	Company-wide	<Not Applicable>	Parameter: the physical scenario relies on the concentration of greenhouse gas in the atmosphere Assumption: The climate projection is computed under RCP4.5 , also called optimistic scenario, which leads to an increase of GHG concentration corresponding to an end of century warming of 2.1 to 3.5°C Analytical choices: All climate projections are computed for time horizons in 2030 (relevant for climate prevention and climate adaptation strategies to be implemented as soon as possible) and 2050 (relevant time horizon when strategic decisions need to be taken such as expansion, acquisition, prevention or closure). The RCP is coupled to a Shared Socioeconomic Pathway (SSP) : SSP 2-4.5 Our analysis using this scenario was both quantitative and qualitative.
Physical climate scenarios: RCP 8.5	Company-wide	<Not Applicable>	Parameter: the physical scenario relies on the concentration of greenhouse gas in the atmosphere Assumption: The climate projection is computed under RCP 8.5 , also called optimistic scenario, which leads to an increase of GHG concentration corresponding to an end of century warming of 3.3 to 5.7°C All climate projections are computed for time horizons in 2030 (relevant for climate prevention and climate adaptation strategies to be implemented as soon as possible) and 2050 (relevant time horizon when strategic decisions need to be taken such as expansion, acquisition, prevention or closure). The RCP is coupled to a Shared Socioeconomic Pathway (SSP) : SSP 5-8.5 Our analysis using this scenario was both quantitative and qualitative.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

1) Given the proven contribution of diesel to global warming, how can increasingly stringent carbon regulations affect Alstom's business model?
2) To what extent can Alstom's complete transition to a modernized and low environmental footprint transport offer prove to be a real opportunity and ensure the company's sustainability?
3) To what extent can Alstom's rolling stock accompany European states in achieving the carbon neutrality set by the European Green Deal by 2050?

Results of the climate-related scenario analysis with respect to the focal questions

Question 1)
(i) Analysis conducted: Alstom conducted a transition scenario analysis to understand future evolution of the transport sector, and especially its decarbonization, and build a Net Zero Emissions target. A physical scenario analysis was also performed.
(ii) Results: Alstom's customers are turning to low-carbon solutions to comply to strengthened climate regulations in the transport sector, thus affecting Alstom's business model. Physical chronic risks were identified that could impact Alstom's business model, such as extreme heat that can affect production processes and products.
(iii) Decision taken: To answer to the phase out of diesel and offer an even lower carbon transport, the companies catenary-free zero emissions solutions to fully decarbonise operations on non-electrified lines answers to the market demand. After being the first manufacturer in the world to offer regional trains powered by hydrogen fuel cells, Alstom has now developed a full range of solutions, including battery solutions, more suitable for short and medium-length non-electrified sections, and hydrogen-based solutions, that are preferable for long-range needs.

Questions 2) & 3)
(i) Analysis conducted: Apart from the analysis mentioned in 1), an EU taxonomy alignment analysis was also performed on Alstom's reporting scope.
(ii) Results: Alstom's current portfolio, covering electric, hydrogen and battery trains is online with the 2019 IEA Future of rail which states that reducing oil demand and GHG emissions from the transport sector in line with the Paris Agreement targets requiring a combination of measures including modal shifts, improved vehicle efficiency, low-carbon fuels and power sector decarbonization for rail. This is a real market opportunity to respond to customers' needs.
Moreover, the alignment of the KPI's to the EU taxonomy (59% for turnover, 54% for CapEx and 47% for OpEx) for the FY2022/23 reflects the importance of the Group activities for sustainable mobility.
(iii) Decision taken: The results of activities alignment to the taxonomy qualify Alstom as a company that is in line with the European Commission's action plan to achieve EU's ambitious goal of carbon neutrality by 2050. In the long term, the Group intends to use EU taxonomy regulation as a compass to conduct its actions and decisions as part of its overall strategy.
To accompany EU states in carbon neutrality, Alstom will keep developing its low-carbon portfolio: the Coradia iLint, is now used as the world premiere 100% hydrogen train route, in passenger operation in Bremervörde, Lower Saxony, Germany. This regional train only emits steam and condensed water while operating with a low level of noise. The 14 vehicles with fuel cell propulsion belong to Landesnahverkehrsgesellschaft Niedersachsen (LNVG). Alstom regional solutions will gradually replace 15 diesel trains.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	In terms of products and services, Alstom favours a life cycle approach to select the main levers of environmental performance and ensure an effective way to control and reduce the footprint of its solutions. One of the priorities set in Alstom's ecodesign policy focus on the energy efficiency of rail transport systems. Alstom has set a target to reduce the energy consumption of its portfolio of solutions by 25% by 2025 compared to 2014. Climate changes can potentially affect transport systems, for example extreme heat can affect production processes and products such as spared part inventories (with plastic materials or electronic/electric components) and have potential impact on plastic sheeting quality, in some of Alstom's main countries, where industrial sites are present. The company will proceed to a follow-up study to mitigate the risk. Alstom has years of experience in demanding projects on many sites exposed to exceptional weather conditions, for example delivering material that operates in extreme cold conditions in the steppes of Kazakhstan to the high temperatures of the desert in Qatar. This expertise includes, inter alia, enhanced heating/ventilation/air conditioning functions, power supply sub-stations resilient to high temperatures and equipment designed to resist important volumes of snow, rain and corrosion from saline atmospheres. In 2022, Alstom signed a contract with Norske Tog to deliver regional trains. The new trains will be equipped with the latest ETCS(3) signalling system. The system will feature a world-first advanced odometry solution designed for the harshest winter conditions. Another example is the Lusail tramway project in Qatar, with 50 degrees Celsius outside, the temperature on board the trains must be 23-25 degrees, which has given special attention to the air conditioning systems (HVAC).
Supply chain and/or value chain	Evaluation in progress	Given Alstom's transition risks, and especially the one of indirect CO2 emissions from solutions, the Group is committed to reducing the amount of CO2 emissions in its value chain. For any CO2 emission source, Alstom will account for the emissions and continuously improve the accuracy and robustness of data through the on-going deployment of a digital platform dedicated to carbon accounting , launch reduction actions towards net-zero and establish milestones and targets. Alstom is also currently working on integrating CBAM in supply chain risks. Alstom has set reduction targets on its GHG emissions from the Scope 3 "Use of sold products" (downstream value chain) from its portfolio of rolling stock solutions. The Group has committed to reduce CO2 emissions by 42% per passenger-km and 35% per ton-km by 2030 from a 2021/22 baseline – target that has been validated by SBTi in June 2023. A new target was established for Scope 3 "Purchased Goods and Services" (upstream value chain) , which is the next higher contributor to Alstom's Scope 3 after the sold products, and "Upstream transportation".
Investment in R&D	Yes	Alstom intends to mitigate its risks with investment in R&D, to avoid loss of revenue due to the disappearance of diesel technology and the change in market. In response to transition risks identified in its climate-related risks mapping, Alstom intends to address CO2 emissions from the Use of Sold products through active R&D and innovations to reduce energy consumption from solutions and develop alternative solutions to diesel, progressive decarbonization of electricity mix in the countries and active customers engagement to promote renewable electricity. Alstom invests 3.1% of its annual turnover in its Research & Development (R&D) Department. Innovation is at the heart of Alstom's entrepreneurial culture and has led to applications for 10,127 patents and the establishment of many key partnerships. "Innovation in smarter and greener mobility solutions" is now the second pillar of the new Strategy Alstom in Motion and focuses on on ecodesign and eco-manufacturing solutions, green traction and road electromobility. As this has been identified as one of Alstom's main risks, The Group would like to accompany its clients in their commitments of phasing out diesel powered rail, as many major companies have already pledged to become fully emission-free in this timeframe. Alstom is able to offer the complete range of green-traction solutions, Alstom is already ideally positioned to facilitate this shift with solutions like electrification, hybrid traction and fully autonomous zero-emissions trains. Alstom is already a pioneer in mobility with leading innovations such as the recent hydrogen train. Alstom is accelerating towards its ambition: be the global innovative player for a sustainable and smart mobility. To date, Alstom's Coradia iLint, it is already used as the world premiere 100% hydrogen train route, in passenger operation in Bremervörde, Lower Saxony, Germany.
Operations	Yes	(i) Transition risks On the basis of its environmental risk mapping, and increase in regulations such as carbon pricing, Alstom has decided to set mitigations actions in theform of two main goals related to energy, namely: - reduce greenhouse gas emissions (scope 1 and 2) by 40% compared to the baseline year 2021 by 2030 (yearly reduction of 4.4%); - use 100% of electricity from renewable energy sources by 2025. (ii) Physical risks Alstom's processes for managing Climate Change related risks include an annual prevention programme, validated by Alstom's insurance company and based on the best available standards. The objective is to ensure that appropriate adaptation measures are in place against physical risks, such as flooding. Ten to 20 sites are visited every year, according to identified potential risks. Depending on the result, improvement actions are deployed as necessary. This year, a study has been launched to set up a transition plan, and surveys have been answered by sites at highest risk and actions will be investigated in the next year.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Indirect costs Capital expenditures Capital allocation Acquisitions and divestments Access to capital Assets Liabilities	A) Revenues Alstom's approach to managing climate-related risks and opportunities spans across various aspects of the rail business which perspectives indicate that it should grow at an average annual rate above 2.9% over 2025-2027 period vs 2019-2021 (and 2.3% over 2023-2025 period vs 2019-2021) (source: UNIFE -Association of the European Rail Industry- Market Study Sept. 2022). One key area is revenue generation, where the company is increasingly looking for climate-related opportunities, such as new sustainable products and services that help mitigate climate change. For example, Alstom is investing in more eco-designed and energy-efficient rolling stock, such as hydrogen or battery-powered trains, and signalling equipment to reduce carbon emissions and improve energy efficiency. This is expected to raise revenues and respond to the risk of decreasing revenues due to change in demand. Building on the momentum created by Coradia iLintTM, a zero-emission train featuring hydrogen fuel cells and energy storage system with an autonomy range of more than 800 km, Alstom extends its range of energy autonomous trains to battery-powered trains (B-EMU). B) Direct costs Climate-related risks can also increase costs, and not only higher insurance premiums or repair costs, but also direct costs such as the purchase of raw materials. Events such as the conflict between Russia and Ukraine, inflation, the shortage of electronic components and raw materials, or supply disruptions are factors that aggravate risks and that require to constantly mobilize. Alstom's ability to anticipate thanks to its strict risk management allows to reduce the consequences of such external events. C) Indirect costs > Situation: Climate change can lead to indirect costs, such as supply chain disruptions or reputational damage, which could affect the company's bottom line. Energy usage associated costs are intrinsic to Alstom's operation thus they are considered in the financial planning process. > Task: Alstom needs to limit the indirect costs raised by climate-related risks. > Action: One of the pillars of Alstom's Sustainability and CSR policy and one of the objectives associated with this pillar is to reduce the energy intensity of operations by 10% in 2025 compared to 2019 baseline. In order to achieve this objective and maximize the opportunities stemming from energy efficiency of operations, Alstom deploys Energy Saving Plans at the asset level. These plans take into consideration the energy savings to be achieved, the investment required, and the return on investment as criteria to prioritize the projects/initiatives. > Result: These investments are included in the financial planning process of Alstom's operation sites. Achieving the target of 10% of electricity produced on-site would translate into an annual saving equivalent to 10% of Alstom's energy bill, approximately 9.5M€. D) Capital expenditures Alstom's own capital expenditure is linked to climate-related footprint adaptation and modernization, such as renewable energy infrastructure for its factories (solar panels), with the objective to only use renewable energy sources for electricity by 2025. As an example of how railway capital expenditure is impacted by the risks/opportunities stemming from climate change/energy-related issues, Alstom is sustaining its investment to improve high-speed lines network operation by increasing transport capacity and fleet energy consumption optimization. An intercity train ATO (Automatic Train Operation) has already been demonstrated in China and a test campaign has also been completed in Belgium with up to 40% energy-saving demonstrated. In the fiscal year 2022/23, Alstom R&D spending was approximately 3.1% of its total revenue, which contributes to maintaining the company as a key player in smart mobility solutions and offering innovative capacitive solutions based on electric and shared mobility, helping Alstom's clients achieve their climate change commitments. E) Access to capital Alstom recognizes that investors are increasingly considering climate risks and opportunities when making investment decisions, which can influence their access to capital. Ranking among the best players in terms of sustainability (e.g. EU taxonomy 59% alignment (revenue) score for sustainable activities), is creating opportunities for Alstom regarding access to capital. Alstom's transparency and disclosure on climate-related risks and opportunities in its extra-financial reporting also aim to attract socially responsible investors and improve the company's creditworthiness, which is becoming increasingly important as investors consider climate risks and opportunities when making investment decisions. A new opportunity comes with this transparency: issuing green bonds to raise capital for the development of sustainable rolling stock or signalling equipment. F) Acquisitions and divestments Alstom is integrating climate-related risks and opportunities for both its organic and external growth: acquisitions are generally driven by Alstom's ambition to grow its market share on sustainable mobility. This is enhanced by the opportunity that, with changing behaviors, the number of sustainable mobility companies is increasing. This was the case with the acquisition of one hydrogen fuel cells company for stationary and mobility applications, or with several partnerships within the clean mobility ecosystem or energy providers over several European countries notably. Alstom is also looking at acquiring companies that specialize in signalling systems to improve the efficiency and sustainability of the railway network. G) Assets & Liabilities Alstom integrates climate risk into its asset valuation models to account for potential losses due to climate-related events and to manage operations in a responsible and sustainable way. An assessment of risks related to natural hazards on the full perimeter has been launched in the 2021/22 fiscal year to develop and implement a full prevention program for climate change risks for Alstom's new perimeter of activities. Alstom mandated AXA XL and AXA Climate to start and conduct a new exhaustive climate change-related exposure analysis of more than 900 sites, operated by Alstom as well as a few from suppliers and partners. The analysis aimed to identify countries and sites with the highest potential exposure to natural disasters, in the current climate conditions and future ones. All climate projections are computed for time horizons in 2030 and 2050, and the climate projections are also computed under two global warming scenarios RCP4.5 (end of century warming to reach 2.1 to 3.5°C) and RCP8.5 (end of century warming to reach 3.3 to 5.7°C). The main conclusion is that 17% of the total value of assets is considered at Extreme or High risk, which could potentially represent €202 million in financial impact, taking into account the asset value and the probability of risk.

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's climate transition?

	Identification of spending/revenue that is aligned with your organization's climate transition	Indicate the level at which you identify the alignment of your spending/revenue with a sustainable finance taxonomy
Row 1	Yes, we identify alignment with a sustainable finance taxonomy	At both the company and activity level

C3.5a

(C3.5a) Quantify the percentage share of your spending/revenue that is aligned with your organization's climate transition.

Financial Metric
Revenue/Turnover

Type of alignment being reported for this financial metric
Alignment with a sustainable finance taxonomy

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Objective under which alignment is being reported
Climate change mitigation

Amount of selected financial metric that is aligned in the reporting year (unit currency as selected in C0.4)
9666000000

Percentage share of selected financial metric aligned in the reporting year (%)
59

Percentage share of selected financial metric planned to align in 2025 (%)
75

Percentage share of selected financial metric planned to align in 2030 (%)
80

Describe the methodology used to identify spending/revenue that is aligned
Using preliminary assessment performed last year to identify Taxonomy-eligible activities and based on definitions in Annex I and Annex II of the Climate Delegated Act of the EU Taxonomy, the Group completed the analysis of alignment for its activities. The mapping of the full portfolio of products, solutions and services (so-called Product Mapping) has been completed by applying susbstantial contribution criteria (SCC) for each activity in order to identify products/solutions passing the first step of alignment with respect to climate change mitigation objective. All manufacturing of electrical trains and bimode trains comply with SSC requirement on 3.3 activity and pass it. Similarly, for the activity 6.3, solutions are all electric and fulfill the requirement of zero direct CO2 emissions. Urban infrastructure, falling under category 6.15, being not dedicated to the transport/storage of fossil fuels and operating only electrical rolling stock with 0 direct (tailpipe) CO2 emissions validates this first requirement. However, for projects outside urban environment (relating to 6.14), non-electrified lines on the one hand and freight lines or mixed freight/passenger lines likely to transport fossil fuels on the other hand have been isolated and a conservative approach has been applied for this fiscal year. A dedicated analysis is planned for next year to complement this approach.
In the reporting year, 57% of our total turnover was attributable to the manufacture of electric, hydrogen and bimodal trains which met all criteria to contribute substantially to climate change mitigation under the EU Taxonomy by enabling the transition to 1.5C.

Our operations in these activities are expected to expand by 2030 as we phase out diesel train product. Therefore, Alstom expects the proportion of total turnover which substantially contributes to climate change mitigation under the taxonomy to increase to 80% by 2030.
The Turnover (denominator) consists of the Groups consolidated turnover calculated in accordance with IAS 1.82 (a) and reported in the Consolidated Financial Statements in this report. The accounting policy applicable for revenue recognition can also be found as part of the Consolidated Financial Statements.
Noteworthy is the fact that, following the future works that will be conducted on Alstom's activities regarding their alignment on EU Taxonomy standards, Alstom might revise the above reported metrics in the following years.

Financial Metric
CAPEX

Type of alignment being reported for this financial metric
Alignment with a sustainable finance taxonomy

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Objective under which alignment is being reported
Climate change mitigation

Amount of selected financial metric that is aligned in the reporting year (unit currency as selected in C0.4)
308000000

Percentage share of selected financial metric aligned in the reporting year (%)
54

Percentage share of selected financial metric planned to align in 2025 (%)
70

Percentage share of selected financial metric planned to align in 2030 (%)
80

Describe the methodology used to identify spending/revenue that is aligned
The Taxonomy-eligible capital expenditure rate has been calculated as that proportion of the Capital Expenditure that is associated with the Group’s Taxonomy-eligible economic activities (numerator) over the Capital Expenditure (denominator).
Using preliminary assessment performed last year to identify Taxonomy-eligible activities and based on definitions in Annex I and Annex II of the Climate Delegated Act of the EU Taxonomy, the Group completed the analysis of alignment for its activities. The mapping of the full portfolio of products, solutions and services (so-called Product Mapping) has been completed by applying susbstantial contribution criteria (SCC) for each activity in order to identify products/solutions passing the first step of alignment with respect to climate change mitigation objective. All manufacturing of electrical trains and bimode trains comply with SSC requirement on 3.3 activity and pass it. Similarly, for the activity 6.3, solutions are all electric and fulfill the requirement of zero direct CO2 emissions. Urban infrastructure, falling under category 6.15, being not dedicated to the transport/storage of fossil fuels and operating only electrical rolling stock with 0 direct (tailpipe) CO2 emissions validates this first requirement. However, for projects outside urban environment (relating to 6.14), non-electrified lines on the one hand and freight lines or mixed freight/passenger lines likely to transport fossil fuels on the other hand have been isolated and a conservative approach has been applied for this fiscal year. A dedicated analysis is planned for next year to complement this approach.

The 54% figure disclosed represents the proportion of our CAPEX associated with the substantial contribution of train manufacturing activities to climate change mitigation and climate change adaptation in the reporting year. Alstom plans to increase taxonomy-aligned CAPEX to 70% in 2025 and 80% in 2030.

The Capital Expenditure (denominator) consists of additions to tangible, intangible fixed assets and right of use assets during the financial year, before any depreciation, amortization, re-measurement, excluding any revaluation, impairment, and changes in fair value as reported in the Consolidated Financial Statements. This includes investments from business combinations during the fiscal year. Acquired goodwill is excluded from the calculations. The variation resulting from the Purchase Price Allocation has not been included. The Capital Expenditure made during the year has been considered at the closing exchange rate.

Noteworthy is the fact that, following the future works that will be conducted on Alstom’s activities regarding their alignment on EU Taxonomy standards, Alstom might revise the above reported metrics in the following years.

