PACCAR Inc

2024 TCFD - CDP Climate Annual Report

TCFD Topics	Climate Transition Action Plan Elements	CDP Climate Sections
Governance	Board level oversight: PACCAR's Nominating and Governance Committee Charter states that the committee has responsibility for environmental, social, and governance matters	C1.1, C1.1a, C1.1b
	Board expertise on climate related issues	C1.1d
	Senior management accountability & feedback mechanism	C1.2
	Executive remuneration linked to climate KPI's	C1.3, C1.3a
Strategy	1.5°C world aligned transition plan within business strategy & shareholder feedback	C3.1
	Link between climate related risks, opportunities, & strategy.	C3.3
	Details of scenario analysis	C3.2, C3.2a, C3.2b
	Financial planning details associated with climate transition	C3.4, C3.5, C3.5a
	Low carbon product & services	C4.5, C4.5a
	Low carbon initiatives – direct operations	C4.3b
	Value chain engagement – suppliers and customers	C12.1, C12.2
	Alignment of public policy engagement with climate strategy	C12.3,C12.3a to b
Risk Mgmt.	Process for identifying and managing climate related risks and opportunities	C2.1, C2.2
	Climate related risks, potential financial impact, and response strategy	C2.3, C2.3a
	Climate related opportunities, potential financial impact, and response strategy	C2.4, C2.4a
Metrics & Targets	Approved science-based targets. Scope 1 and 2 emissions by 35% (tonnes) and Scope 3 emissions by 25% (gC02e/vkm) by 2030 from a base year of 2018	C4.1, C4.1a, C4.1b
	Other climate related targets	C4.2a
	Pathway to zero emissions	C-TO9.6a/C-TS9.6a
	GHG Protocol annual Scope 1, 2, and 3 GHG inventory with third-party verified emission accounting	C5, C6, C7, C10.1a,b,c
Notes	SBTi continues its pause on target validations & updates for medium- and heavy-truck makers recognizing there is no sectoral decarbonization approach (SDA) for transport sector allowing companies to align their use-phase emissions targets of new road vehicles with 1.5°C pathways. PACCAR's well-below 2°C trajectory verified science-based targets are granted extensions until a viable SDA for transport is developed and approved for medium- and heavy-duty trucks. https://sciencebasedtargets.org/sectors/transport#our-updated-oems-policy	Science Based Target Initiative OEM's Policy

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PACCAR Inc - Climate Change 2023

C0. Introduction

C0.1

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

PACCAR is a global technology leader in the design, manufacture and customer support of high-quality light-, medium- and heavy-duty trucks under the Kenworth, Peterbilt and DAF nameplates. PACCAR also designs and manufactures advanced powertrains, provides financial services and information technology, and distributes truck parts related to its principal business.

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
January 1 2022

End date
December 31 2022

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.
Australia
Belgium
Brazil
Canada
Mexico
Netherlands
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.
USD

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?
Heavy Duty Vehicles (HDV)

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, a Ticker symbol	PCAR

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
Chief Executive Officer (CEO)	PACCAR's Chief Executive Officer (CEO), who is a member of the Board of Directors, has responsibility for climate-related issues. The CEO made a climate-related decision in 2022 to spend nearly 70% of PACCAR's $341.2 million of R&D, on climate-related vehicle research and development to reduce product-use greenhouse gas emissions. This is because climate strategy, planning and responses are integrated into PACCAR's operations, planning, and capital budgeting processes, which are the responsibility of the CEO. The senior executives in charge of division operations, planning, strategy, and innovation report directly to the CEO on a weekly basis. For example, significant progress with advanced vehicle technology, including hybrid vehicles, low carbon fueled and electric vehicles is reported to the CEO on a weekly basis by PACCAR's Chief Technology Officer (CTO). The CTO's focus is on electrification and connected vehicles, hybrid vehicles, low carbon fuels and fuel cell technology for commercial freight applications. Between the CEO, CTO and other senior executives, presentation on the progress and strategies for advanced vehicles were provided to the Board of Directors at each Board Meeting.