Financial Metric
OPEX

Type of alignment being reported for this financial metric
Alignment with a sustainable finance taxonomy

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Objective under which alignment is being reported
Climate change mitigation

Amount of selected financial metric that is aligned in the reporting year (unit currency as selected in C0.4)
298000000

Percentage share of selected financial metric aligned in the reporting year (%)
47

Percentage share of selected financial metric planned to align in 2025 (%)
57

Percentage share of selected financial metric planned to align in 2030 (%)
80

Describe the methodology used to identify spending/revenue that is aligned
Using preliminary assessment performed last year to identify Taxonomy-eligible activities and based on definitions in Annex I and Annex II of the Climate Delegated Act of the EU Taxonomy, the Group completed the analysis of alignment for its activities. The mapping of the full portfolio of products, solutions and services (so-called Product Mapping) has been completed by applying susbstantial contribution criteria (SCC) for each activity in order to identify products/solutions passing the first step of alignment with respect to climate change mitigation objective. All manufacturing of electrical trains and bimode trains comply with SSC requirement on 3.3 activity and pass it. Similarly, for the activity 6.3, solutions are all electric and fulfill the requirement of zero direct CO2 emissions. Urban infrastructure, falling under category 6.15, being not dedicated to the transport/storage of fossil fuels and operating only electrical rolling stock with 0 direct (tailpipe) CO2 emissions validates this first requirement. However, for projects outside urban environment (relating to 6.14), non-electrified lines on the one hand and freight lines or mixed freight/passenger lines likely to transport fossil fuels on the other hand have been isolated and a conservative approach has been applied for this fiscal year. A dedicated analysis is planned for next year to complement this approach.

Alstom has accounted the R&D expenses related to low-carbon transport products aligned with the EU taxonomy as 47% of total OPEX. Alstom anticipates consumer demand to continue to increase over time. Therefore, Alstom estimates that the share of total R&D that is linked to low carbon transport products will increase to 80% by 2030 to meet this demand.
The Taxonomy-eligible operating expenses rate has been calculated as that proportion of the operating expenses that are associated with the Group's Taxonomy-eligible economic activities (numerator) over the Taxonomy qualified operating expenses (denominator). It should be noted that the Taxonomy has its own definition of operating expenses, and the Taxonomy qualified operating expenses represent only a proportion of the total operating expenses of the Group as reported in the Consolidated Financial Statements. The Taxonomy qualified operating expenses (denominator) consists of non-capitalized direct costs that relate to research and development, building renovation and repair, short-term lease contracts, staff costs, general maintenance and service costs relating to the day-to-day servicing of the property, plant, and equipment.

Noteworthy is the fact that, following the future works that will be conducted on Alstom's activities regarding their alignment on EU Taxonomy standards, Alstom might revise the above reported metrics in the following years.

C3.5b

(C3.5b) Quantify the percentage share of your spending/revenue that was associated with eligible and aligned activities under the sustainable finance taxonomy in the reporting year.

Economic activity
Manufacture of low carbon technologies for transport

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-aligned

Financial metric(s)
Turnover
CAPEX
OPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
9359000000

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
57

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
57

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
0

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
298000000

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
52

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
52

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
0

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
257000000

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
40

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
40

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
0

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
Activity enabling mitigation

Calculation methodology and supporting information
Of the taxonomy-eligible revenue from our activities (100%), we assess the taxonomy-aligned sales from products associated with the category of 'Manufacture of low carbon technologies for transport' under the EU Taxonomy to be respectively 57%, 52% & 40% of the total net turnover, CAPEX and OPEX from our activities. In this activity, all Alstom's activities except the ones performed on diesel trains are included.

Technical screening criteria met
Yes

Details of technical screening criteria analysis
Manufacturing of Electrical trains, Hydrogen trains and bimode trains comply with substantive contribution to climate change mitigation (0 direct CO2 emissions).

Do no significant harm requirements met
Yes

Details of do no significant harm analysis
A mapping of entities according to EU taxonomy activities has been set up to assess DNSH relevance as per their localisation (Climate change adaptation, Sustainable use and protection of aquatic and marine resources, Protection and restoration of biodiversity and ecosystems, transition to circular economy for what is related to waste management and pollution prevention and control with regard to noise and vibrations). Information used for the evaluation is based on Group policies and procedures and are supplemented by site environmental reports (monthly reporting), climate risk assessment, biodiversity diagnosis, compliance with Afnor ISO 14001 certification and information additional collected on the sites. For rolling stock manufacturing sites classified in "Manufacturing of low products for transport" (3.3), environmental information (climate, water, waste and biodiversity) has been collected and compiled to meet DNSH. For rolling stock solutions, classified in 3.3, the information of product eco-design have been collected and compiled to meet the relevant DNSH.

Minimum safeguards compliance requirements met
Yes

Details of minimum safeguards compliance analysis
4 dimensions are covered : human rights, corruption, fair competition and taxation. Analysis relied mainly on:
- Processes applied and deployed by the Group, including but not limited to Code of Ethics, the sustainable procurement policy, the Vigilance plan. These processes are further detailed later in this chapter. The assessment encompasses the supply chain.
- Absence of severe breach or conviction related to the 4 dimensions. The protocol followed to determine the eligibility and alignment criteria has been precisely documented by listing the assumptions made and calculation methodologies applied in a European Taxonomy reporting manual. The alignment of activities was assessed with the help of a specialized working group led by experts in Finance and CSR and supported by the contribution of internal expertise such as EHS, Eco-design, as well as external on the Climate and Biodiversity part. This manual will be updated each year annually with the assumptions.

Economic activity
Infrastructure enabling low-carbon road transport and public transport

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-aligned

Financial metric(s)
Turnover
CAPEX
OPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
307000000

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
2

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year

2

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
0

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
10000000

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
2

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
2

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
0

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
42000000

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
7

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
7

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
0

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
<Not Applicable>

Type(s) of substantial contribution
Activity enabling mitigation

Calculation methodology and supporting information
Of the taxonomy-eligible revenue from our activities, we assess the taxonomy-aligned sales from Alstom's product associated with the category of 'Infrastructure enabling low-carbon road transport and public transport' under the EU Taxonomy to be respectively 2%, 2% and 7% of the total net turnover, CAPEX and OPEX from our activities. All solutions passed the SSC criteria being all electrical (no direct CO2 emissions) and none of them transport or store fossil fuels.

Technical screening criteria met
Yes

Details of technical screening criteria analysis
All solutions are electrical (no direct CO2 emissions) and none of them transport nor store fossil fuels.

Do no significant harm requirements met
Yes

Details of do no significant harm analysis
A mapping of entities according to EU taxonomy activities has been set up to assess DNSH relevance as per their localisation (Climate change adaptation, Sustainable use and protection of aquatic and marine resources, Protection and restoration of biodiversity and ecosystems, transition to circular economy for what is related to waste management and pollution prevention and control with regard to noise and vibrations). Information used for the evaluation is based on Group policies and procedures and are supplemented by site environmental reports (monthly reporting), climate risk assessment, biodiversity diagnosis, compliance with Afnor ISO 14001 certification and information additional collected on the sites. In general, a conservative approach was applied when the available documentation was not sufficient enough to validate a criteria: It should be noted in particular that compliance with European standards, as mentioned in the EU Taxonomy regulations, that could be applied for project sites located outside the EU, could only be partially documented. DNSH for "Transition to the circular economy" and "Pollution prevention and control" relevant to Products were evaluated through the previously mentioned Product Mapping. Information used for the assessment mainly include an environmental dashboard for the solutions designed, environmental declarations of products and other relevant eco-design information.

Minimum safeguards compliance requirements met
Yes

Details of minimum safeguards compliance analysis
4 dimensions are covered : human rights, corruption, fair competition and taxation. Analysis relied mainly on:
- Processes applied and deployed by the Group, including but not limited to Code of Ethics, the sustainable procurement policy, the Vigilance plan. These processes are further detailed later in this chapter. The assessment encompasses the supply chain.
- Absence of severe breach or conviction related to the 4 dimensions. The protocol followed to determine the eligibility and alignment criteria has been precisely documented by listing the assumptions made and calculation methodologies applied in a European Taxonomy reporting manual. The alignment of activities was assessed with the help of a specialized working group led by experts in Finance and CSR and supported by the contribution of internal expertise such as EHS, Eco-design, as well as external on the Climate and Biodiversity part. This manual will be updated each year annually with the assumptions

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Economic activity
Urban and suburban transport, road passenger transport

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-eligible but not aligned

Financial metric(s)
Turnover
CAPEX
OPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
317000000

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
2

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
5000000

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
1

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
10000000

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
2

Type(s) of substantial contribution
<Not Applicable>

Calculation methodology and supporting information
Of the taxonomy-eligible revenue from our activities, we assess the taxonomy-eligible sales from Alstom's product associated with the category of 'Urban and suburban transport, road passenger transport' under the EU Taxonomy to be 100% of the total net turnover, CAPEX and OPEX from our activities. The taxonomy-aligned sales associated with this category is 0% of the total net turnover, CAPEX and OPEX from our activities. All solutions passed the SSC criteria being all electrical (no direct CO2 emissions) and none of them transport or store fossil fuels.

Technical screening criteria met
Yes

Details of technical screening criteria analysis
All solutions are electrical (no direct CO2 emissions) and none of them transport nor store fossil fuels.

Do no significant harm requirements met
No

Details of do no significant harm analysis
A mapping of entities according to EU taxonomy activities has been set up to assess DNSH relevance as per their localisation (Climate change adaptation, Sustainable use and protection of aquatic and marine resources, Protection and restoration of biodiversity and ecosystems, transition to circular economy for what is related to waste management and pollution prevention and control with regard to noise and vibrations). Information used for the evaluation is based on Group policies and procedures and are supplemented by site environmental reports (monthly reporting), climate risk assessment, biodiversity diagnosis, compliance with Afnor ISO 14001 certification and information additional collected on the sites. In general, a conservative approach was applied when the available documentation was not sufficient enough to validate a criteria: It should be noted in particular that compliance with European standards, as mentioned in the EU Taxonomy regulations, that could be applied for project sites located outside the EU, could only be partially documented. DNSH for "Transition to the circular economy" and "Pollution prevention and control" relevant to Products were

evaluated through the previously mentioned Product Mapping. Information used for the assessment mainly include an environmental dashboard for the solutions designed, environmental declarations of products and other relevant eco-design information. On these criteria, a conservative approach has been applied when the documentation available was not sufficient to validate one of the which is why the DNSH "Pollution prevention and control" was not validated for the reporting year. Discussions are on-going to clarify criteria about pollution from tyres.

Minimum safeguards compliance requirements met
Yes

Details of minimum safeguards compliance analysis
4 dimensions are covered: human rights, corruption, fair competition and taxation. Analysis relied mainly on:
- Processes applied and deployed by the Group, including but not limited to Code of Ethics, the sustainable procurement policy, the Vigilance plan. These processes are further detailed later in this chapter. The assessment encompasses the supply chain.
- Absence of severe breach or conviction related to the 4 dimensions. The protocol followed to determine the eligibility and alignment criteria has been precisely documented by listing the assumptions made and calculation methodologies applied in a European Taxonomy reporting manual. The alignment of activities was assessed with the help of a specialized working group led by experts in Finance and CSR and supported by the contribution of internal expertise such as EHS, Eco-design, as well as external experts on the Climate and Biodiversity part. This manual will be updated each year annually with the assumptions

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Economic activity
Infrastructure for rail transport

Taxonomy under which information is being reported
EU Taxonomy for Sustainable Activities

Taxonomy Alignment
Taxonomy-eligible but not aligned

Financial metric(s)
Turnover
CAPEX
OPEX

Taxonomy-aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned turnover from this activity as % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change mitigation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-aligned turnover from this activity that substantially contributed to climate change adaptation as a % of total turnover in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned turnover from this activity in the reporting year (unit currency as selected in C0.4)
1355000000

Taxonomy-eligible but not aligned turnover from this activity as % of total turnover in the reporting year
8

Taxonomy-aligned CAPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned CAPEX from this activity as % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change mitigation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-aligned CAPEX from this activity that substantially contributed to climate change adaptation as a % of total CAPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned CAPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
82000000

Taxonomy-eligible but not aligned CAPEX associated with this activity as % of total CAPEX in the reporting year
14

Taxonomy-aligned OPEX from this activity in the reporting year (unit currency as selected in C0.4)
<Not Applicable>

Taxonomy-aligned OPEX from this activity as % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change mitigation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-aligned OPEX from this activity that substantially contributed to climate change adaptation as a % of total OPEX in the reporting year
<Not Applicable>

Taxonomy-eligible but not aligned OPEX associated with this activity in the reporting year (unit currency as selected in C0.4)
98000000

Taxonomy-eligible but not aligned OPEX associated with this activity as % total OPEX in the reporting year
16

Type(s) of substantial contribution
<Not Applicable>

Calculation methodology and supporting information
Of the taxonomy-eligible revenue from our activities, we assess the taxonomy-eligible sales from Alstom’s product associated with the category of ‘Urban and suburban

transport, road passenger transport' under the EU Taxonomy to be 100% of the total net turnover, CAPEX and OPEX from our activities. The taxonomy-aligned sales associated with this category is 0% of the total net turnover, CAPEX and OPEX from our activities. All solutions passed the SSC criteria being all electrical (no direct CO2 emissions) and none of them transport or store fossil fuels.

Technical screening criteria met
No

Details of technical screening criteria analysis
Technical criteria are not met due to the usage of the infrastructure by customers: urban infrastructure, falling under this category, being not dedicated to the transport/storage of fossil fuels and operating only electrical rolling stock with 0 direct (tailpipe) CO2 emissions validates this first requirement. However for projects outside urban environment, non-electrified lines on the one hand and freight lines or mixed freight/passenger lines likely to transport fossil fuels on the other hand have been isolated and a conservative approach has been applied for this fiscal year. A dedicated analysis is planned for next year to complement this approach, discussions with the sectoral stakeholders are on-going to trace the infrastructures linked to transportation of fossil fuels.

Do no significant harm requirements met
Yes

Details of do no significant harm analysis
A mapping of entities according to EU taxonomy activities has been set up to assess DNSH relevance as per their localisation (Climate change adaptation, Sustainable use and protection of aquatic and marine resources, Protection and restoration of biodiversity and ecosystems, transition to circular economy for what is related to waste management and pollution prevention and control with regard to noise and vibrations). Information used for the evaluation is based on Group policies and procedures and are supplemented by site environmental reports (monthly reporting), climate risk assessment, biodiversity diagnosis, compliance with Afnor ISO 14001 certification and information additional collected on the sites. In general, a conservative approach was applied when the available documentation was not sufficient enough to validate a criteria: It should be noted in particular that compliance with European standards, as mentioned in the EU Taxonomy regulations, that could be applied for project sites located outside the EU, could only be partially documented. DNSH for "Transition to the circular economy" and "Pollution prevention and control" relevant to Products were evaluated through the previously mentioned Product Mapping. Information used for the assessment mainly include an environmental dashboard for the solutions designed, environmental declarations of products and other relevant eco-design information.

Minimum safeguards compliance requirements met
Yes

Details of minimum safeguards compliance analysis
4 dimensions are covered : human rights, corruption, fair competition and taxation. Analysis relied mainly on:
- Processes applied and deployed by the Group, including but not limited to Code of Ethics, the sustainable procurement policy, the Vigilance plan. These processes are further detailed later in this chapter. The assessment encompasses the supply chain.
- Absence of severe breach or conviction related to the 4 dimensions. The protocol followed to determine the eligibility and alignment criteria has been precisely documented by listing the assumptions made and calculation methodologies applied in a European Taxonomy reporting manual. The alignment of activities was assessed with the help of a specialized working group led by experts in Finance and CSR and supported by the contribution of internal expertise such as EHS, Eco-design, as well as external on the Climate and Biodiversity part. This manual will be updated each year annually with the assumptions

C3.5c

(C3.5c) Provide any additional contextual and/or verification/assurance information relevant to your organization's taxonomy alignment.

The alignment of the KPI's (59% for turnover, 54% for CapEx and 47 % for OpEx) for the FY2022/23 reflects the importance of the Group activities for sustainable mobility. The Group shall continue to move forward in this direction and bring significant positive impact on environmental topics. In the long term, the Group intends to use EU taxonomy regulation as a compass to conduct its actions and decisions as part of its overall CSR strategy.

Work in progress: It should be noted that this is a first alignment exercise, and that considering the evolving character of the EU regulatory framework, the level of complexity around the legislation and the room available for interpretation, the Group expects the reporting to evolve over time. In line with the deployment of the CSRD (Corporate Sustainability Reporting Directive), Alstom is working on the adaptation of its reporting processes to extend it to its entire value chain (upstream and downstream) and complete its holistic approach with new levels of granularity. The Group will therefore review its methodology on a periodical basis based on guidance received from the European Commission.

Verification: as this is a first exercise, data as not been verified by a third party but it will be in the next years. However, financial auditors have done a coherence review of the information related to EU Taxonomy mentioned in the URD.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?
Absolute target
Intensity target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number
Abs 1

Is this a science-based target?
Yes, and this target has been approved by the Science Based Targets initiative

Target ambition
1.5°C aligned

Year target was set
2022

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2

Scope 2 accounting method
Market-based

Scope 3 category(ies)
<Not Applicable>

Base year
2021

Base year Scope 1 emissions covered by target (metric tons CO2e)
107073

Base year Scope 2 emissions covered by target (metric tons CO2e)
121789

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target (metric tons CO2e)
<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
228862

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
95

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
95

Base year Scope 3, Category 1: Purchased goods and services emissions covered by target as % of total base year emissions in Scope 3, Category 1: Purchased goods and services (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 2: Capital goods emissions covered by target as % of total base year emissions in Scope 3, Category 2: Capital goods (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions covered by target as % of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 4: Upstream transportation and distribution covered by target as % of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 5: Waste generated in operations emissions covered by target as % of total base year emissions in Scope 3, Category 5: Waste generated in operations (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 6: Business travel emissions covered by target as % of total base year emissions in Scope 3, Category 6: Business travel (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 7: Employee commuting covered by target as % of total base year emissions in Scope 3, Category 7: Employee commuting (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 8: Upstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 8: Upstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 9: Downstream transportation and distribution emissions covered by target as % of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 10: Processing of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 10: Processing of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 11: Use of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 11: Use of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 12: End-of-life treatment of sold products emissions covered by target as % of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 13: Downstream leased assets emissions covered by target as % of total base year emissions in Scope 3, Category 13: Downstream leased assets (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 14: Franchises emissions covered by target as % of total base year emissions in Scope 3, Category 14: Franchises (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Category 15: Investments emissions covered by target as % of total base year emissions in Scope 3, Category 15: Investments (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (upstream) emissions covered by target as % of total base year emissions in Scope 3, Other (upstream) (metric tons CO2e)
<Not Applicable>

Base year Scope 3, Other (downstream) emissions covered by target as % of total base year emissions in Scope 3, Other (downstream) (metric tons CO2e)
<Not Applicable>

Base year total Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
95

Target year
2030

Targeted reduction from base year (%)
40

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
137317.2

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
93969.912

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
84779.756

Scope 3, Category 1: Purchased goods and services emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 2: Capital goods emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 4: Upstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 5: Waste generated in operations emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 6: Business travel emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 7: Employee commuting emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 8: Upstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 9: Downstream transportation and distribution emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 10: Processing of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 11: Use of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 12: End-of-life treatment of sold products emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 13: Downstream leased assets emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 14: Franchises emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Category 15: Investments emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (upstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Scope 3, Other (downstream) emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total Scope 3 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
178750

Does this target cover any land-related emissions?
No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]
54.7404112521956

Target status in reporting year
Underway

Please explain target coverage and identify any exclusions
Alstom commits to reduce absolute scope 1 and 2 GHG emissions by 40% by 2030 compared to FY2021/22 (i.e., the base year).

These data cover 95% of Alstom's emissions The remaining 5% are:
- temporary construction sites not covered by a certification;
- activities conducted in sites of less than 200 persons on which the utilities are not managed by Alstom are not recorded .
The emissions from the sites that make up these exclusions are extrapolated for in scope 3, category Upstream leased assets, therefore they are accounted in Alstom's carbon footprint.

Plan for achieving target, and progress made to the end of the reporting year
Alstom is continuing to deploy its energy-saving plan that is targeting the 40 largest consumers, representing 83% of Alstom energy consumption.

There are 2 main parts in this plan:
1) The deployment and monitoring of action plans, overseen by a three-level governance structure (central, regional, site) to ensure their follow-up and the sharing of best practices. These plans include energy saving initiatives including installation of LED lighting (in 2022, 16 sites were fully equipped and 53 other sites partially equipped), upgrading painting booths, increasing surface compacting and investigating the use of heat pumps to provide heating.
Moreover, specific energy efficiency plans were deployed in the European global region in order to face the energy crisis and reduce the energy intensity by 15%, on this perimeter, between 2021 and 2022. Main actions consisted in reducing the amount of heating in workshops and offices, and making sure that electrical equipment is turned off when not being used, like the VMC in the sites. Energy audits were also used to pinpoint the places where reduction initiatives could be deployed and sites are studying long-term actions like the replacement of natural gas when possible.

2) Alstom has also set a target to switch to 100% electricity supply from renewable sources by the end of 2025. To this end, Alstom is increasing the amount of self-generated renewable electricity with solar panels (this year, 15 sites have completed feasibility study for installation of solar panels and 3 have already ordered new systems) and signing contracts for the supply of electricity from renewable energy sources where economically viable, on the whole Alstom's perimeter. Alstom's electricity supplies come totally from green sources in Belgium, the Netherlands, Brazil, and Sweden, India, China, Italy, Spain, the United Kingdom and partially in the United States, Germany, Switzerland, Poland and France through contracts with its electricity suppliers.
In total, in 2022, 57% of electricity supply came from renewable sources on the full perimeter, which is showing a 15 percentage-point increase progression compared to last year. The green electricity produced on site represented more than 1% of energy consumed by the Group in 2022.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number
Int 1

Is this a science-based target?
Yes, and this target has been approved by the Science Based Targets initiative

Target ambition
Well-below 2°C aligned

Year target was set
2022

Target coverage
Company-wide

Scope(s)
Scope 3

Scope 2 accounting method
<Not Applicable>

Scope 3 category(ies)
Category 11: Use of sold products

Intensity metric
Metric tons CO2e per passenger kilometer

Base year
2021

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)
0.0000046

Intensity figure in base year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)

<Not Applicable>

Intensity figure in base year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for total Scope 3 (metric tons CO2e per unit of activity)
0.0000046

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)
0.0000046

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure
<Not Applicable>

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 1: Purchased goods and services covered by this Scope 3, Category 1: Purchased goods and services intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 2: Capital goods covered by this Scope 3, Category 2: Capital goods intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) covered by this Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution covered by this Scope 3, Category 4: Upstream transportation and distribution intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 5: Waste generated in operations covered by this Scope 3, Category 5: Waste generated in operations intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 6: Business travel covered by this Scope 3, Category 6: Business travel intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 7: Employee commuting covered by this Scope 3, Category 7: Employee commuting intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 8: Upstream leased assets covered by this Scope 3, Category 8: Upstream leased assets intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution covered by this Scope 3, Category 9: Downstream transportation and distribution intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 10: Processing of sold products covered by this Scope 3, Category 10: Processing of sold products intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 11: Use of sold products covered by this Scope 3, Category 11: Use of sold products intensity figure
37

% of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products covered by this Scope 3, Category 12: End-of-life treatment of sold products intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 13: Downstream leased assets covered by this Scope 3, Category 13: Downstream leased assets intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 14: Franchises covered by this Scope 3, Category 14: Franchises intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 15: Investments covered by this Scope 3, Category 15: Investments intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Other (upstream) covered by this Scope 3, Other (upstream) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Other (downstream) covered by this Scope 3, Other (downstream) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this total Scope 3 intensity figure
35

% of total base year emissions in all selected Scopes covered by this intensity figure
35

Target year
2030

Targeted reduction from base year (%)
42

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]
0.000002668

% change anticipated in absolute Scope 1+2 emissions
0

% change anticipated in absolute Scope 3 emissions
19

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)
0.0000046

Intensity figure in reporting year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for total Scope 3 (metric tons CO2e per unit of activity)
0.0000046

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)
0.0000046

Does this target cover any land-related emissions?
No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]
0

Target status in reporting year
Revised

Please explain target coverage and identify any exclusions
This intensity target only concerns the category 11, Use of sold products, as it represented 85% of Scope 3 emissions in 2022 (year target was set). Passenger trains represent 35% of Alstom's scope 3 emissions in reporting year, therefore this is the coverage of this intensity target,
Calculation is based on the fiscal year's sales-related carbon emissions and their associated passenger.km or ton.km (Emission factors from IEA 2019). CO2 emission

reduction targets take into account Alstom's entire perimeter of activities and has been approved by the Science Based Targets Initiative in June 2023.

Alstom has committed to reduce the GHG emissions of its passenger rolling stock solutions by 42% by 2030 (compared with baseline 2021), measured in gCO2e/passenger*km.
Alstom has set a key performance indicator to monitor its solutions' energy efficiency. The indicator consolidates the global energy consumption reduction of its portfolio based on a weighted average of the energy consumption reductions from standardised train products – the so-called "reference solutions" – as well as from those projects. The Company has established standardised methodologies for energy simulations based on sets of assumptions defined for each type of train (mission profile, occupancy, temperature, etc.) in order to ensure the consistency of collected data.

In 2022/23, Alstom reported emissions of 4.6 gCO2e/p.km for passenger trains. The target is set at 2.6 gCO2e/p.km in 2030.

About the calculation of % of reduction anticipated on scope 3:
We expect a CO2 reduction of 19% by 2030 from our sold products. This is obtained from the projection of activity on passenger -km and ton-km up to 2030 and then multiplying the carbon performance ratio from the baseline and from the expected target. The difference is the announced 19% reduction and it has been reviewed for the SBTi validation.

Plan for achieving target, and progress made to the end of the reporting year
The main lever to reach the target is alternative traction systems (orders received for both battery and hydrogen powered regional trains in Germany, Italy and France), such as the following:
• Electrification;
• bi-mode/Hybrid;
• Catenary-free zero emissions solutions, that aim to fully decarbonize operations on non-electrified lines. The following are technologies applications:
> Battery solutions are generally more suitable for short and medium-length non-electrified sections. The new battery technology that Alstom is currently developing can increase distances to over 120 km. During the reporting year, Irish Rail ordered 18 additional battery-electric multiple units (BEMUs), aiming to boost the sustainability of Ireland's busiest commuter belt. The trains will be capable of journeys of more than 80 km outside the electrified DART network under pure battery power, thereby taking older diesel rolling stock off those non-electrified lines. Energy stored in the battery system will be charged via fast charging stations at chosen terminus locations and by recovering braking energy while the new battery-electric trainsets are on the move;
> Hydrogen solutions: Hydrogen-based solutions are preferable for long-range needs. Hydrogen trains offer a clean, reliable and cost efficient alternative tracks that aren't electrified. In 2022, Alstom's first 2 hydrogen train fleets went into service in Germany: the Coradia iLint. It is the world premiere 100% hydrogen train route, in passenger operation in Bremervörde, Lower Saxony, Germany. This regional train only emits steam and condensed water while operating with a low level of noise. The 14 vehicles with fuel cell propulsion belong to Landesnahverkehrsgesellschaft Niedersachsen (LNVG). Alstom regional solutions will gradually replace 15 diesel trains. They will be fuelled daily and around the clock at the Linde hydrogen filling station. Thanks to a range of 1,000 kilometres, the Alstom multiple units of the Coradia iLint model, which are emission-free in operation, can run all day long on just one tank of hydrogen on the network. Alstom will also deliver hydrogen trains to Italian operator FNM, with Coradia Stream FCMU.
Other main levers to reduce emissions from our solutions are the energy efficiency gains (integrated into Alstom's eco-design policy priorities) and the engagement with our customers.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Int 2

Is this a science-based target?
Yes, and this target has been approved by the Science Based Targets initiative

Target ambition
Well-below 2°C aligned

Year target was set
2022

Target coverage
Company-wide

Scope(s)
Scope 3

Scope 2 accounting method
<Not Applicable>

Scope 3 category(ies)
Category 11: Use of sold products

Intensity metric
Other, please specify (Metric tons CO2e per ton kilometre)

Base year
2021

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)
0.0000092

Intensity figure in base year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for total Scope 3 (metric tons CO2e per unit of activity)
0.0000092

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)
0.0000092

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure
<Not Applicable>

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 1: Purchased goods and services covered by this Scope 3, Category 1: Purchased goods and services intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 2: Capital goods covered by this Scope 3, Category 2: Capital goods intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) covered by this Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution covered by this Scope 3, Category 4: Upstream transportation and distribution intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 5: Waste generated in operations covered by this Scope 3, Category 5: Waste generated in operations intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 6: Business travel covered by this Scope 3, Category 6: Business travel intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 7: Employee commuting covered by this Scope 3, Category 7: Employee commuting intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 8: Upstream leased assets covered by this Scope 3, Category 8: Upstream leased assets intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution covered by this Scope 3, Category 9: Downstream transportation and distribution intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 10: Processing of sold products covered by this Scope 3, Category 10: Processing of sold products intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 11: Use of sold products covered by this Scope 3, Category 11: Use of sold products intensity figure
48

% of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products covered by this Scope 3, Category 12: End-of-life treatment of sold products intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 13: Downstream leased assets covered by this Scope 3, Category 13: Downstream leased assets intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 14: Franchises covered by this Scope 3, Category 14: Franchises intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 15: Investments covered by this Scope 3, Category 15: Investments intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Other (upstream) covered by this Scope 3, Other (upstream) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Other (downstream) covered by this Scope 3, Other (downstream) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this total Scope 3 intensity figure
46

% of total base year emissions in all selected Scopes covered by this intensity figure
46

Target year
2030

Targeted reduction from base year (%)
35

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]
0.00000598

% change anticipated in absolute Scope 1+2 emissions
0

% change anticipated in absolute Scope 3 emissions
30

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)
0.0000092

Intensity figure in reporting year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for total Scope 3 (metric tons CO2e per unit of activity)
0.0000092

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)
0.0000092

Does this target cover any land-related emissions?
No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]
0

Target status in reporting year
Underway

Please explain target coverage and identify any exclusions
This intensity target only concerns the category 11, Use of sold products, as it represented 85% of Scope 3 emissions in 2022 (year target was set). Freight trains represent 46% of Alstom's scope 3 emissions, therefore this is the coverage of this intensity target,
Calculation is based on the fiscal year's sales-related carbon emissions and their associated passenger.km or ton.km (Emission factors from IEA 2019). CO2 emission reduction targets take into account Alstom's whole perimeter of activities and has been validated by the Science Based Target initiative in June 2023.

Alstom has set a key performance indicator to monitor its solutions' energy efficiency. The indicator consolidates the global energy consumption reduction of its portfolio based on a weighted average of the energy consumption reductions from standardised train products – the so-called "reference solutions" – as well as from those projects. The Company has established standardised methodologies for energy simulations based on sets of assumptions defined for each type of train (mission profile, occupancy, temperature, etc.) in order to ensure the consistency of collected data.

In 2022/23, Alstom reported emissions of 9.2 gCO2e/ton.km for freight trains. The target is set at 5.9 gCO2e/ton.km in 2030.

Plan for achieving target, and progress made to the end of the reporting year
To achieve its intensity target, Alstom is implementing several measures :
• Energy efficiency of products like working on the auxiliaries load reduction during standstill of vehicles (pump, cooling, etc.)
• Hybrid diesel and battery propulsion systems: battery solutions are generally more suitable for short and medium-length non-electrified sections. Energy stored in the battery system will be charged via fast charging stations at chosen terminus locations and by recovering braking energy while the new battery-electric trainsets are on the move.
• Digital driving assistant systems and automation: to enhance eco-driving.
• Decarbonisation of the electricity mixes within countries where our freight transport products are sold – For example, India has set ambitious targets to reach a lower carbon mix in the decades to come.
• Working with customers to support increasing their use of renewable electricity to power our freight solutions and integrating this in our estimates of emissions.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Int 3

Is this a science-based target?
No, but we are reporting another target that is science-based

Target ambition
<Not Applicable>

Year target was set
2022

Target coverage
Company-wide

Scope(s)
Scope 3

Scope 2 accounting method
<Not Applicable>

Scope 3 category(ies)
Category 1: Purchased goods and services

Intensity metric
Other, please specify (Metric tons CO2e/€ value added)

Base year
2022

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)
0.00095

Intensity figure in base year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for total Scope 3 (metric tons CO2e per unit of activity)
0.00095

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)
0.00095

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure
<Not Applicable>

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 1: Purchased goods and services covered by this Scope 3, Category 1: Purchased goods and services intensity figure
95

% of total base year emissions in Scope 3, Category 2: Capital goods covered by this Scope 3, Category 2: Capital goods intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) covered by this Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution covered by this Scope 3, Category 4: Upstream transportation and distribution intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 5: Waste generated in operations covered by this Scope 3, Category 5: Waste generated in operations intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 6: Business travel covered by this Scope 3, Category 6: Business travel intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 7: Employee commuting covered by this Scope 3, Category 7: Employee commuting intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 8: Upstream leased assets covered by this Scope 3, Category 8: Upstream leased assets intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution covered by this Scope 3, Category 9: Downstream transportation and distribution intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 10: Processing of sold products covered by this Scope 3, Category 10: Processing of sold products intensity figure

<Not Applicable>

% of total base year emissions in Scope 3, Category 11: Use of sold products covered by this Scope 3, Category 11: Use of sold products intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products covered by this Scope 3, Category 12: End-of-life treatment of sold products intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 13: Downstream leased assets covered by this Scope 3, Category 13: Downstream leased assets intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 14: Franchises covered by this Scope 3, Category 14: Franchises intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 15: Investments covered by this Scope 3, Category 15: Investments intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Other (upstream) covered by this Scope 3, Other (upstream) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Other (downstream) covered by this Scope 3, Other (downstream) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this total Scope 3 intensity figure
14

% of total base year emissions in all selected Scopes covered by this intensity figure
14

Target year
2030

Targeted reduction from base year (%)
30

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]
0.000665

% change anticipated in absolute Scope 1+2 emissions
0

% change anticipated in absolute Scope 3 emissions
11

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)
0.00095

Intensity figure in reporting year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for total Scope 3 (metric tons CO2e per unit of activity)
0.00095

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)
0.00095

Does this target cover any land-related emissions?
No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]
0

Target status in reporting year
New

Please explain target coverage and identify any exclusions
The mid-term trajectory is not aligned with SBTi requirements, however the effort on reduction is part of our Net-Zero engagement in the long term.
This intensity target only concerns Category 1 “Purchased goods and services” of scope 3 as it is the second highest contributor to Alstom’s scope 3 emissions (14% of total scope 3 emissions in 2022).
To calculate this category’s emissions, Alstom proceeded to an initial estimation based on the spend method covering 95% of the total procurement spend, the remaining 5% come from categories that could not be identified to an emission factor.

Plan for achieving target, and progress made to the end of the reporting year
This new target was set in 2022 to decarbonize Alstom procurement. A decarbonization plan has been set up, to deploy reduction actions up to 2030. It focuses on 3 main pillars:
- Capacity building: Alstom aims to conduct change management through actions such as training of buyers and suppliers or deployment of a Supplier carbon tool. Alstom also plans co-investment with key metiers from its supply chain in order to: develop shared CO2e target with platforms, review engineering specifications for materials and products (eco-design, grades for steel, recycle rate, product standardization). The Group will try and partner with suppliers on circular business models (industrial symbiosis, take-back).
- Suppliers engagement: Alstom will engage with its top 100 most CO2e intensive suppliers to calculate their CO2e emissions following the GHG Protocol, provide product life-cycle analysis, set up CO2e reduction targets validated by SBTi (or 2060 trajectory for China), put in place renewable energy projects and co-invest in suppliers transition.
- Low-carbon tech: as an example, use low CO2e steel, dried using green hydrogen, with an increased % of recycled content and using electric arc furnace.

Improvement in carbon accounting, with a review of market codes and a shift from spend to quantity (kg, pieces), is also planned to better understand our indirect procurement emissions.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Int 4

Is this a science-based target?
No, but we are reporting another target that is science-based

Target ambition
<Not Applicable>

Year target was set
2022

Target coverage
Company-wide

Scope(s)
Scope 3

Scope 2 accounting method
<Not Applicable>

Scope 3 category(ies)
Category 4: Upstream transportation and distribution

Intensity metric
Other, please specify (Metric ton CO2e/t.km)

Base year
2022

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)

<Not Applicable>

Intensity figure in base year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)
0.000041

Intensity figure in base year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for total Scope 3 (metric tons CO2e per unit of activity)
0.000041

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)
0.000041

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure
<Not Applicable>

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 1: Purchased goods and services covered by this Scope 3, Category 1: Purchased goods and services intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 2: Capital goods covered by this Scope 3, Category 2: Capital goods intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) covered by this Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution covered by this Scope 3, Category 4: Upstream transportation and distribution intensity figure
100

% of total base year emissions in Scope 3, Category 5: Waste generated in operations covered by this Scope 3, Category 5: Waste generated in operations intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 6: Business travel covered by this Scope 3, Category 6: Business travel intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 7: Employee commuting covered by this Scope 3, Category 7: Employee commuting intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 8: Upstream leased assets covered by this Scope 3, Category 8: Upstream leased assets intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution covered by this Scope 3, Category 9: Downstream transportation and distribution intensity figure

<Not Applicable>

% of total base year emissions in Scope 3, Category 10: Processing of sold products covered by this Scope 3, Category 10: Processing of sold products intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 11: Use of sold products covered by this Scope 3, Category 11: Use of sold products intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products covered by this Scope 3, Category 12: End-of-life treatment of sold products intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 13: Downstream leased assets covered by this Scope 3, Category 13: Downstream leased assets intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 14: Franchises covered by this Scope 3, Category 14: Franchises intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Category 15: Investments covered by this Scope 3, Category 15: Investments intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Other (upstream) covered by this Scope 3, Other (upstream) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3, Other (downstream) covered by this Scope 3, Other (downstream) intensity figure
<Not Applicable>

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this total Scope 3 intensity figure
0.12

% of total base year emissions in all selected Scopes covered by this intensity figure
0.12

Target year
2030

Targeted reduction from base year (%)
30

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]
0.0000287

% change anticipated in absolute Scope 1+2 emissions
0

% change anticipated in absolute Scope 3 emissions
65

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 1: Purchased goods and services (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 2: Capital goods (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO2e per unit of activity)
0.000041

Intensity figure in reporting year for Scope 3, Category 5: Waste generated in operations (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 6: Business travel (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 7: Employee commuting (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 8: Upstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 10: Processing of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for total Scope 3 (metric tons CO2e per unit of activity)
0.000041

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)
0.000041

Does this target cover any land-related emissions?
No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]
0

Target status in reporting year
New

Please explain target coverage and identify any exclusions
The mid-term trajectory is not aligned with SBTi requirements, however the effort on reduction is part of our Net-Zero engagement in the long term.
All upstream transportation emissions are included in this target, it represents 0.12% of total scope 3 emissions. The expected change in upstream transportation absolute emissions is -65%.

Plan for achieving target, and progress made to the end of the reporting year
Identified actions to decarbonise our transportation include for example:
- Identify the most frequent air freight routes (from carriers' activity reports) and evaluate the use of Sustainable Aviation Fuels with carriers
- Select suppliers based on and/or engage suppliers towards the adoption of electric and fuel cell trucks. Evaluate where the shift can be most effective based on the region and type of transportation.
- Collaborate with suppliers to switch from air to sea freight. Engage with customers to agree on longer delivery times where feasible
- Increase truck load rates to optimize truck load and reduce total distance travelled

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?
Target(s) to increase low-carbon energy consumption or production
Net-zero target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number
Low 1

Year target was set
2020

Target coverage
Company-wide

Target type: energy carrier
Electricity

Target type: activity
Consumption

Target type: energy source
Renewable energy source(s) only

Base year
2021

Consumption or production of selected energy carrier in base year (MWh)
3693

% share of low-carbon or renewable energy in base year
42

Target year
2025

% share of low-carbon or renewable energy in target year
100

% share of low-carbon or renewable energy in reporting year
57

% of target achieved relative to base year [auto-calculated]
25.8620689655172

Target status in reporting year
Underway

Is this target part of an emissions target?
Yes, Abs1

Is this target part of an overarching initiative?
Science Based Targets initiative

Please explain target coverage and identify any exclusions
The Group has made an ambitious commitment to use 100% of electricity from renewable energy sources by 2025, among which, 10% are to be produced on-site, as part of its ambition to be net-zero by 2050. Following revision of the methodology to calculate KPI on RE100 technical guidance, 2018 has been recalculated to be comparable with 2019 (at 36% for 2018).