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 – all meetings	Overseeing major capital expenditures Reviewing and guiding strategy Overseeing value chain engagement Reviewing and guiding the risk management process Other, please specify (Reviewing and guiding major plans of action; Reviewing and guiding business plans)	<Not Applicable>	Advanced vehicle technology such as hybrids, alternative low carbon fuels and electric vehicles is an agenda topic at each Board meeting, including climate-related issues. In this way, the Board of Directors provides guidance and oversight to PACCAR's overall climate change strategy related to advanced vehicle technology and low carbon transition planning.
Other, please specify (Every other year)	Overseeing and guiding employee incentives Overseeing and guiding the development of a transition plan Monitoring the implementation of a transition plan Monitoring progress towards corporate targets	<Not Applicable>	Product use related greenhouse gas emissions regulations and goals are discussed every two years during Board level business strategy reviews and at other times, as appropriate. In this way, the Board of Directors monitors and oversees progress toward greenhouse gas emissions reduction targets for product use.
Sporadic - as important matters arise	Overseeing and guiding employee incentives Monitoring the implementation of a transition plan Overseeing and guiding scenario analysis Overseeing the setting of corporate targets Monitoring progress towards corporate targets	<Not Applicable>	Board level presentation of facility related greenhouse gas emissions and goals is scheduled as needed. In this way, the Board of Directors monitors and oversees progress toward greenhouse gas emissions reduction targets for facilities.

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	Climate-related competency is a combination of individual board members experience and capabilities combined with the governance and oversight systems and processes the board has in place. Climate-related competent board members understand the sense of urgency around climate change; the justification to transition to lower GHG emissions in the timeline laid out in by the Science-Based Target Initiative (SBTi); has relevant experience in climate related risks and opportunities facing PACCAR.	<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 Technology Officer (CTO)

Climate-related responsibilities of this position
Managing major capital and/or operational expenditures related to low-carbon products or services (including R&D)
Developing a climate transition plan
Implementing a climate transition plan
Integrating climate-related issues into the strategy
Conducting climate-related scenario analysis
Monitoring progress against climate-related corporate targets
Managing value chain engagement on climate-related issues
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
More frequently than quarterly

Please explain
PACCAR's CEO, who is a member of the Board of Directors, has responsibility for climate-related issues in climate strategy, planning, operations, and capital budgeting processes.

PACCAR's Chief Technology Officer reports directly to the CEO.

Responsibility for strategic climate related issues has been assigned to the CTO because this role is also responsible for PACCAR's global information technology, innovation and technical centers in Silicon Valley and Washington State, and PACCAR's Engine and Powertrain groups and for PACCAR's advancement in electrification and connected vehicles, hybrid vehicles, low carbon fuels and fuel cell technology for commercial freight applications.

The CTO monitors strategic climate-related issues through regulatory liaison work and collaboration with both existing suppliers and new advanced vehicle technology developers.

This makes the CTO uniquely qualified to lead PACCAR's climate-related program for next generation products including strategy and planning for low carbon transitioning, scenario analysis and product-use greenhouse gas emissions goals.

The CTO reports progress and strategies for advanced vehicles to the Board of Directors at some Board meetings including climate-related issues.

In addition, the CTO provides progress reports on advanced technology vehicles such as hybrids, alternative low carbon fueled and electric vehicles, and other climate-related issues to the CEO, who is a member of the Board of Directors, on a weekly basis.

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	none

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 Executive Officer (CEO)

Type of incentive
Monetary reward

Incentive(s)
Bonus - % of salary

Performance indicator(s)
Reduction in absolute emissions
Reduction in emissions intensity
Energy efficiency improvement
Increased share of revenue from low-carbon products or services in product or service portfolio

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

Further details of incentive(s)
PACCAR's executive bonuses are based on the attainment of goals, which can include the reduction of facility and/or product use greenhouse gas emissions.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan
The CEO's 2022 incentives included goals on strategic plans for the development and production of vehicle electrification and fuel cell hybridization, including zero-emissions vehicle strategies.

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	none
Medium-term	4	10	none
Long-term	11	30	none

C2.1b

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

For the purposes of evaluating PACCAR's climate risks and opportunities for this CDP report, "substantive" financial or strategic impacts on PACCAR's business can depend on many factors when identifying and assessing climate-related risks impacting upstream in the supply chain, directly in the business operations or downstream ability to timely identify or respond to changing demand for products and services.

In the context of climate-related factors and this CDP response, a quantitative guideline for a substantive impact can be described as a measurable financial change over 5% percentage points of PACCAR's annual net income. Risks and opportunities deemed substantive for the purposes of this CDP report may not be considered substantive or material for Securities and Exchange Commission (SEC) reporting purposes.