Relying on Bombardier Transportation integration in the beginning of 2021, we updated the base year with 2021, and this year we report the progress against the same target.

Plan for achieving target, and progress made to the end of the reporting year
The Company has signed contracts for the supply of electricity from renewable energy sources where it was economically viable. For example, all of Alstom's electricity supplies come totally from green sources in Belgium, the Netherlands, Brazil, and Sweden, India, China, Italy, Spain, the United Kingdom and partially in the United States, Germany, Switzerland, Poland and France through contracts with its electricity suppliers. In APAC, the share of electricity from renewable energy sources in 2022 has risen from 4% to 84%. In FY 2022/23, 15 sites completed feasibility study for installation of solar panels and 3 have already ordered new systems

The next step is also to find solutions for switching to biogas. The solutions being studied are: biomass, geothermal, solar and heat pumps.

List the actions which contributed most to achieving this target
<Not Applicable>

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number
NZ1

Target coverage
Company-wide

Absolute/intensity emission target(s) linked to this net-zero target
Abs1
Int1
Int2

Target year for achieving net zero
2050

Is this a science-based target?
Yes, we consider this a science-based target, and the target is currently being reviewed by the Science Based Targets initiative

Please explain target coverage and identify any exclusions
The Company is committed to supporting Net Zero in transport and has defined its Corporate Climate and Energy Transition strategy covering all its activities along three axes, based on its analysis of the sector and the Company's challenges:
The net-zero ambition means that climate targets will be gradually expanded to cover the whole value chain, by setting the right measure efforts and establishing the milestones towards absolute CO2 reduction by 2050. The target has been submitted for validation by the SBTi during the reporting year, and validation was obtained in June 2023 (after FY2022/23).

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?
Yes

Planned milestones and/or near-term investments for neutralization at target year
As the target has been approved very recently, Alstom does not have an active program yet. A request for information was made to get costs on the credits linked to this kind of project in order to build a plan. Alstom is expecting to launch an initiative in the coming 2 years.

Planned actions to mitigate emissions beyond your value chain (optional)
Carbon removal – Alstom will ensure the balance of its residual CO2 emissions through carbon sequestration project. Even if the immediate focus is on reducing the carbon footprint, pilot projects will be launched in coming years to start gaining experience on this field. Alstom will invest in reforestation projects through the French Label bas carbone standard.

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.
Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	4	0
To be implemented*	3	18867
Implementation commenced*	2	690
Implemented*	4	34623
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Low-carbon energy generation	Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)
16

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
48000

Investment required (unit currency – as specified in C0.4)
255000

Payback period
4-10 years

Estimated lifetime of the initiative
21-30 years

Comment
In Fiscal Year 2022/23, the installation of photovoltaic solar panels was completed for our site in Wroclaw. The panels will generate 300 MWh that will be self-consumed in the site. Wroclaw is a manufacturing site of the Rolling Stock product line, they mainly work on high-speed train bodies for Western European Railways, like the Pendolino train. Solar panel deployment has a central Alstom follow-up mechanism in place.

Initiative category & Initiative type

Energy efficiency in buildings	Lighting

Estimated annual CO2e savings (metric tonnes CO2e)
283

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
160000

Investment required (unit currency – as specified in C0.4)
868000

Payback period
4-10 years

Estimated lifetime of the initiative
21-30 years

Comment
Alstom is progressively deploying its programme on LED lighting. This year, several sites progressed into changing their lights. The programme is active for every type of site, manufacturing, depot or office. The declared GHG reduction is estimated over the approved CAPEX in the reporting period, which are expected to avoid over 1,000 MWh per year. The LED programme is followed-up centrally.

Initiative category & Initiative type

Energy efficiency in buildings	Building Energy Management Systems (BEMS)

Estimated annual CO2e savings (metric tonnes CO2e)
585

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1
Scope 2 (location-based)
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
434000

Investment required (unit currency – as specified in C0.4)
2240000

Payback period
4-10 years

Estimated lifetime of the initiative
6-10 years

Comment
Alstom monitors its energy efficiency through the energy intensity. Alstom is continuing to deploy its energy-saving plan which has already delivered good results. The deployment and monitoring of action plans are overseen by a three-level governance structure (central, regional, site). This initiative has generated a strong dynamic to make progress and to share best practices. The reported GHG reduction is an estimation over the CAPEX approved for the fiscal year. There is a mix of actions like actions over heating (Heating centralized controlling system and ceiling fans to distribute heating) or smart systems (Energy Management System to Monitor Power Consumption Trend). The reported figure in efficiency also takes into account organisational and behaviour initiatives that are not capture in this list.

Initiative category & Initiative type

Low-carbon energy consumption	Low-carbon electricity mix

Estimated annual CO2e savings (metric tonnes CO2e)
33739

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
0

Investment required (unit currency – as specified in C0.4)
150000

Payback period
No payback

Estimated lifetime of the initiative
21-30 years

Comment
The Company is signing contracts for the supply of electricity from renewable energy sources where it is economically viable. The initiative engaged few years ago on the legacy Alstom perimeter is now being extended to the full perimeter. In this fiscal year, the countries that bought additional guarantees of origin were India, China, United Kingdom and Germany.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Dedicated budget for energy efficiency	Alstom has a dedicated budget managed at site and region level. Alstom has an Energy Management procedure in place, which sets the company general framework in terms of energy management and usage. All Alstom units must comply with this internal procedure. One of its key principles is that all units must implement continuous improvement through monitoring and regular review of figures, analysis of top consumers, deployment of energy saving action plan and monitoring of its deployment. As per the abovementioned procedure all permanent facilities consuming more than 5 GWh per year must organize an energy survey every 4 years as a minimum, either externally or internally by qualified personnel, in accordance with applicable regulations. At early phase of projects, project management must complete a review of energy sources and main usages during project field activities and at project office to support establishment of action plan.
Lower return on investment (ROI) specification	Alstom's operational sites keep a "Energy Efficiency Plan" where they register the different potential projects to be undertaken. The projects are prioritized according to the following criteria: cost planned, return on investment, implementation time and impact on QHS. These prioritization criteria have different scoring categories (form level 1 to 4) as per pre-defined values ranges. Regarding the ROI, projects with ROI lower than 3 years are preferred. Energy Efficiency Plans also register the annual planned savings and real savings (once the project or initiative has been implemented) regarding kWh, monetary value and % of savings per site invoice.
Internal incentives/recognition programs	Alstom's annual short-term incentive scheme is based on two performance factors: collective performance (60% of the incentive target) and individual performance (40% of the incentive target). The target incentive is the incentive payment that is received when 100% of the financial goals and individual objectives are met. If the financial results and/or the employee performance exceed the goals, the incentive paid out may exceed the target incentive. Several indicators based on Corporate Social Responsibility were used in this Short-Term Incentive programme based on the Group performance, including the measurement of the decrease of greenhouse gas (GHG) emissions in scope 1 & 2 of Alstom activities.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?
Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation
Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon
The EU Taxonomy for environmentally sustainable economic activities

Type of product(s) or service(s)

Rail	Other, please specify (Electric, hybrid and diesel trains)

Description of product(s) or service(s)
Alstom's portfolio of transport solutions includes:
• Rolling-stock and components (Light rail, metro, regional locomotives and high-speed trains, people movers) including hybrid locomotives (Prima H3) and fuel-cells or battery powered regional trains, amongst others;
•Digital Integrated System (infrastructure, system, Signalling, Turnkey for autonomous solutions): track and power supply solutions, solutions for passengers done on electrified infrastructure
•Services (Maintenance, modernisation, energy efficiency services, spare parts): services done on low-carbon rolling-stock (electrical, battery-powered, hydrogen rolling-stock…);
The vast majority (99% of revennues) of Alstom's Products is classified under "Transport/Public Transport: BRTs, rail, etc. "in the EU Taxonomy.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
Yes

Methodology used to calculate avoided emissions
Other, please specify (Internal methodology, based on customers' requirements)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
Cradle-to-grave

Functional unit used
In tonCO2/passenger.km or tonCO2/ton.km

Reference product/service or baseline scenario used
Reference products are all the ones using fossil fuels (rolling stock/maintenance services):
• Rolling-stock and components: diesel rolling stock
•Digital Integrated System (infrastructure, system, Signalling): track and power supply solutions, other solutions/infrastructure for diesel trains.
•Services (Maintenance, modernisation, energy efficiency services, spare parts) for diesel trains;
The improvement of our solutions through ecodesign is measured vs 2014 baseline rolling stock solutions.

Life cycle stage(s) covered for the reference product/service or baseline scenario
Cradle-to-grave

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
170000000

Explain your calculation of avoided emissions, including any assumptions
As a rough estimate, from our passenger solutions on rolling stock, the sales in 2022 will have an impact on the equivalent of 3 440 billion passenger-kilometres (calculating the whole utilization phase of a train for 30/40 years). If we take an average of 53 gCO2/passenger-kilometre for the travelling in France (data based on sectoral benchmark) and compare it to our 4.6 gCO2/passenger-kilometre, then we will get around 5.5 million tons CO2 saved per year. (or 170 million for the average whole life cycle of utilization of a train).

The Turnover for the Group amounts to €16.5 billion with an alignment rate of 59% under the EU taxonomy.
Considering EU taxonomy activities, this includes 57% under "3. Manufacturing" (covering rolling stock, components and services), and 2% under "6. Transport" (covering mainly infrastructure).

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
59

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?
No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

Yes, an acquisition
Yes, a divestment

Name of organization(s) acquired, divested from, or merged with

Pinto
Reichschoffen site

Details of structural change(s), including completion dates

Alstom has realised the acquisition of the Spanish site Pinto, dedicated to digital services with 24-hours fleet surveillance, that was included in the reporting scope in April 2022.
Reichsoffen site production site in France was divested during the reporting year, therefore it was taken off the environmental reporting starting in July 2022.

Newly acquired activities start to report after a full calendar quarter of presence for environmental results. The environmental results of newly acquired sites are consolidated after a full calendar year of reporting.

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in methodology Yes, a change in reporting year definition	Change in reporting year: In Alstom's last year CDP reporting, the reporting year was defined as January to December 2021. However, the data for all indicators except Scope 1, Scope 2 and energy was provided for the period April 1st, 2021 to March 31st, 2022 (Alstom's fiscal year, for which the data is verified by an external third party). To be consistent with Alstom's fiscal year and URD, it was decided to define the reporting year in the CDP reporting as April 1st, 2022 to March 31st, 2023. Scope 1, Scope 2 and energy indicators are still calculated on the calendar year and verified by the independent third-party on this period. Change in methodology: The methodology for the Scope 3 categories related to the supply chain has been changed. A new methodology, covering the spend base method is used for the following categories: - Purchased goods and services; - Transportation and Distribution; - Capital goods; - Business travel. Moreover, category 11 – Use of sold products has also been revised after having been challenged by SBTi for the validation of targets. The reference year of these categories has been set on FY2022/23.

C5.1c

(C5.1c) Have your organization's base year emissions and past years' emissions been recalculated as a result of any changes or errors reported in C5.1a and/or C5.1b?

	Base year recalculation	Scope(s) recalculated	Base year emissions recalculation policy, including significance threshold	Past years' recalculation
Row 1	Yes	Scope 3	Alstom's recalculation policy is aligned with the SBTi definition: "a company's base year emissions recalculation policy must include a significance threshold of 5% or less that is applied to emission recalculations or in the absence of a base year emissions recalculation policy, a company must agree to apply a 5% significance threshold for emission recalculations". Alstom therefore recalculates the base year if a change of more than 5% occurs.	No

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1 2021

Base year end

December 31 2021

Base year emissions (metric tons CO2e)

107073

Comment

Energy indicators, and therefore Scope 1, are accounted in calendar year and verified on this period by the independent third-party

Scope 2 (location-based)

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
144632

Comment
Energy indicators, and therefore Scope 2, are accounted in calendar year and verified on this period by the independent third-party.

Scope 2 (market-based)

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
121789

Comment
Energy indicators, and therefore Scope 2, are accounted in calendar year and verified on this period by the independent third-party.

Scope 3 category 1: Purchased goods and services

Base year start
April 1 2022

Base year end
March 31 2023

Base year emissions (metric tons CO2e)
6544458

Comment
Value changed compared to last year due to the methodological change.

Scope 3 category 2: Capital goods

Base year start
April 1 2022

Base year end
March 31 2023

Base year emissions (metric tons CO2e)
79526

Comment
Value changed compared to last year due to the methodological change.

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start
April 1 2021

Base year end
March 31 2022

Base year emissions (metric tons CO2e)
19131

Comment
No comment.

Scope 3 category 4: Upstream transportation and distribution

Base year start
April 1 2021

Base year end
March 31 2022

Base year emissions (metric tons CO2e)
56186

Comment
Value changed compared to last year due to the methodological change.

Scope 3 category 5: Waste generated in operations

Base year start
April 1 2021

Base year end
March 31 2022

Base year emissions (metric tons CO2e)
4051

Comment
No comment.

Scope 3 category 6: Business travel

Base year start
April 1 2022

Base year end
March 31 2023

Base year emissions (metric tons CO2e)
30237

Comment
Value changed compared to last year due to the methodological change.

Scope 3 category 7: Employee commuting

Base year start
April 1 2021

Base year end
March 31 2022

Base year emissions (metric tons CO2e)
80000

Comment
No comment.

Scope 3 category 8: Upstream leased assets

Base year start
April 1 2021

Base year end
March 31 2022

Base year emissions (metric tons CO2e)
40229

Comment
Value not published in the URD but calculated for the SBTi target.

Scope 3 category 9: Downstream transportation and distribution

Base year start
April 1 2022

Base year end
March 31 2023

Base year emissions (metric tons CO2e)
0

Comment
Alstom is not able to account for these emissions: it corresponds to the transport paid by Alstom's customers and as trains are very specific products to move there is no data available.

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)
0

Comment
Alstom's products are not processed after having been sold.

Scope 3 category 11: Use of sold products

Base year start
April 1 2022

Base year end
March 31 2023

Base year emissions (metric tons CO2e)
38558381

Comment
Value changed compared to last year due to the methodological change. This value is the one that has been reviewed and challenged by SBTi for the validation of the target. Value in the URD only accounts the rolling-stock, which represents 29MtCO2e and not all Alstom's solutions.

Scope 3 category 12: End of life treatment of sold products

Base year start
April 1 2021

Base year end
March 31 2022

Base year emissions (metric tons CO2e)
31700

Comment
Value not published in the URD but calculated for the SBTi target.

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)
0

Comment
No downstream leased assets.

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)
0

Comment
No franchises.

Scope 3 category 15: Investments

Base year start
April 1 2022

Base year end
March 31 2023

Base year emissions (metric tons CO2e)
75074

Comment
Value not published in the URD but calculated for the SBTi target.

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

IEA CO2 Emissions from Fuel Combustion
IPCC Guidelines for National Greenhouse Gas Inventories, 2006
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
The Greenhouse Gas Protocol: Scope 2 Guidance

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)
93970

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
No comment.

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based
We are reporting a Scope 2, location-based figure

Scope 2, market-based
We are reporting a Scope 2, market-based figure

Comment
-Emission factors for electricity come from AIB (2020 data base) or, if not available IEA (2019 data base). We compute our scope 2 location-based emissions but do not report the results in our URD, they are publicly available solely in our CDP reporting.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based
133651

Scope 2, market-based (if applicable)
84780

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
No comment.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?
Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1, Scope 2, or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source of excluded emissions
Exclusions come from:
- Scope 3 category 1 - Purchased goods & services: Alstom proceeds to an initial estimation based on the spend method covering 95% of the total procurement spend, from categories that could not be identified to an emission factor.
- End of life: The figure reported is applied from an LCA to the sold products of Rolling Stock. The products on infrastructure and signalling are excluded from this estimation.

Scope(s) or Scope 3 category(ies)
Scope 3: Purchased goods and services
Scope 3: End-of-life treatment of sold products

Relevance of Scope 1 emissions from this source
<Not Applicable>

Relevance of location-based Scope 2 emissions from this source
<Not Applicable>

Relevance of market-based Scope 2 emissions from this source
<Not Applicable>

Relevance of Scope 3 emissions from this source
Emissions are not relevant

Date of completion of acquisition or merger
<Not Applicable>

Estimated percentage of total Scope 1+2 emissions this excluded source represents
<Not Applicable>

Estimated percentage of total Scope 3 emissions this excluded source represents
1

Explain why this source is excluded
For the purchased goods & services, the methodology used is spend-based and it covers 95% of the total procurement. The remaining 5% are categories for which an emission factor could not be identified.
For the end-of-life treatment of products, only the rolling-stock has been considered (as 96% of emissions from sold-products are from the rolling-stock, it has been decided to consider only these products in the end-of-life category).

Explain how you estimated the percentage of emissions this excluded source represents
The exclusions from the Purchased goods & services represent 5% of this category, which is equal to around 344 MtCO2e. This represents 0,75% of total scope 3 emissions.
The exclusions from the End-of-life treatments of products represent less than 1% of this category .
In total when adding both of these exclusions, around 1% of the emissions are excluded from total scope 3.
A life cycle assessment realized by Alstom on some of its rolling stock solutions also estimated that less than 1% of GHG emissions were excluded on the overall life cycle.

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
6544457.69

Emissions calculation methodology
Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
The Purchased Goods and Services category covers the upstream emissions (from cradle-to-gate) from the solutions purchased by Alstom Group during the FY (1st of April-31st of March). It includes both goods (tangible products) and services (intangible products) sourced within Direct and Indirect Procurement under domains like Electrical & Propulsion or Metallic. The activity data are obtained from invoices. Emission Factors are provided by the CEDA database. The reported figure for 2021/22 was an estimation done under spend order-amount, which was a first approach to get the full scope of GHG emissions for this category. The figure reported for 2022/23 is considered as the baseline for our carbon inventory.

Capital goods

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
79526.35

Emissions calculation methodology
Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
The Capital goods category covers the upstream emissions (from cradle-to-gate) from the goods purchased by Alstom Group during the FY (1st of April-31st of March). It includes Painting & preparation booths, Train Handling Equipment, Industrial machinery, Automated Storage systems, among others. The activity data are obtained from invoices. Emission Factors are provided by the CEDA database.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
17075.8

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Total energy consumption per energy type (natural gas, butane/propane, fuel oil, gasoline, diesel, electricity) (in MWh) x upstream energy emission factor per energy type from the Ademe (French Agency for Environment) (tCO2e / MWh).

Upstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
56186.056

Emissions calculation methodology
Hybrid method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
41

Please explain
CO2 Emissions data are collected quarterly from transport providers for transport activities organized by Alstom. The providers give a GHG emission report with activity data (ton-km) per type of transport mode. These data cover 41% of the Spend amount in Transportation. An extrapolation is used to calculate the rest of the perimeter. The extrapolation is done with the covered spend and a ration of CO2 per ton-km, the ratio is applied only to the not covered spend. Extrapolation detail:
1. Addition of TCO2, ton.km & spend amount from the transport providers (declaration)
2. Ratio of spend amount and TCO2 and on tkm
3. Multiplication of Spend amount not covered against the ratio
The reported figure for 2021/22 was an estimation done under spend order-amount, which was a first approach to get the full scope of GHG emissions for this category. The figure reported for 2022/23 is considered as the baseline for our carbon inventory.

Waste generated in operations

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
4141.84

Emissions calculation methodology
Waste-type-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Sum of tons of non-valorized dangerous waste (in tonnes) x emission factor of dangerous waste incineration from Ademe (French Agency for Environment) (in tCO2e/tonne of waste) and tons of non-valorized non dangerous waste (in tonnes) x emission factor of non-dangerous incineration from Ademe (French Agency for Environment) (in tCO2e/tonne of waste).

Business travel

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
30236.82

Emissions calculation methodology
Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
The Business travel category covers the travel and hotel nights of the FY (1st of April - 31st of March). The activity data are obtained from invoices. Emission Factors are provided by the CEDA database. There has been a change in methodology as we previously requested our travel providers to send the GHG emission report from employee travel. It did not cover all expenses (especially hotels, taxis, some transport modes) therefore it was decided to change to the spend method based on the business travel expenses.

Employee commuting

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
56345

Emissions calculation methodology
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
11

Please explain
A global commuting survey collects data on the commuting habits of employees, asking information on a typical worked week. The following indicators are used to consolidate the information: Number of days going to the workplace; Distance; Mode of Transport; Number of days going back home to lunch; (If car – is the person doing carpool).
The survey was done in March 2023 on a global scope for the fiscal year. The answer rate was 11% of the employee workforce. An extrapolation is done based on the results of this survey: an average emission factor (tCO2e/employee) per country is obtained from the survey, which in turn is multiplied by the number of declared employees.
Extrapolation details:
1. Number of days coming to the workplace x Carbon intensity of transport mode x Distance declared
2. Per country, Consolidation of TCO2
3. Ratio of TCO2/ number of answer (employee)
4. Extrapolation of ratio against the number of employees per country

Upstream leased assets

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
45218.78

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
This category accounts for the sites not covered in Alstom’s environmental reporting (sites with less than 200 employees for which facilities are not managed by Alstom and temporary construction sites not covered by a certification) based on an extrapolation of these sites’ emissions.
Extrapolation details:
1. Ratio on TCO2 per employee per type of site.
2. Extrapolation against the number of employees not covered per type of site
3. type of site (production, office, depot)

Downstream transportation and distribution

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Alstom is not able to account for these emissions: Alstom does not have any data to estimate the distance of the transport done on the customer control.

Processing of sold products

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
No activities identified in this category. Indeed, the large majority of our products are end users' products that are not processed before use.

Use of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
38558381.35

Emissions calculation methodology
Average product method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
3

Please explain
Alstom has developed a methodology to estimate the company's scope 3 greenhouse gas emissions stemming from the use of sold products and the purchased good and services. For each contract, GHG emissions are calculated automatically from the sales at completion, the associated "representative solution", the location of the contract (to allocate the corresponding electricity emission factor). For each group of Alstom solutions (RS, Services, Signalling…), the tool contains a predefined list of representative solutions that were created from Alstom's lifecycle assessments (LCAs), environmental product declarations (EPDs) and Energy KPIs documents and from external databases. Each representative solution provides relevant ratios and emissions factors for the GHG assessment calculations. The total emissions induced during the product life are allocated to a specific year proportionally to the percentage of sales of the year (amount of revenue for the fiscal year) vs. total sales at completion (full value of a contract).
The electricity emission factors used are from the IEA. Other emission factors used (e.g. for diesel, natural gas) are from the ADEME Base Carbone (French Agency for Environment). The methodological guide used has been developed by Carbone 4.
In FY 2022/23, Alstom started to collect information from customers (electricity usage in their traction operations, customers' sustainability reports verified by third-party), therefore 3% of emissions are calculated using these data .
Alstom does a second set of calculation based on an average 30-year emission factor, since our products have a very long-life operation - The result with 30 years EF (from STEPS scenario) is 28,890,000.09 TCO2e.

End of life treatment of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
28865.54

Emissions calculation methodology
Average product method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
From the LCA of a Regional train, the indicator on end of life gives the potential impact in global warming per functional unit (1 passenger moved 1 km), tCO2e/passenger.km or tCO2e/ton.km.
This average is used with the reported activity from the indicators in Use of Sold Products reporting. The reported figure only covers Rolling Stock and not the other product lines (D&IS to be included in the future).

Downstream leased assets

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
0

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
We have no downstream leased assets.

Franchises

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
0

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
We have no franchise.

Investments

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
13113.59

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Based on the covered Environment, Health and Safety reporting for Scope 1&2, an extrapolation is made over the sales from Joint Ventures that are not consolidated in Alstom revenue. (tCO2e/M€).
For the extrapolation, the EF is calculated as: Scope 1+2 Alstom/Alstom sales. Then, a percentage relative to Alstom's participation in the Joint Venture is applied.

Other (upstream)

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
We have no other upstream emissions.

Other (downstream)

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
We have no other downstream emissions.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?
No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure
0.0000108

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
178750

Metric denominator
unit total revenue

Metric denominator: Unit total
16507000000

Scope 2 figure used
Market-based

% change from previous year
26

Direction of change
Decreased

Reason(s) for change
Change in renewable energy consumption
Other emissions reduction activities

Please explain
The CO2 emissions reflect the decrease in the energy consumptions due to the implementation of energy saving actions in 2022 in the major energy consumers. At the end of 2022, the GHG emissions from energy consumption decreased by 22% compared to 2021.
The share of green electricity in energy supply also contributes significantly to the reduction of CO2 emissions.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?
No

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/area/region.

Country/area/region	Scope 1 emissions (metric tons CO2e)
Australia	121.47
Belgium	2926.23
Brazil	0
Canada	7261.22
China	140.5
France	25611.07
Germany	13070.53
India	619.37
Italy	4383.52
Mexico	1210.05
Netherlands	283.79
Poland	9473.33
Romania	440.43
Spain	3985.14
United Kingdom of Great Britain and Northern Ireland	12582.91
United States of America	5294.8
South Africa	924.42
Morocco	0
Kazakhstan	97.58
Austria	205.36
Czechia	2685.67
Philippines	0
Sweden	0
Switzerland	420.56
Thailand	7.94
Algeria	270.14

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By activity

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Digital Integrated Systems (Signaling et Infra & Systems)	3011.8
Headquarters	2044.69
Rolling Stock & Components	78002.2
Services	10911.22

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	81013.99	<Not Applicable>	N/A
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/area/region.

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Australia	2186.57	2186.57
Belgium	1145.1	0
Brazil	256.46	0
Canada	3055.62	3055.62
China	1849.04	0
France	4390.2	1836.69
Germany	28259.89	29671.49
India	16828.29	0
Italy	7088.39	2632.52
Mexico	3548.42	3548.42
Morocco	599.28	599.28
Netherlands	136.26	0
Poland	15919.03	1580.68
Romania	1103.9	1138.46
South Africa	15848.99	15848.99
Spain	1808.37	0
United Kingdom of Great Britain and Northern Ireland	6635.78	0
United States of America	7250.11	4987.85
Kazakhstan	6201.05	6201.05
Austria	1129.96	755.87
Czechia	4750.92	6377.39
Hungary	1239.14	2629.94
Philippines	295.33	295.33
Algeria	591.26	0
Sweden	255.25	177.11
Switzerland	411.84	389.57
Thailand	866.93	866.93

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By activity

C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
DIS (Digital Integrated System)	11690.16	4707.74
Headquarters	1634.07	1225.98
Rolling Stock and Components (RSC)	107834.23	74138.42
Services	12492.92	4707.6

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

No

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	119524.39	78846.17	N/A
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C-TO7.8

(C-TO7.8) Provide primary intensity metrics that are appropriate to your indirect emissions in Scope 3 Category 11: Use of sold products from transport.

Activity
Rail

Emissions intensity figure
0.0000046

Metric numerator (Scope 3 emissions: use of sold products) in Metric tons CO2e
15817704

Metric denominator
p.km

Metric denominator: Unit total
3443404908896

% change from previous year
0

Vehicle unit sales in reporting year
2341

Vehicle lifetime in years
33

Annual distance in km or miles (unit specified by column 4)
120000

Load factor
100% of capacity of the train - In average, a vehicle sold has a capacity of 230 passengers. As an OEM, we consider the occupancy at a 100% capacity, meaning that we will account the whole number of seats sold. The average figure is given as an average of all active contracts, with a wide variation between light rail vehicles and high-speed trains, for example.

Please explain the changes, and relevant standards/methodologies used
We have no changes on the carbon performance of passenger trains from previous year.
Alstom has developed a methodology to estimate the company's scope 3 greenhouse gas emissions stemming from the use of sold products and the purchased good and services. For each contract, GHG emissions are calculated automatically from the sales at completion, the associated "representative solution", the location of the contract (to allocate the corresponding electricity emission factor). For each group of Alstom solutions (RS, Services, Signalling…), the tool contains a predefined list of representative solutions that were created from Alstom's LCAs, EPDs and Energy KPIs documents and from external databases. Each representative solution provides relevant ratios and emissions factors for the GHG assessment calculations. The total emissions induced during the product life are allocated to a specific year proportionally to the percentage of sales of the year vs. total sales at completion.

Activity
Rail

Emissions intensity figure
0.0000092

Metric numerator (Scope 3 emissions: use of sold products) in Metric tons CO2e
21054578

Metric denominator
t.km

Metric denominator: Unit total
2283771818276

% change from previous year
0

Vehicle unit sales in reporting year
200

Vehicle lifetime in years
30

Annual distance in km or miles (unit specified by column 4)
135000

Load factor
100% of capacity of the locomotive - In average, a vehicle sold has a capacity of 1800 tons. As an OEM, we consider the load factor at a 100% capacity, meaning that we will account for the whole capacity we sold.

Please explain the changes, and relevant standards/methodologies used
We have no changes on the carbon performance of freight trains from previous year.
Alstom has developed a methodology to estimate the company's scope 3 greenhouse gas emissions stemming from the use of sold products and the purchased good and services. For each contract, GHG emissions are calculated automatically from the sales at completion, the associated "representative solution", the location of the contract (to allocate the corresponding electricity emission factor). For each group of Alstom solutions (RS, Services, Signalling…), the tool contains a predefined list of representative solutions that were created from Alstom's LCAs, EPDs and Energy KPIs documents and from external databases. Each representative solution provides relevant ratios and emissions factors for the GHG assessment calculations. The total emissions induced during the product life are allocated to a specific year proportionally to the percentage of sales of the year vs. total sales at completion.

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?
Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	34000	Decreased	15	34,000tCO2e were reduced by an investment in renewable energy, therefore a change of 34000/228862 = -15% (compared to previous year's emissions)
Other emissions reduction activities	16112	Decreased	9	Due to other emission reduction activities implemented during the reporting year (Energy efficiency measures (including LED, PV, behaviour, insulation, etc.), 20,112tCO2e were reduced, thus a change of 20112/228862 = -9% (compared to previous year's emissions)
Divestment	0	No change	0	N/A
Acquisitions	0	No change	0	N/A
Mergers	0	No change	0	N/A
Change in output	0	No change	0	N/A
Change in methodology	0	No change	0	N/A
Change in boundary	0	No change	0	N/A
Change in physical operating conditions	0	No change	0	N/A
Unidentified	0	No change	0	N/A
Other	0	No change	0	N/A

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?
Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?
More than 0% but less than or equal to 5%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	415988	415988
Consumption of purchased or acquired electricity	<Not Applicable>	212165	160511	372676
Consumption of purchased or acquired heat	<Not Applicable>	0	98835	98835
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	3990	<Not Applicable>	3990
Total energy consumption	<Not Applicable>	216155	675334	891489

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
No comment.

Other biomass

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
No comment.

Other renewable fuels (e.g. renewable hydrogen)

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
No comment.

Coal

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
No comment.

Oil

Heating value
LHV

Total fuel MWh consumed by the organization
10902

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
10902

Comment
Domestic fuel oil, heavy fuels and other fuels (URD p352) – only for co-generation.

Gas

Heating value
LHV

Total fuel MWh consumed by the organization
405086

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
403165

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
1921

Comment
Natural gas + butane/propane and other gases

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
No comment.

Total fuel

Heating value
LHV

Total fuel MWh consumed by the organization
415988

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
403165

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
12823

Comment
No comment.

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	3990	3990	3990	3990
Heat	1051	1051	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.

Country/area of low-carbon energy consumption
Belgium

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Low-carbon energy mix, please specify (Solar, Windturbines, hydropower and biomass)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
7238.8

Tracking instrument used
GO

Country/area of origin (generation) of the low-carbon energy or energy attribute
Belgium

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2021

Comment
There are both GO and Solar included in the figure reported here. There are actually 4 types of low-carbon technology used: solar, Windturbines, hydropower and biomass. The Company has signed contracts for the usage of electricity from renewable sources where economically viable. The commisisioning year for only PV Solar in 2021.

Country/area of low-carbon energy consumption
Brazil

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Low-carbon energy mix, please specify (Solar, Windturbines, hydropower and biomass)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
2754.7

Tracking instrument used
I-REC

Country/area of origin (generation) of the low-carbon energy or energy attribute
Brazil

Are you able to report the commissioning or re-powering year of the energy generation facility?
No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
<Not Applicable>

Comment
There are actually 4 types of low-carbon technology used: solar, Windturbines, hydropower and biomass. The Company has signed contracts for the usage of electricity from renewable sources where economically viable.

Country/area of low-carbon energy consumption
China

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Low-carbon energy mix, please specify (Solar, Windturbines, hydropower and biomass)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
3009.5

Tracking instrument used
GO

Country/area of origin (generation) of the low-carbon energy or energy attribute
China

Are you able to report the commissioning or re-powering year of the energy generation facility?
No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
<Not Applicable>

Comment
No comment.

Country/area of low-carbon energy consumption
Spain

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Low-carbon energy mix, please specify (Solar, Windturbines, hydropower and biomass)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
11843.3

Tracking instrument used
GO

Country/area of origin (generation) of the low-carbon energy or energy attribute
Spain

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2022

Comment
There are both GO and Solar included in the figure reported here. There are actually 4 types of low-carbon technology used: solar, Windturbines, hydropower and biomass. The Company has signed contracts for the usage of electricity from renewable sources where economically viable. The commisisioning year for only PV Solar in 2022.

Country/area of low-carbon energy consumption
France

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Hydropower (capacity unknown)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
48433.8

Tracking instrument used
GO

Country/area of origin (generation) of the low-carbon energy or energy attribute
France

Are you able to report the commissioning or re-powering year of the energy generation facility?
No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
<Not Applicable>

Comment
No comment.

Country/area of low-carbon energy consumption
Germany

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Low-carbon energy mix, please specify (Solar, Windturbines, hydropower and biomass)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
22904.4

Tracking instrument used
GO

Country/area of origin (generation) of the low-carbon energy or energy attribute

Germany

Are you able to report the commissioning or re-powering year of the energy generation facility?
No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
<Not Applicable>

Comment
There are actually 4 types of low-carbon technology used: solar, Windturbines, hydropower and biomass. The Company has signed contracts for the usage of electricity from renewable sources where economically viable.

Country/area of low-carbon energy consumption
India

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Renewable energy mix, please specify (Solar, Windturbines, hydropower and biomass)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
25922.7

Tracking instrument used
Indian REC

Country/area of origin (generation) of the low-carbon energy or energy attribute
India

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2022

Comment
The commissioning year for only PV Solar is 2022.

Country/area of low-carbon energy consumption
Italy

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Renewable energy mix, please specify (Solar, Windturbines, hydropower and biomass)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
20459.7

Tracking instrument used
GO

Country/area of origin (generation) of the low-carbon energy or energy attribute
Italy

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2020

Comment
There are both GO and Solar included in the figure reported here. There are actually 4 types of low-carbon technology used: solar, Windturbines, hydropower and biomass. The Company has signed contracts for the usage of electricity from renewable sources where economically viable. The commisisioning year for only PV Solar in 2020.

Country/area of low-carbon energy consumption
Morocco

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Renewable energy mix, please specify (Solar, Windturbines, hydropower and biomass)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
59.4

Tracking instrument used
GO

Country/area of origin (generation) of the low-carbon energy or energy attribute
Morocco

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2021

Comment
100% of our low carbon energy comes from solar panles installed in our facilities. The commisisioning year for only PV Solar in 2021.

Country/area of low-carbon energy consumption
Netherlands

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Renewable energy mix, please specify (Solar, Windturbines, hydropower and biomass)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
451.5

Tracking instrument used
GO

Country/area of origin (generation) of the low-carbon energy or energy attribute
Netherlands

Are you able to report the commissioning or re-powering year of the energy generation facility?
No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
<Not Applicable>

Comment
There are actually 4 types of low-carbon technology used: solar, Windturbines, hydropower and biomass. The Company has signed contracts for the usage of electricity from renewable sources where economically viable.

Country/area of low-carbon energy consumption
Poland

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Low-carbon energy mix, please specify (Solar, Windturbines, solar and biomass)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
23302.5

Tracking instrument used
GO

Country/area of origin (generation) of the low-carbon energy or energy attribute
Poland

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2021

Comment
There are both GO and Solar included in the figure reported here. There are actually 4 types of low-carbon technology used: solar, Windturbines, hydropower and biomass. The Company has signed contracts for the usage of electricity from renewable sources where economically viable. The commisisioning year for only PV Solar in 2021.

Country/area of low-carbon energy consumption
Sweden

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Low-carbon energy mix, please specify (Solar, Windturbines, hydropower and biomass)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
7586

Tracking instrument used
Please select

Country/area of origin (generation) of the low-carbon energy or energy attribute
Sweden

Are you able to report the commissioning or re-powering year of the energy generation facility?
No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
<Not Applicable>

Comment
There are actually 4 types of low-carbon technology used: solar, Windturbines, hydropower and biomass. The Company has signed contracts for the usage of electricity from renewable sources where economically viable.

Country/area of low-carbon energy consumption
Switzerland

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Low-carbon energy mix, please specify (Solar, Windturbines, hydropower and biomass)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
1260.6

Tracking instrument used
GO

Country/area of origin (generation) of the low-carbon energy or energy attribute
Switzerland

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2021

Comment
There are actually 4 types of low-carbon technology used: solar, Windturbines, hydropower and biomass. The Company has signed contracts for the usage of electricity from renewable sources where economically viable. The commisisioning year for only PV Solar in 2021.

Country/area of low-carbon energy consumption
United Kingdom of Great Britain and Northern Ireland

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Low-carbon energy mix, please specify (Solar, Windturbines, hydropower and biomass)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
34536.5

Tracking instrument used
REGO

Country/area of origin (generation) of the low-carbon energy or energy attribute
United Kingdom of Great Britain and Northern Ireland

Are you able to report the commissioning or re-powering year of the energy generation facility?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2021

Comment
There are both GO and Solar included in the figure reported here. There are actually 4 types of low-carbon technology used: solar, Windturbines, hydropower and biomass. The Company has signed contracts for the usage of electricity from renewable sources where economically viable. The commisisioning year for only PV Solar in 2021.

Country/area of low-carbon energy consumption
United States of America

Sourcing method
Unbundled procurement of energy attribute certificates (EACs)

Energy carrier
Electricity

Low-carbon technology type
Low-carbon energy mix, please specify (Solar, Windturbines, hydropower and biomass)

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
6401.4

Tracking instrument used
US-REC

Country/area of origin (generation) of the low-carbon energy or energy attribute
United States of America

Are you able to report the commissioning or re-powering year of the energy generation facility?
No

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
<Not Applicable>

Comment
There are actually 4 types of low-carbon technology used: solar, Windturbines, hydropower and biomass. The Company has signed contracts for the usage of electricity from renewable sources where economically viable.