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
Description of the PACCAR process used to determine which risks and/or opportunities could have a substantive financial or strategic impact includes the assessments conducted with representatives of the divisions and all functions of the Company as part of Executive Operating Committee duties. The process is conducted twice a year with monitoring of risk response measures twice a year as well, and reporting to the Board of Directors.

[Time Horizon, Frequency] PACCAR's risk management process assesses risk multiple times a year – monthly, quarterly, annually continuously identifying, assessing, and responding to potential impacts. Direct operations, upstream, and downstream climate-related risk management is integrated companywide into PACCAR's multi-disciplinary management process. Risk and opportunities are assessed for short-, medium- and long- term time horizons.

[Identification]
Risks and opportunities are identified on site, product, division and global basis by an integrated and multi-disciplinary management team and process culminating in semi-annual review meeting. Bottom-up and top-down processes are both used to identify climate-related risks and opportunities.

[Assessment]
Potential direct operations related impacts are identified and assessed on a global basis by experienced internal management at semi-annual meetings, by senior executives in charge of division operations, and through external engagement in trade associations and direct agency collaborations.

Upstream supply chain and regulatory risks are identified and evaluated relative to annual financial reporting of material risks in PACCAR's Form 10-K, including both climate-related physical and transitional risks. Climate related extreme weather events can cause power outages, floods, landslides, and damage facility and transportation infrastructure such as buildings, roads, bridges, and rail tracks.

For downstream assessments, short-, medium-, long-term considerations are made when responding to identified risks and opportunities from increasing regulations, changing customer preferences, new disruptive technology, and public policy support for low carbon transportation infrastructure such as vehicle electrification and low carbon fuels. The identification and assessment require external stakeholder engagement including frequent collaborations with partners, suppliers, government agencies and customers.

[Response]
After potential impacts are identified and assessed, they are reported to PACCAR's Board of Directors. In this way, appropriate strategic decisions can be made on timely responses as climate strategy, planning and responses are integrated into PACCAR's operations, planning, and capital budgeting processes, which are the responsibility of the CEO and senior executives in charge of division operations, planning, strategy, and innovation.

An example of identification and assessment of potential material impacts is reported in PACCAR's 2022 Form 10-K which discloses that operations are subject to environmental laws and regulations that impose significant compliance costs.

Direct operations, upstream and downstream, PACCAR must identify and comply with global regulatory and policy developments, engage in advanced vehicle design trends, invest in the development of commercially viable products and operations, and optimize supplier readiness related to the future of commercial vehicles. The Company invested $7.3 billion in world-class facilities, next generation products and state of the art technologies during the past decade. In 2022, PACCAR made strategic decisions on factory upgrades and product development by allocating nearly 70% of $341.2 million in R&D funding towards climate-related research and development and $505 million on capital projects

PACCAR's research and development efforts include several demonstration and development projects for Kenworth, Peterbilt and DAF vehicles, including battery-electric, hydrogen fuel cell, hydrogen combustion and hybrid technologies. In 2022, Kenworth, Peterbilt and DAF delivered battery-electric trucks to customers and have nine zero emissions vehicle models in production with a backlog of hundreds of customer orders.

PACCAR is launching its SuperTruck 3 program to continue the development of its Class 8 Kenworth and Peterbilt battery-electric and fuel cell vehicles, along with its vehicle charging stations. PACCAR received a $33 million matching grant from the U.S. Department of Energy for the initiative to develop state-of-the-art zero emissions medium- and heavy-duty trucks.

In the past 5 years, the only significant example of upstream supply chain disruption, besides COVID, was from extreme weather event in 2018 when Hurricane Florence disrupted deliveries of truck parts from several of PACCAR's suppliers, primarily in the south eastern region of the United States, for an extended period due to flooding-related shutdowns. PACCAR's quick operational response and supplier engagement related to Hurricane Florence related supply chain disruption normalized the situation within four months of the weather event. Following Hurricane Florence, the allocation of capital spending on supply chain development and resiliency was enacted.

C2.2a

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

	Relevance & inclusion	Please explain

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Regulatory requirements are a strategic risk for PACCAR and are always evaluated because compliance with applicable regulations for manufacturing and use of commercial vehicles must be achieved to increase market share and revenues, as well to avoid fines. Regulatory risks are identified and assessed on a global basis by experienced internal management at semi-annual meetings, and through external stakeholder engagement