C8.2g

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area
Australia

Consumption of purchased electricity (MWh)
3223.6

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
3223.6

Country/area
Austria

Consumption of purchased electricity (MWh)
3135.7

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
2907.2

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
6042.9

Country/area
Belgium

Consumption of purchased electricity (MWh)
6896.6

Consumption of self-generated electricity (MWh)
252.2

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
1051

Total non-fuel energy consumption (MWh) [Auto-calculated]
8199.8

Country/area
Brazil

Consumption of purchased electricity (MWh)
2754.7

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
2754.7

Country/area
Canada

Consumption of purchased electricity (MWh)
25570

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
25570

Country/area
China

Consumption of purchased electricity (MWh)
3009.5

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
3009.5

Country/area
Czechia

Consumption of purchased electricity (MWh)
11596.1

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
11596.1

Country/area
Spain

Consumption of purchased electricity (MWh)

11796.3

Consumption of self-generated electricity (MWh)
38

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
11834.3

Country/area
France

Consumption of purchased electricity (MWh)
79869.3

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
1980

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
81849.3

Country/area
Germany

Consumption of purchased electricity (MWh)
50719.5

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
69089

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
119808.5

Country/area
Hungary

Consumption of purchased electricity (MWh)
5637.6

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
5637.6

Country/area
India

Consumption of purchased electricity (MWh)
24413.6

Consumption of self-generated electricity (MWh)
1509.1

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
25922.7

Country/area
Italy

Consumption of purchased electricity (MWh)
19067.4

Consumption of self-generated electricity (MWh)
1392.3

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
19789

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
40248.7

Country/area
Kazakhstan

Consumption of purchased electricity (MWh)
3831.8

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
5270.3

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
9102.1

Country/area
Mexico

Consumption of purchased electricity (MWh)
8902.2

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
8902.2

Country/area
Morocco

Consumption of purchased electricity (MWh)
837.1

Consumption of self-generated electricity (MWh)
59.4

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
896.5

Country/area
Netherlands

Consumption of purchased electricity (MWh)
451.5

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
451.5

Country/area
Philippines

Consumption of purchased electricity (MWh)
416.9

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
416.9

Country/area
Poland

Consumption of purchased electricity (MWh)
23680.4

Consumption of self-generated electricity (MWh)
104

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
2787.8

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
26572.2

Country/area
Romania

Consumption of purchased electricity (MWh)
4024.1

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
4024.1

Country/area
South Africa

Consumption of purchased electricity (MWh)
17156.3

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
17156.3

Country/area
Sweden

Consumption of purchased electricity (MWh)
7586

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
4654

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
12240

Country/area
Switzerland

Consumption of purchased electricity (MWh)
1292.6

Consumption of self-generated electricity (MWh)
445.5

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
1358.1

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
3096.2

Country/area
Thailand

Consumption of purchased electricity (MWh)
1837.5

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
1837.5

Country/area
United Kingdom of Great Britain and Northern Ireland

Consumption of purchased electricity (MWh)

34346.7

Consumption of self-generated electricity (MWh)
189.8

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
34536.5

Country/area
United States of America

Consumption of purchased electricity (MWh)
20515.3

Consumption of self-generated electricity (MWh)
0

Is this electricity consumption excluded from your RE100 commitment?
<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)
0

Consumption of self-generated heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
20515.3

C-TO8.5

(C-TO8.5) Provide any efficiency metrics that are appropriate for your organization's transport products and/or services.

Activity
Rail

Metric figure
11.96

Metric numerator
MWh

Metric denominator
Use phase, please specify (millions p.km)

Metric numerator: Unit total
40114894.39

Metric denominator: Unit total
3353352.12

% change from previous year
4.91

Please explain
This intensity metrics relates the total electricity consumption of rail vehicles in MWh during the year divided by the use phase of these vehicles during the year expressed in millions passenger.km.
The metric for last year was 11.40, which gives a change of +4.91%.

Activity
Rail

Metric figure
12.49

Metric numerator
MWh

Metric denominator
Other, please specify (millions t.km)

Metric numerator: Unit total
28520302.24

Metric denominator: Unit total
2283771.82

% change from previous year

Please explain
This intensity metrics relates the total electricity consumption of locomotives vehicles in MWh during the year divided by the use phase of these vehicles during the year expressed in millions tons.km.
The metric for last year was 11.80, which gives a change of +5.85%.

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description
Other, please specify (Activity performance from diesel sold products)

Metric value
2.49

Metric numerator
85,851,902,546

Metric denominator (intensity metric only)
3,443,404,908,896

% change from previous year
6.06

Direction of change
Increased

Please explain
Calculation : passenger-km from diesel/total passenger-km of global rolling stock. This indicator gives the amount of activity from passenger rail sold products that is allocated to a product that runs on diesel. From the estimation, this year 2.49% of passenger kilometers were run on diesel trains, the rest being electric hydrogen or hybrids, which is a higher percentage than previous year (2.35%). We expect that this percentage will decrease in the coming years.

C-TO9.3/C-TS9.3

(C-TO9.3/C-TS9.3) Provide tracking metrics for the implementation of low-carbon transport technology over the reporting year.

Activity
Rail

Metric
Other, please specify (% of supply of non-diesel powered rolling stock)

Technology
Other, please specify (Non diesel-powered rolling stock)

Metric figure
98.46

Metric unit
Other, please specify (%)

Explanation
This indicator gives the amount of activity from passenger rail sold products that is allocated to a product that runs on electricity. From the calculation, this year, 98,46% of passenger kilometers were run on electric trains. The supply of diesel rolling-stock (locomotives or trains) represented less than 5% of Alstom's orders over the last 3 years. 95% of Alstom's rolling-stock supply as ordered in the last 3 years is non diesel-powered.

Activity
Rail

Metric
Other, please specify (% of supply of hydrogen powered rolling stock)

Technology
Other, please specify (Hydrogen rail solutions)

Metric figure
0.04

Metric unit
Other, please specify (%)

Explanation
This indicator gives the amount of activity from passenger rail sold products that is allocated to a product that runs on hydrogen. From the calculation, this year, 0,04% of passenger kilometers were run on hydrogen trains. Alstom expects to increase the number of sales linked to this technology and increase the activity for this product in the coming years.

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	Alstom does not disclose detailed figures on R&D per type of programs. In 2022/23, global R&D expenses represented € 519 million, which equals to 3.1% of sales.

C-TO9.6a/C-TS9.6a

(C-TO9.6a/C-TS9.6a) Provide details of your organization's investments in low-carbon R&D for transport-related activities over the last three years.

Activity
Rail

Technology area
Unable to disaggregate by technology area

Stage of development in the reporting year
<Not Applicable>

Average % of total R&D investment over the last 3 years
40

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)
519000000

Average % of total R&D investment planned over the next 5 years
25

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan
Description of % of total R&D investment
Alstom does not disclose detailed figures on R&D per type of programs. In 2022/23, global R&D expenses represented € 519 million, which is equal to 3.1% of sales. All the R&D efforts are focused to address the expectations of the customers and passengers as well as addressing the environmental and sustainability impact of its offers.
The 40% of R&D spent linked with low-carbon transport was calculated based on EU taxonomy R&D Capex and Opex.
Alstom intends to increase this percentage by around 5% every year over the next 5 years.

Description of investments related to low-carbon R&D
Alstom's key R&D priorities include:
- Digitalization: Alstom is focused on leveraging digital technologies to improve the efficiency, reliability. Alstom is investing in technologies such as big data, artificial intelligence, and the Internet of Things (IoT) to develop new solutions for predictive maintenance, energy optimization, and traffic management.
- Energy Efficiency: Alstom is committed to reducing the energy consumption and carbon footprint of rail transport systems. The company is investing in technologies such as regenerative braking, lightweight materials, and energy-efficient traction systems to reduce energy consumption and emissions.
- Hydrogen Mobility: Alstom is a leader in the development of hydrogen-powered trains, which offer a clean and sustainable alternative to diesel-powered trains. The company is investing in research and development to improve the efficiency and performance of hydrogen-powered trains and to develop new solutions for hydrogen production and storage.
- Signalling and Train Control: Alstom is investing in R&D to improve the efficiency of rail transport systems through the development of advanced signalling and train control solutions.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
Alstom_2022_2023_Universal_Registration_Document_URD_EN.pdf
Alstom_Assurance_Report_OTI_2022_23_EN.pdf

Page/ section reference
URD p335-339
Audit report: All

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach
Scope 2 market-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
Alstom_2022_2023_Universal_Registration_Document_URD_EN.pdf
Alstom_Assurance_Report_OTI_2022_23_EN.pdf

Page/ section reference
URD p335-339
Audit report: All

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category
Scope 3: Purchased goods and services
Scope 3: Use of sold products

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
Alstom_2022_2023_Universal_Registration_Document_URD_EN.pdf
Alstom_Assurance_Report_OTI_2022_23_EN.pdf

Page/section reference
URD p335-339
Audit report: All

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
78

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?
Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Emissions reduction activities	ISAE 3000	This data is included in our Sustainability Report and verified annually as part of the independent review of data included in the report. Attached is PWC's Statement for CSR data assurance and Alstom 2022/23 Universal Registration Document covering Sustainability Report on chapter 6. Alstom_2022_2023_Universal_Registration_Document_URD_EN.pdf Alstom_Assurance_Report_OTI_2022_23_EN.pdf
C4. Targets and performance	Year on year change in emissions (Scope 1 and 2)	ISAE 3000	This data is included in our Sustainability Report and verified annually as part of the independent review of data included in the report. Attached is PWC's Statement for CSR data assurance and Alstom 2022/23 Universal Registration Document covering Sustainability Report on chapter 6. Alstom_2022_2023_Universal_Registration_Document_URD_EN.pdf Alstom_Assurance_Report_OTI_2022_23_EN.pdf
C4. Targets and performance	Year on year change in emissions (Scope 3)	ISAE 3000	This data is included in our Sustainability Report and verified annually as part of the independent review of data included in the report. Attached is PWC's Statement for CSR data assurance and Alstom 2022/23 Universal Registration Document covering Sustainability Report on chapter 6. Alstom_2022_2023_Universal_Registration_Document_URD_EN.pdf Alstom_Assurance_Report_OTI_2022_23_EN.pdf
Please select	Please select		
C8. Energy	Energy consumption	ISAE 3000	This data is included in our Sustainability Report and verified annually as part of the independent review of data included in the report. Attached is PWC's Statement for CSR data assurance and Alstom 2022/23 Universal Registration Document covering Sustainability Report on chapter 6. Alstom_2022_2023_Universal_Registration_Document_URD_EN.pdf Alstom_Assurance_Report_OTI_2022_23_EN.pdf

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

France carbon tax

C11.1c

(C11.1c) Complete the following table for each of the tax systems you are regulated by.

France carbon tax

Period start date

April 1 2022

Period end date

March 31 2023

% of total Scope 1 emissions covered by tax

27

Total cost of tax paid

1142250.6

Comment

Total scope 1 emissions in France: 25 611 tCO2e (i.e. 27% of total scope 1 emissions) Carbon tax: 44.6 €/t in 2022 (unchanged since 2018) Total cost paid: 44.6 x 25,611 = 1,142,250.60

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

(i) Strategy for complying with the France Carbon tax.

Alstom's strategy to reduce its exposure to the France Carbon Tax is reflected in the company's CSR

strategy.

Enabling the decarbonisation of mobility is one of the pillars of our CSR Strategy. In order to support the decarbonisation of mobility,

Alstom is committed to reduce absolute direct GHG emissions (scope 1) and indirect GHG emissions (scope 2) from Alstom sites by 40% by 2030 from 2021/22 baseline.

The way Alstom has implemented this strategy through the deployment of energy saving plans, whereby the sites identify, study different possibilities, prioritize and implement energy efficiency projects (e.g. replacement of boilers with more efficient models). Alstom has been driving the reduction of the environmental footprint of its operations over the last 10 years with significant progress made. The energy consumption of Alstom's operations in its permanent sites comes from gas (about 43%), electricity (about 42%) and the rest from district heating and other fuels.

Alstom is targeting to reach carbon neutral operations through a step-by-step approach. In an initial phase, Alstom is addressing two priorities:

• The continuous reduction of the carbon impact of its operations

• The progressive switch to low carbon electricity supply.

(ii) Explanation of how the strategy has been applied with reference to results of actions and timescale of implementation

The strategy is based on the deployment and monitoring of action plans, overseen by a three-level governance structure (central, regional, site) to ensure their follow-up and the sharing of best practices. These plans include energy saving initiatives including installation of LED lighting, upgrading painting booths, increasing surface compacting and investigating the use of heat pumps to provide heating.

Moreover, specific energy efficiency plans have been deployed in the European global region in order to face the energy crisis and reduce the energy intensity by 15%, on this perimeter, between 2021 and 2023. Main actions consisted in reducing the amount of heating in workshops and offices, and making sure that electrical equipment is turn off when not being used, like the VMC in the sites. Energy audits were also used to pinpoint the places where reduction initiatives could be deployed and sites are studying long-term actions like the replacement of natural gas when possible.

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?
No

C11.3

(C11.3) Does your organization use an internal price on carbon?
No, but we anticipate doing so in the next two years

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?
Yes, our suppliers
Yes, our customers/clients
Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement
Engagement & incentivization (changing supplier behavior)

Details of engagement
Other, please specify (On-boarding suppliers to comply with Alstom's decarbonization plan)

% of suppliers by number
32

% total procurement spend (direct and indirect)
57

% of supplier-related Scope 3 emissions as reported in C6.5
74

Rationale for the coverage of your engagement
As EcoDesign is part of Alstom DNA, the EcoDesign Department collaborates closely with the Procurement Department to apply a life-cycle approach to purchased products and services in order to maximize the environmental benefits of Alstom's solutions over time.

Currently EcoDesign deliverables are contractually requested to suppliers through engineering specifications covering five key priorities established in the ecodesign policy, namely:
• energy efficiency of rail transport systems;
• use of greener, recyclable, and natural materials;
• reduction of noise and vibrations;
• reduction of air emissions;
• circular economy and end of life management with the objective of 25% recycled content in newly-developed rolling stock by 2025.

Indeed, the decarbonization plan identified the integration of eco-design criteria in engineering specifications as a key lever to reduce CO2 emissions from purchased goods. For instance, the target of having at least a minimum of 25% recycled content in newly-developed rolling stock solutions is part of the Climate Change requirements on suppliers.

Moreover, in FY22/23, 50 suppliers have been trained on the accounting of CO2 emissions and product carbon footprint .

Calculation
Included in this engagement are all direct suppliers.
The direct goods suppliers represent around 6800 suppliers out of 21400 = 32% by number and 57% by procurement spent in FY2022/23.
Indirect procurement represents around 26% of procurement CO2e emissions, therefore direct procurement represents 74%.

Impact of engagement, including measures of success
1) Impact
As regards the ecodesign criteria of 25% recycled content, for most carbon-intensive commodities purchased, the minimum requirement can be higher, as for instance in the case of aluminium profiles (at least 50% recycled content), which encouraged suppliers to go beyond the requirement and offer products including 76% recycled content. For example, this has been proposed on the project TGV M where the customer had specified in the public tender high environmental requirements. In this case, the carbon footprint of the aluminium profiles used for the manufacturing of the carbody shell is 3 times lower than the average one.

In addition, concerning steel, the minimum requirement for the recycled content has been defined at 40%, while some suppliers have started to produce by using electric arc furnaces, reducing the carbon impact from 2tCO2e in average per ton of steel to 0.5tCO2e. This has been proposed to the customer to produce low-carbon rails for one of the subway lines in Paris, reducing the CO2 emissions by 6000tCO2e for this specific purchase (2000tCO2e for 4000 tons of steel purchased, compared to 8000tCO2e by using the basic oxygen method).

2) Measure of success
The success is measured through the recycled content, with the EcoDesign criteria of 25% of recycled content by 2025. In FY22/23, the total recycled content rate in newly developed solutions is 22.5%.

Comment

Type of engagement
Information collection (understanding supplier behavior)

Details of engagement
Collect GHG emissions data at least annually from suppliers

% of suppliers by number
0

% total procurement spend (direct and indirect)
26

% of supplier-related Scope 3 emissions as reported in C6.5
60

Rationale for the coverage of your engagement
The Procurement decarbonization plan targets the top 100 suppliers contributing to Alstom's carbon emissions and is divided in three main pillars:
• knowledge development and capacity building (Suppliers and Buyers);
• supplier engagement;
• and low-carbon innovations with suppliers.

Targeted suppliers in the decarbonization plan have been selected based on the Procurement Domains' strategy (2030 vision for the entire panel of suppliers) and have answered to an assessment through the EcoVadis online platform that collects specific data on their climate change measures and actions, such as:
• reporting on energy consumption
• use of renewable energies
• reporting on Scope 1&2 GHG emissions
• reporting on Scope 3 GHG emissions
• actions and measures on energy consumption and GHG emissions
• CDP disclosure
• climate targets approved by the Science Bases Targets initiative (SBTi).

Calculation
Calculations are done based on the number of suppliers listed in the decarbonization plan (around 100), representing 26% of the total invoices FY22/23.
For coverage by scope 3 emissions, based on the analysis done when building the procurement's emissions reduction plan:
o CO2e emissions from targeted Metallic suppliers represent 25% of the Domain's emissions (on the spend-based method);
o We added the raw material impact,
Therefore the listed suppliers represent the majority of the Domain's CO2e emissions (60%).

Impact of engagement, including measures of success

1) Impact

The EcoVadis online assessment provides suppliers a scorecard that highlights the strengths and the areas of improvement on climate change aspects. In this sense, it allows suppliers to measure the performance of their climate change strategies and guides them in the implementation of specific actions with the aim to improve their results. For example, the Sustainable Procurement team supports suppliers with the implementation of corrective actions by organizing dedicated sessions together with the EcoVadis CSR experts or by addressing them on a case by case. This was the case of supporting a wheel sets supplier to better define its sustainable development policies and actions, which after resubmitting its answers, the overall performance increased by more than 20 points (from 35 to 55). Therefore, this represents an important step to raise awareness among suppliers and encourage them to improve their climate change policies and strategies in order to reduce CO2 emissions. 625 EcoVadis assessments were carried out for 2022/23 and 236 more can be added as they were led in the past 2 fiscal years.

2) Measure of success

The success of this engagement is measured by the average score of suppliers assessed by Alstom. It is 60/100 in FY2022/23 and has improved by +3 points compared to the previous fiscal year (the minimum requirement being at 45/100).

Comment

As part of Procurement decarbonization plan, Alstom aims to have a better control of its CO2 emissions to monitor the reduction targets. In this sense, the Group is about to finalize the last steps of the implementation of a major project to collect primary data (e.g., product-specific Emission Factor by production site certified by an LCA or EPD) from suppliers in order to:

• improve the monitoring of CO2 emissions by using supplier-specific Emission Factors;
• have a better understanding of their maturity and engage with them on carbon reduction action plans;
• and allow Buyers in collaboration with other associated Departments to take into account suppliers' carbon footprint in procurement decisions.

Type of engagement

Innovation & collaboration (changing markets)

Details of engagement

Run a campaign to encourage innovation to reduce climate impacts on products and services

% of suppliers by number

0

% total procurement spend (direct and indirect)

12

% of supplier-related Scope 3 emissions as reported in C6.5

17

Rationale for the coverage of your engagement

In FY22/23, as part of Alstom's Scope 3 – Supply Chain carbon reduction initiatives, the Procurement Department together with the Open Innovation Team has invited suppliers to participate in the "Circular Economy Innovation Race" and submit innovative solutions to address Climate Change. Targeted suppliers have been selected based on the partnership program called "Alliance™", which aims to develop a collaborative approach with strategic suppliers in four main areas: Business Development, Operational Excellence, Product & Process innovation and After Sales Market. As of end of March 2023, 10 suppliers already joined the program and committed to reach ambitious objectives.

Indeed, as part of the Procurement strategy, suppliers to Alstom Group are strongly encouraged to measure and reduce their greenhouse gas emissions by focusing on low-carbon innovations. In this perspective, in 2022, the Group has launched a major decarbonization action plan with the support of a specialized Climate Change consultancy. All Procurement Domains and Regions, as well as the Supply Chain Department have brought their contribution, while around 20 strategic suppliers have been consulted to better understand their current Climate reduction strategies and how they could partner with Alstom to implement carbon reduction actions and accelerate the use of low-carbon innovation .

As a result, circular economy has been identified as the cornerstone of the decarbonization plan, bringing CO2 reduction by:

• maintaining the value of materials and components into the economy as long as possible to lower the pressure put on the extraction of raw materials,
• increasing the traceability of materials throughout their life cycle and share information to boost reuse, repair and recycling.

Calculation:

All calculations are based on the number of suppliers integrated in the Circular Economy Innovation Race as well as suppliers included in the building of the Decarbonization Plan with EcoAct (total suppliers involved in these two collaborations – 22 from a total of 21400).

• By number: 22 out of 21,400 suppliers = 0.001%
• By procurement spent: total invoices linked to these 22 suppliers out of the total invoices for FY2022/23 = 12%
• By Scope 3 emissions: total emissions linked to the invoices of these 22 suppliers out of the total scope 3 Category 1 emissions

Impact of engagement, including measures of success

1) Impact

10 circular economy innovative projects have been identified especially regarding closing the loop by including Alstom's customers and taking-back materials and components from the rolling stock at the end of their lifespan (e.g., aluminium and steel in the carbody shell, copper in cables, electrical and electronic components) for recycling and reintegration into suppliers' new production cycles that are currently running with Alstom.

For instance, in the case of steel, as the grades used by the railway industry are very specific and produced in lower quantities compared to the grades of the automotive industry, this is a concrete measure, which brings a competitive advantage to Alstom: not only it reduces the carbon footprint through increased recycled content but it also creates synergies between key stakeholders in the entire railway value chain.

2) Measure of success

Based on the innovative solutions identified with its suppliers, Alstom has proposed to the members of the European railway industry initiative (Railsponsible, an initiative that focuese on sustainable procurement) that the Working Group dedicated to Climate Change issues focuses on common decarbonization solutions, especially circular economy or low-carbon materials. A measure of success is the number of innovation solutions identified by Alstom with its suppliers that are put on the agenda of Railsponsible. Among the 10 key solutions identified by Alstom, one has already been put on the top of the agenda of Railsponsible members: it is green steel. Members of Railsponsible are currently exchanging with the global initiative of the international Climate Group "Steel Zero" with the aim to join together the initiative and contribute to building the demand for net zero steel by 2050. One of the main objectives is to join forces and use the power of Railsponsible (whose members are covering the entire railway value chain) to unlock the innovation potential and speed up the transition towards net zero in 2050.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Education/information sharing	Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

5

% of customer - related Scope 3 emissions as reported in C6.5

16

Please explain the rationale for selecting this group of customers and scope of engagement

Measure put in place: We provide energy simulations of our products/solutions as per customers' requests. In addition, we publish Environmental Product Declaration on customer demand. An EPD® (Environmental Product Declaration) is an independently verified and registered document that communicates transparent and comparable information about the life-cycle environmental impact of products.
This information offers to all customers and other stakeholders an exhaustive overview of the environmental impacts throughout the product life-cycle.
With a complete portfolio of renovation and modernisation solutions, Alstom offers customers the ability to extend the life-time of their systems whilst allowing for an upgrade of comfort and services. Alstom also delivers end of life manuals geared to optimised and safe recycling. The dismantling manual for X'trapolis suburban trains specifies how the 240 tons of train should be dismantled in order to achieve 93% of recyclability and 99% of recoverability. Moreover, the Sydney Metro has a recyclability rate of 95% while the recoverability rate is of 98.5%.

The ecodesign team is in charge of setting an inventory on customer requests linked to environment. One of the criteria is the requests on Life Cycle Analysis, carbon footprint or environmental declaration for the product. On the period 2022/23, the team studied more than one hundred customer request. Out of them, the 5% that is declared reflects the number of customer that requested an environmental declaration. The 16% of GHG emissions that are declared reflects the number of requests per Region. (Tons of GHG per region x % of requests on environmental declaration over total request per region).

Impact of engagement, including measures of success

1) Company-specific description of the impact:
Our strategy to prioritize engagement with customers is to focus on customers that are more mature, who have announced GHG or energy reduction ambitions or operate in countries where electricity is a scarce resource. A number of initiatives are being implemented with customers in France, Brazil and Ireland. They include collaboration over energy measurements, energy storage and heat pump tests, new energy management systems, auxiliary control systems, etc.

2) Description of measures of success
Our measure of success of customer engagement is through the level of connection established with the customer, the delivery of project versus initial objectives, the potential to transfer to commercial projects and the overall satisfaction of customer. We also consider the number of interviews conducted with customers.
The success of the engagement of customers is measured by the number of customers requesting the energy simulation or the Environmental Product Declaration.

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

Alstom also collaborates with other organizations in order to develop and provide innovative transport solutions that meet our customer's needs and requirements. Collaborations with other business partners enables us to develop synergies and provide more integrated solutions that address more holistic smart mobility solutions.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

Yes, suppliers have to meet climate-related requirements, but they are not included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement
Complying with regulatory requirements

Description of this climate related requirement
Procurement teams require their suppliers to comply with Alstom Sustainable Development values and principles detailed in the "Ethics & Sustainable Development Charter for Alstom's Suppliers and Contractors" (ESD charter). This is mandatory to enter into Alstom's panel. Compliance with this Charter is also part of Alstom's general procurement terms and conditions. By signing this Charter, the suppliers are committed to respecting applicable laws and regulations, as well as international conventions related, among others, to environment requirements of Alstom and implement environmental friendly initiatives.
As precised by the ESD charter: "Alstom's Suppliers and Contractors shall promote the development of environment friendly technologies (e.g. controlling pollutant, CO2 emissions, etc.) as well as energy saving and recycling solutions, and implement logistics strategies that minimise environmental impacts (notably with respect to transshipment and transportation), [...], shall seek, develop and propose low environmental footprint solutions"
Screenings, online evaluations and on-site CSR audits are conducted and cover 74% of the total purchase volume in 2022/23.

% suppliers by procurement spend that have to comply with this climate-related requirement
100

% suppliers by procurement spend in compliance with this climate-related requirement
98

Mechanisms for monitoring compliance with this climate-related requirement
On-site third-party verification
Grievance mechanism/Whistleblowing hotline
Supplier scorecard or rating

Response to supplier non-compliance with this climate-related requirement
Other, please specify (As soon as a non-compliance is detected, the supplier is asked to implement a corrective action plan. Depending on the criticality level, it can be decided either to launch additional assessment, to put the supplier on hold or to stop the business.)

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate
Yes, we engage directly with policy makers
Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate
Yes, we fund organizations or individuals whose activities could influence policy, law, or regulation that may impact the climate

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?
Yes

Attach commitment or position statement(s)
Policy_influence_Transparency_Document_EN.pdf

Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan
Alstom communicates about its climate-related engagement activities in its URD, chapter 6, in the section "Relations with governments, international & national organisations and think tanks" p.349. Alstom acknowledges its responsibility to decarbonise both its operations and its product and service offerings and strongly believes in its role to support the transition towards a low carbon future.
Alstom fully supports the deployment of the United Nations Paris Agreement on Climate Change (2015) and the strategy of the Global Climate Action Agenda on Transport. Therefore, the Company closely follows the United Nations Framework Convention on Climate Change (UNFCCC) negotiation process. Alstom has also participated in the UNFCCC's Conferences of the Parties (COPs) since 2015 in Paris (France) with the objective to be a key contributor in the fight against climate change and demonstrate that Alstom is a key actor in this market, continuously promoting green mobility and rail.
Engagement activities with policy makers or trade associations are carried out by the local (Country), regional (Region) or central organization, depending on the context. Internal instructions task all Alstom representatives to promote and defend an ambitious climate agenda, in line with the company's objectives as outlined above. Coordination and validation of the specific positions being taken is done as required, through the involvement of the Strategy team.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate
<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate
<Not Applicable>

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Specify the policy, law, or regulation on which your organization is engaging with policy makers
Alstom supports policies to internalize environmental costs, particularly with regards to a consistent CO2 pricing. To this end, Alstom welcomes the evolution of the European Unio regulatory framework as part of its "Fitfor55" agenda and especially the set-up of a Carbon Border Adjustment Mechanism (CBAM) and the extension of the Emission Trading Scheme. we support the completion of other initiative that were proposed as part of the same package, namely the Eurovignette and the Energy Taxation Directive.

Category of policy, law, or regulation that may impact the climate
Carbon pricing, taxes, and subsidies

Focus area of policy, law, or regulation that may impact the climate

Carbon taxes

Policy, law, or regulation geographic coverage
Regional

Country/area/region the policy, law, or regulation applies to
EU27

Your organization's position on the policy, law, or regulation
Support with minor exceptions

Description of engagement with policy makers
As a key player in sustainable mobility, Alstom supports the fit for 55 package which will contribute to the decarbonisation of transport in the EU and to a better carbon price signal in the market. Alstom welcomes the set-up of a Carbon Border Adjustment Mechanism (CBAM) to capture carbon leakage and restore a level playing field for European producers in the covered sectors. In particular, Alstom supports the coverage of both direct and indirect emissions within the instrument. Alstom calls for the enlargement of the scope at the earliest possibility to include downstream sectors such as the rail industry.
In addition, Alstom welcomes the revision of the Energy Taxation Directive to be in line with the EU climate & energy objectives set by the EU Green Deal and the Climate Law. Taking into account the 'polluter pays' principle and the need to internalise environmental costs, Alstom supported the rewriting of the Energy Taxation Directive to adequately promote the reduction of greenhouse gas (GHG) emissions, energy efficiency and the uptake of electricity and alternative fuels such as hydrogen. However, we regret the lack of progress on this file.
Alstom has engaged with public authorities by preparing analyses and position papers and by presenting its views at meetings with relevant stakeholders.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation
With regards to the selection of sectors in the CBAM, Alstom is in favour of the instrument covering both finished and semi-finished products as to avoid negative impacts on downstream industries, while the instrument only covers primary inputs such as steel and aluminium.

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?
N/A

Specify the policy, law, or regulation on which your organization is engaging with policy makers
Alstom has engaged on sustainable finance, particularly in the definition and implementation of the European Taxonomy. The Taxonomy framework sets out uniform criteria for determining whether an economic activity is environmentally sustainable. It further sets out a process involving a platform for Sustainable Finance to establish a unified EU classification system (EU taxonomy) based on a set of specific technical screening criteria. The company considers that Taxonomy will play an important role for driving investments towards transport decarbonisation.

Category of policy, law, or regulation that may impact the climate
Low-carbon products and services

Focus area of policy, law, or regulation that may impact the climate
Other, please specify (Sustainable finance)

Policy, law, or regulation geographic coverage
Regional

Country/area/region the policy, law, or regulation applies to
EU27

Your organization's position on the policy, law, or regulation
Support with minor exceptions

Description of engagement with policy makers
Alstom has participated in working groups of the European institutions to set up a European Taxonomy in order to identify sustainable activities. Alstom provided inputs to the Technical Expert Group (TEG) for the preparation of the EU Taxonomy for Sustainable Activities and contributed to the workshop related to Transport. Alstom has also participated directly and indirectly to exchange with policy makers and institutions on the definition of the criteria and on the methodology proposed to conduct the taxonomy reporting. To this end, Alstom has participated in the drafting of position papers within UNIFE and in coordination with other rail players such as operators (Community of European Railway - CER) and infrastructure managers (European Rail Infrastructure Managers - EIM). Alstom has also had the opportunity to present its positions during meetings organized with representatives from the Member States. In 2022 this activity also covered providing feedback on the first set of criteria and proposing clarifications and improvements for its revision.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation
Alstom has asked the legislator for clarification on the implementation of the Taxonomy eligibility rules.
In particular, Alstom advocated for certain criteria to be consistent with existing sectoral regulations.
Alstom also called for a level playing field across transport modes regarding their respective alignment criteria.

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?
N/A

Specify the policy, law, or regulation on which your organization is engaging with policy makers
Alstom strongly supports the promotion of sustainable and low-carbon transport strategies based on public transport and alternative fuels rather than fossil fuelled and individual transport. At EU level, Alstom promoted the inclusion of rail in the revision of the Alternative Fuels Infrastructure Directive (AFIR).

Category of policy, law, or regulation that may impact the climate
Low-carbon products and services

Focus area of policy, law, or regulation that may impact the climate
Alternative fuels
Other, please specify (Modal shift/transport decarbonization)

Policy, law, or regulation geographic coverage
Regional

Country/area/region the policy, law, or regulation applies to

EU27

Your organization's position on the policy, law, or regulation
Support with no exceptions

Description of engagement with policy makers
Alstom underlined the necessity to set the rail sector on a path to full decarbonisation in line with the EU's target of climate neutrality by 2050. Indeed, while rail transport is the best-in-class land transport mode, the renewal rate of its assets implies that it is quite urgent to move away from fossil fuels if we aim for a full switch by 2050. Therefore, Alstom called for the AFIR to require member states to plan for the deployment of battery and fuel-cell powered trains on their network (or extension of overhead line electrification), replacing diesel-powered trains. Alstom directly engaged with policy makers at the EU level and in several countries and contributed to UNIFE's advocacy activities in that respect.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation
<Not Applicable>

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?
N/A

C12.3b

(C12.3b) Provide details of the trade associations your organization is a member of, or engages with, which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association
Other, please specify (Sustainable Low Carbon Transport Partnership (SLoCaT))

Is your organization's position on climate change policy consistent with theirs?
Consistent

Has your organization attempted to influence their position in the reporting year?
Yes, and they have changed their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position
Alstom is a member of the "Sustainable Low Carbon Transport Partnership" (SLoCaT) initiative that brings together international players committed to sustainable mobility. SLoCaT is the Partnership on Sustainable, Low Carbon Transport (SLoCaT) and promotes the integration of sustainable transport in global policies on sustainable development and climate change. SLoCaT consists of a multi-stakeholder partnership of over 90 organisations, which is supported by the SLoCaT Foundation.
The actions of SLoCaT, promoting sustainable mobility, are consistent with Alstom's ambition to reduce the carbon footprint of transport solutions.

Alstom is an active member of SLoCaT and participates in many of its events including the Transport Day at each COP.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)
2625

Describe the aim of your organization's funding
Alstom uses SLoCaT as a lever for accessing key decision-makers at country level to ensure that the rail option is fully considered when transport plans are being prepared. Alstom supports this as a member and through sponsorship of the PPMC (Paris Process for Mobility and Climate) which was created to raise the visibility of the transport sector at COP 21 in Paris and then to subsequent COPs.

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Trade association
Other, please specify (UNIFE)

Is your organization's position on climate change policy consistent with theirs?
Consistent

Has your organization attempted to influence their position in the reporting year?
Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position
Alstom is a member of the Union of the European Railway Industries (UNIFE) which represents the sector at the European level. UNIFE supports in particular the creation of a single European rail area through the achievement of rail interoperability. It also promotes the role of rail in reaching the EU climate ambition and its contribution to the EU Smart & Sustainable Mobility Strategy. Alstom Chairman and CEO, Henri Poupart-Lafarge, has been Chair of the UNIFE Presiding Board from June 2020 until June 2023.

Alstom is a supportive member of UNIFE and supports the association's position on climate change and carries it forward in discussions with Governments and key transport stakeholders. As a member of the UNIFE "Chemical Risks" group, Alstom has prepared upcoming challenges linked to lead as a candidate substance (REACH), essential use concept and PFAS restriction proposal; Alstom has set up a vigilance plan on high concern substance.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)
339900

Describe the aim of your organization's funding
Alstom participates in the work of UNIFE in order to contribute to the representation of the interests of railway manufacturers at EU level.

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Trade association
Other, please specify (UITP (International Association of Public Transport))

Is your organization's position on climate change policy consistent with theirs?
Consistent

Has your organization attempted to influence their position in the reporting year?
Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position
Alstom is member of the International Association of Public Transport (UITP), the international association of public transport, promoting sustainable urban mobility, which is consistent with Alstom's ambition to reduce carbon footprint of transport solutions.
UITP is a worldwide network with over 1900 members that bring together all public transport stakeholders.

Alstom is a supportive member of UITP and supports the association's position on climate change, its promotion of public transport and its ambition to promote modal shift.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)
78309

Describe the aim of your organization's funding
Alstom participates in UITP activities, including the drafting of position papers. Alstom currently chairs the Vehicle & Equipment Industry Committee and is also vice-chair of the UITP Sustainability Committee and as such participates to UITP events. Finally, Alstom participates as a member of consortia for UITP-led collaborative R&D projects.

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Trade association
Federation of French Industry (MEDEF)

Is your organization's position on climate change policy consistent with theirs?
Consistent

Has your organization attempted to influence their position in the reporting year?
Yes, and they have changed their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position
Alstom is member of MEDEF, which is a network of entrepreneurs in France. MEDEF mission is to promote free enterprise and encourage and enhance entrepreneurship. The MEDEF maintains a dialogue with all the actors of civil society and, with the various decision-makers, works towards achieving a better understanding of the constraints and the strengths of businesses

Alstom is more ambitious than the MEDEF on climate and environmental-related topics. In this sense, the participation of sustainable mobility players such as Alstom helps to moderate the MEDEF's position on key environmental files such as the CBAM and the EU Taxonomy.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)
30000

Describe the aim of your organization's funding
The MEDEF is an important representative of businesses in France. Alstom's contribution in MEDEF allows it to participate in analysis, position setting and thematic events important for the group's activities.

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Trade association
International Chamber of Commerce (ICC)

Is your organization's position on climate change policy consistent with theirs?
Consistent

Has your organization attempted to influence their position in the reporting year?
Yes, and they have changed their position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position
Alstom is member of International Chamber of Commerce (ICC) France. ICC plays a role in scaling widespread action on Sustainable Development Goals and formulating business voluntary rules.

ICC France contributes to the elaboration of ICC positions, defends the positions of companies to public authorities, organizes seminars on topics related to international economic and legal activity, training courses on ICC rules and best practices in contracting and financing international trade and offers services adapted to the needs of companies to help them in their international development and remove obstacles to bilateral and multilateral trade.

Alstom is sometimes more ambitious than other ICC players on climate and environmental-related topics. In this sense, the participation of sustainable mobility players such as Alstom helps to promote key environmental priorities within ICC work. ICC France is an important representative of businesses. Alstom's contribution in ICC allows it to participate in analysis, position setting and thematic events important for the group's activities.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)
9450

Describe the aim of your organization's funding
Alstom's participation to the ICC enables it to participate in analysis, position setting and thematic events important for the group's activities.

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

C12.3c

(C12.3c) Provide details of the funding you provided to other organizations or individuals in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.

Type of organization or individual
Research organization

State the organization or individual to which you provided funding
Alstom is a member of the Shift Project. The Shift Project is a French think tank advocating the shift to a post-carbon economy. As a non-profit organisation committed to serving the general interest through scientific objectivity, the Shift Project is dedicated to informing and influencing the debate on energy transition in Europe.

Funding figure your organization provided to this organization or individual in the reporting year (currency as selected in C0.4)
50000

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate
Alstom contributed to the “Energy Climate Scenarios: Evaluation and Guidance”, the report by The Shift Project with AFEP, from November 2019. This report provides "tools of strategic foresight [which] enable the confrontation of the robustness of an organization’s strategy, with hypotheses on possible futures, some of which being undesirable", regarding the role in public and private organisations’ decisions.

Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

C12.4

(C12.4) Have you published information about your organization’s response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication
In mainstream reports, incorporating the TCFD recommendations

Status
Complete

Attach the document
Alstom_2022_2023_Universal_Registration_Document_URD_EN.pdf

Page/Section reference
We publish information in our Universal Registration Document, chapter 6 (p257-364).

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment
No comment.

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment	Describe your organization’s role within each framework, initiative and/or commitment
Row 1	UN Global Compact Other, please specify (Railsponsible)	UN Global Compact: Since 2008, Alstom adheres to the United Nations Global Compact Initiative, which seeks to encourage companies to commit to a set of values such as human rights, the respect for labour conditions, the protection of the environment, and ethics in business. Alstom is actively involved in this initiative and promotes the ten principles that summarise its key values. As a signatory member of the United Nations Global Compact, Alstom supports the Sustainable Development Goals (SDGs) that aim to end extreme poverty, protect the planet and ensure prosperity for all by 2030. Alstom bases its value system and business approach on the 10 principles of the Global Compact and submits its Communication of Progress (COP) each year. Railsponsible: Since 2015 Alstom has been a founding member of "Railsponsible", which is an industry initiative focused on sustainable procurement, with the aim to continuously improve sustainability practices throughout the railway industry supply chain. This initiative now has 17 members and aims to lead sustainability in the railway industry supply chain through a common approach, field collaboration, and the sharing of best tools, practices and processes. For instance, members of Railsponsible have agreed to use the EcoVadis platform for suppliers’ sustainability assessments. In January 2017, “Railsponsible” joined the Sustainable Public Procurement Programme of the United Nations Environment Programme (UNEP) and its network of private and public players whose actions are part of the global movement dedicated to achieving the Sustainable Development Objectives set by the United Nations. In order to align with a common path forward, the Railsponsible Committee published a position paper on climate change in April 2018. The 2025 strategy of the “Railsponsible” Committee is structured around 3 main objectives: - Climate Action (CO2 efficiency of products/services; Low carbon procurement; Circular economy); - Responsible procurement (Skills development; Business process and transparency; Supplier development); - Social Responsibility (Human rights). Alstom participates to several workshops, such as on supplier CSR audit and on supplier decarbonization methodologies. On 31 March 2023, 2,622 suppliers, representing all rail industry professions, have been evaluated on this common platform EcoVadis as part of the “Railsponsible” initiative.

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	No, and we do not plan to have both within the next two years	<Not Applicable>	<Not Applicable>

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	No, but we plan to do so within the next 2 years	<Not Applicable>	<Not Applicable>

C15.3

(C15.3) Does your organization assess the impacts and dependencies of its value chain on biodiversity?

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment
Yes

Value chain stage(s) covered
Direct operations

Portfolio activity
<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity
Biodiversity indicators for site-based impacts

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)
Alstom's teams have been working this year to start assessing the potential impacts from activities in order to build a relevant biodiversity program for the years to come.
The result of this first assessment highlighted few sites presenting Key Biodiversity Areas within a 10 km radius, meaning areas contributing significantly to the global persistence of biodiversity, based on threatened biodiversity, geographically restricted biodiversity, ecological integrity, biological processes, irreplaceability.
This approach should embrace biodiversity stakes in a wide sense considering potential impacts and positive contribution through sites, projects and products.
In 2022, Alstom started to address it by performing a high-level assessment on 126 sites with the help of a consulting firm specializing in biodiversity. The aim of this assessment was to map both sensitive areas and potential endangered species located in these areas.
Biodiversity indicators used are:
- Number of endangered species
- Number of protected or sensitive areas
A priority analysis was performed based on these KPIs to identified 25 sites for further analysis, to define the sites where preservation and/or regeneration measures should be prioritised. The diagnosis will continue with the analysis of additional sites next year.

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment
No, but we plan to within the next two years

Value chain stage(s) covered
<Not Applicable>

Portfolio activity
<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity
<Not Applicable>

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)
<Not Applicable>

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity- sensitive areas in the reporting year?
Yes

C15.4a

(C15.4a) Provide details of your organization's activities in the reporting year located in or near to biodiversity -sensitive areas.

Classification of biodiversity -sensitive area
Key Biodiversity Area (KBAs)

Country/area
Please select

Name of the biodiversity-sensitive area

Proximity
Up to 10 km

Briefly describe your organization's activities in the reporting year located in or near to the selected area
Industrial sites

Indicate whether any of your organization's activities located in or near to the selected area could negatively affect biodiversity
Not assessed

Mitigation measures implemented within the selected area
<Not Applicable>

Explain how your organization's activities located in or near to the selected area could negatively affect biodiversity, how this was assessed, and describe any mitigation measures implemented
<Not Applicable>

C15.5

(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water management

C15.6

(C15.6) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	State and benefit indicators

C15.7

(C15.7) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In other regulatory filings	Content of biodiversity-related policies or commitments Biodiversity strategy	URD p286-287 Alstom_2022_2023_Universal_Registration_Document_URD_EN.pdf
Other, please specify (Community Action Plan)	Other, please specify (Examples of actions undertook in FY2022/23)	https://www.alstom.com/sites/alstom.com/files/2023/06/07/CCAP_Selection_FY_2022_23.pdf CCAP_Selection_FY_2022_23.pdf

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

N.A

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	VP Sustainability & CSR	Chief Sustainability Officer (CSO)

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

Due to the multiplicity of contracts and their various nature for each customer, Alstom was not able to allocate emissions to customers according to the goods or services sold to them in this reporting period within this year's CDP answer (SC1.1). Nevertheless, Alstom is willing to exchange via email with requesting customers to be able to identify the relevant emissions.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	16507000000

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

Alstom Universal Registration Document

https://www.alstom.com/sites/alstom.com/files/2023/06/06/Alstom_2022_2023_Universal_Registration_Document_URD_EN.pdf

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
Other, please specify (Information from customers)	Alstom is currently accounting the CO2 emissions per each contract depending on the product family. As an example, for rolling stock, the sales of the year are used to estimate the number of units sold and from there, calculate the activity in passenger-km. We use assumptions from our engineering teams to allocate a representative solution to that contract, with data on energy consumption. Information from customer on actual energy consumption will give a better accuracy of this emissions, but this will mean a complex reporting system, requesting sensible information to our customers.
Other, please specify (Information from customers)	Alstom is currently accounting the CO2 emissions per each contract depending on the product family. As an example, for rolling stock, the sales of the year are used to estimate the number of units sold and from there, the quantity of materials used to build the train. We use assumptions from our engineering teams to allocate a representative solution to that contract. Information from supplier on actual CO2 emissions associated to the product that is used for the given train will give a better accuracy of these emissions. Alstom is currently working on a tool and a process to capture more data from suppliers.

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

Yes

SC1.4a

(SC1.4a) Describe how you plan to develop your capabilities.

Alstom is currently working on a digital tool for the CO2 emissions from Sold Products. This will help ease the internal process of calculation and have an added value as more accurate information can be assigned per contract. Alstom will also explore the collaboration with certain customers to capture back data that can help in getting a more accurate CO2 emissions from the sold products.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

Requesting member
Vale SA

Group type of project
New product or service

Type of project
New product or service that reduces customers operational emissions

Emissions targeted
Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized
3-5 years

Estimated lifetime CO2e savings

Estimated payback
3-5 years

Details of proposal
Alstom's locomotive portfolio is the broadest in the industry and covers most electric and hybrid markets worldwide. Our Prima and Traxx locomotives have been proven to pull heavier train loads compared with locomotives of the same class in many applications. For example, Prima shunting locomotives are designed to reduce CO2 and noise emissions. The hybrid (diesel and battery) based Prima H3 has proven to save up to 60% in diesel fuel with its clever energy management. It has also reduced noise by approx. 15 dB, which is highly appreciated in residential neighbourhoods. The Prima H4 locomotives even go a step further in eco-friendliness by offering catenary and diesel, or catenary and battery-based solutions for heavier shunting, track works or short haul operation. This gives substantial reductions in noise and carbon footprint – up to 6,000 tonnes/year at SBB Cargo.

Requesting member
Vale SA

Group type of project
New product or service

Type of project
New product or service that reduces customers products / services operational emissions

Emissions targeted
Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized
1-3 years

Estimated lifetime CO2e savings

Estimated payback
1-3 years

Details of proposal
Alstom's locomotive portfolio is the broadest in the industry and covers most electric and hybrid markets worldwide. Our Prima and Traxx locomotives have been proven to pull heavier train loads compared with locomotives of the same class in many applications. For example, Prima shunting locomotives are designed to reduce CO2 and noise emissions. The hybrid (diesel and battery) based Prima H3 has proven to save up to 60% in diesel fuel with its clever energy management. It has also reduced noise by approx. 15 dB, which is highly appreciated in residential neighbourhoods. The Prima H4 locomotives even go a step further in eco-friendliness by offering catenary and diesel, or catenary and battery-based solutions for heavier shunting, track works or short haul operation. This gives substantial reductions in noise and carbon footprint – up to 6,000 tonnes/year at SBB Cargo.

Requesting member
Vale SA

Group type of project
New product or service

Type of project
New product or service that reduces customers operational emissions

Emissions targeted
Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized
1-3 years

Estimated lifetime CO2e savings

Estimated payback
1-3 years

Details of proposal
Alstom consistently applies a life-cycle approach to its products and services in order to maximise the environmental and economic benefits over time. This approach allows the Company to limit the ecodesign and circular economy risks and to benefit from new opportunities. Alstom's ecodesign approach is based on life-cycle thinking, consideration of customer and stakeholder expectations, and continuous improvement.
The priorities set in Alstom's ecodesign policy focus on the: energy efficiency of rail transport systems; use of greener, recyclable, and natural materials; reduction of noise and vibrations;reduction of air emissions; circular economy and end of life management. For ElectroLogIXS, an ecodesign approach is currently undergoing to reduce the quantity of material on this solution. The explored option is to reduce/remove an interface panel and cabling from one of the assemblies and the other has a goal to reduce the power needed for track circuit communication. This is currently under investigation by engineering teams.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?
No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?
Yes, I will provide data

SC4.1a

(SC4.1a) Give the overall percentage of total emissions, for all Scopes, that are covered by these products.
0

SC4.2a

(SC4.2a) Complete the following table for the goods/services for which you want to provide data.

Name of good/ service
Metro electrification system 1,5KV - rigid catenary

Description of good/ service
This electrification solution encompasses all the Equipment and materials required to feed metro trains from the connection to the local electricity supplier.
Type of transport: Metro
Type of current: 1500 V DC, 50 Hz
Total length of double passengers' line: 16 km
100% tunnel monotube
Total length of single track 40 km: line & depot
Quantity of passengers' stations: 12
Design speed: 80km/h
Lifetime: 20 years

Type of product
Final

SKU (Stock Keeping Unit)
187

Total emissions in kg CO2e per unit

±% change from previous figure supplied

Date of previous figure supplied

Explanation of change

Methods used to estimate lifecycle emissions
Please select

Name of good/ service
Coradia Polyvalent

Description of good/ service
The Coradia Polyvalent range is the new solution from Alstom fully compliant to TSI (Technical Specification for Interoperability) for the peri-urban, regional and mainline train market. This new generation of trains is modular and accessible. Alstom developed the Coradia Polyvalent "around" the passenger, while trying to take account of all profiles: improved access thanks to a low floor (corridor without steps), efficient information systems, and generous space for luggage, etc.
The models in the Coradia Polyvalent range are designed to suit peri-urban, regional, intercity and cross-border lines, both in France and abroad. They represent a solution capable of travelling at a maximum speed of 200 km/h to meet the needs of mainlines.

Type of product
Final

SKU (Stock Keeping Unit)
1736

Total emissions in kg CO2e per unit

±% change from previous figure supplied

Date of previous figure supplied

Explanation of change

Methods used to estimate lifecycle emissions
Please select

Name of good/ service

Mainline track Concrete track NBT

Description of good/ service
NBT is composed of two superimposed concrete slabs (a foundation layer and a steel-reinforced track slab) tied together via a shear key on top of the foundation slab, with transversal joints for concrete crack control.

Type of product
Final

SKU (Stock Keeping Unit)
0

Total emissions in kg CO2e per unit

±% change from previous figure supplied

Date of previous figure supplied

Explanation of change

Methods used to estimate lifecycle emissions
Please select

Name of good/ service
DT5 vehicle

Description of good/ service
The DT5 vehicle concept of the consortium of ALSTOM Transport Deutschland GmbH and Bombardier Transportation is based on the development of the DT4 vehicles. The DT5 is of a consistent lightweight design and allows energy recovery from braking, with the energy consumption being reduced ubstantially. In addition, the metro vehicle is characterized by a large number of recyclable materials and waives an exterior paint.
Due to its wide entrance, a minimized entry step as well as stepless passages between the car units and the resulting redundant entry and exit possibilities, the DT5 allows barrier-free travelling. Gangways between the cars improve the distribution of passengers throughout the whole vehicle. The air-conditioned passenger room, ergonomically designed seats as well as an extended information system using passenger creens provide a comfortable feeling of riding.

Type of product
Final

SKU (Stock Keeping Unit)
289

Total emissions in kg CO2e per unit

±% change from previous figure supplied

Date of previous figure supplied

Explanation of change

Methods used to estimate lifecycle emissions
Please select

Name of good/ service
Prima II

Description of good/ service
This new generation of Prima electric freight locomotives is designed for cross-border itineraries in Europe and to give freight train operators and their customers the performance, flexibility and reliability they expect. Prima locomotives are also designed to give drivers the most modern comfort, innovative technology as well as an environmentally friendly use of resources.
The Prima development took into account the major environmental impacts. The vehicle is of a consistent lightweight design and allows energy recovery from braking, with the Energy consumption being reduced substantially. Due to a large number of recyclable materials, the Prima meets the highest environmental requirements.

Type of product
Final

SKU (Stock Keeping Unit)
266

Total emissions in kg CO2e per unit

±% change from previous figure supplied

Date of previous figure supplied

Explanation of change

Methods used to estimate lifecycle emissions
Please select

Name of good/ service
Azur

Description of good/ service
The AZUR train sets a high standard for environmentally sustainable rail transportation.

Type of product
Final

SKU (Stock Keeping Unit)
69

Total emissions in kg CO2e per unit

±% change from previous figure supplied

Date of previous figure supplied

Explanation of change

Methods used to estimate lifecycle emissions
Please select

SC4.2b

(SC4.2b) Complete the following table with data for lifecycle stages of your goods and/or services.

Name of good/ service
Mainline track Concrete track NBT

Please select the scope
Scope 3

Please select the lifecycle stage
Other, please specify (Upstream)

Emissions at the lifecycle stage in kg CO2e per unit
2020000

Is this stage under your ownership or control?
No

Type of data used
Secondary

Data quality
Data is provided directly by the Environmental Product Declaration.

If you are verifying/assuring this product emission data, please tell us how
-

Name of good/ service
Mainline track Concrete track NBT

Please select the scope
Scope 1, 2 & 3

Please select the lifecycle stage
Other, please specify (Core)

Emissions at the lifecycle stage in kg CO2e per unit
448000

Is this stage under your ownership or control?
Yes

Type of data used
Secondary

Data quality
Data is directly provided by the Environmental Product Declaration.

If you are verifying/assuring this product emission data, please tell us how
-

Name of good/ service
Mainline track Concrete track NBT

Please select the scope
Scope 3

Please select the lifecycle stage
Other, please specify (Downstream)

Emissions at the lifecycle stage in kg CO2e per unit
2180000

Is this stage under your ownership or control?
No

Type of data used
Secondary

Data quality
Data is directly provided by the Environmental Product Declaration.

If you are verifying/assuring this product emission data, please tell us how
-

Name of good/ service
Metro electrification system 1,5KV - rigid catenary

Please select the scope
Scope 3

Please select the lifecycle stage
Other, please specify (Upstream)

Emissions at the lifecycle stage in kg CO2e per unit
301000

Is this stage under your ownership or control?
No

Type of data used
Secondary

Data quality
Data is directly provided by the Environmental Product Declaration.

If you are verifying/assuring this product emission data, please tell us how
-

Name of good/ service
Metro electrification system 1,5KV - rigid catenary

Please select the scope
Scope 1, 2 & 3

Please select the lifecycle stage
Other, please specify (Core)

Emissions at the lifecycle stage in kg CO2e per unit
19900

Is this stage under your ownership or control?
Yes

Type of data used
Secondary

Data quality
Data is directly provided by the Environmental Product Declaration.

If you are verifying/assuring this product emission data, please tell us how
-

Name of good/ service
Metro electrification system 1,5KV - rigid catenary

Please select the scope
Scope 3

Please select the lifecycle stage
Other, please specify (Downstream)

Emissions at the lifecycle stage in kg CO2e per unit
10000000

Is this stage under your ownership or control?
No

Type of data used
Secondary

Data quality
Data is directly provided by the Environmental Product Declaration.

If you are verifying/assuring this product emission data, please tell us how
-

Name of good/ service
Coradia Polyvalent

Please select the scope
Scope 3

Please select the lifecycle stage
Other, please specify (Upstream)

Emissions at the lifecycle stage in kg CO2e per unit
192390

Is this stage under your ownership or control?
No

Type of data used
Secondary

Data quality
Data is directly provided by the Environmental Product Declaration.

If you are verifying/assuring this product emission data, please tell us how
-

Name of good/ service
Coradia Polyvalent

Please select the scope
Scope 1, 2 & 3

Please select the lifecycle stage
Other, please specify (Core)

Emissions at the lifecycle stage in kg CO2e per unit
6922080

Is this stage under your ownership or control?
Yes

Type of data used
Secondary

Data quality
Data is directly provided by the Environmental Product Declaration.

If you are verifying/assuring this product emission data, please tell us how
-

Name of good/ service
Coradia Polyvalent

Please select the scope
Scope 3

Please select the lifecycle stage
Other, please specify (Downstream)

Emissions at the lifecycle stage in kg CO2e per unit
1663

Is this stage under your ownership or control?
No

Type of data used
Secondary

Data quality
Data is directly provided by the Environmental Product Declaration.

If you are verifying/assuring this product emission data, please tell us how
-

Name of good/ service
DT5

Please select the scope
Scope 3

Please select the lifecycle stage
Other, please specify (Upstream)

Emissions at the lifecycle stage in kg CO2e per unit
5137600

Is this stage under your ownership or control?
No

Type of data used
Secondary

Data quality
Data is directly provided by the Environmental Product Declaration.

If you are verifying/assuring this product emission data, please tell us how
-

Name of good/ service
DT5

Please select the scope
Scope 1, 2 & 3

Please select the lifecycle stage
Other, please specify (Core)

Emissions at the lifecycle stage in kg CO2e per unit
177072480

Is this stage under your ownership or control?
Yes

Type of data used
Secondary

Data quality
Data is directly provided by the Environmental Product Declaration.

If you are verifying/assuring this product emission data, please tell us how
-

Name of good/ service
DT5

Please select the scope
Scope 3

Please select the lifecycle stage
Other, please specify (Downstream)

Emissions at the lifecycle stage in kg CO2e per unit
118352

Is this stage under your ownership or control?
No

Type of data used
Secondary

Data quality
Data is directly provided by the Environmental Product Declaration.

If you are verifying/assuring this product emission data, please tell us how
-

Name of good/ service
Prima II

Please select the scope
Scope 3

Please select the lifecycle stage
Other, please specify (Upstream)

Emissions at the lifecycle stage in kg CO2e per unit
8712000

Is this stage under your ownership or control?
No

Type of data used
Secondary

Data quality
Data is directly provided by the Environmental Product Declaration.

If you are verifying/assuring this product emission data, please tell us how
-

Name of good/ service
Prima II

Please select the scope
Scope 1, 2 & 3

Please select the lifecycle stage
Other, please specify (Core)

Emissions at the lifecycle stage in kg CO2e per unit
355296600

Is this stage under your ownership or control?
Yes

Type of data used
Secondary

Data quality
Data is directly provided by the Environmental Product Declaration.

If you are verifying/assuring this product emission data, please tell us how
-

Name of good/ service
Prima II

Please select the scope
Scope 3

Please select the lifecycle stage
Other, please specify (Downstream)

Emissions at the lifecycle stage in kg CO2e per unit
505800

Is this stage under your ownership or control?
No

Type of data used
Please select

Data quality
Data is directly provided by the Environmental Product Declaration.

If you are verifying/assuring this product emission data, please tell us how
-

Name of good/ service
Azur

Please select the scope
Scope 3

Please select the lifecycle stage
Other, please specify (Upstream)

Emissions at the lifecycle stage in kg CO2e per unit
180499

Is this stage under your ownership or control?
No

Type of data used
Secondary

Data quality
Data is directly provided by the Environmental Product Declaration.

If you are verifying/assuring this product emission data, please tell us how
-

Name of good/ service
Azur

Please select the scope
Scope 1, 2 & 3

Please select the lifecycle stage
Other, please specify (Core)

Emissions at the lifecycle stage in kg CO2e per unit
823660

Is this stage under your ownership or control?
Yes

Type of data used
Secondary

Data quality
Data is directly provided by the Environmental Product Declaration.

If you are verifying/assuring this product emission data, please tell us how
-

Name of good/ service
Azur

Please select the scope
Scope 3

Please select the lifecycle stage
Other, please specify (Downstream)

Emissions at the lifecycle stage in kg CO2e per unit
8600

Is this stage under your ownership or control?
No

Type of data used
Secondary

Data quality
Data is directly provided by the Environmental Product Declaration.

If you are verifying/assuring this product emission data, please tell us how
-

SC4.2c

(SC4.2c) Please detail emissions reduction initiatives completed or planned for this product.

Name of good/ service	Initiative ID	Description of initiative	Completed or planned	Emission reductions in kg CO2e per unit

SC4.2d

(SC4.2d) Have any of the initiatives described in SC4.2c been driven by requesting CDP Supply Chain members?

No

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms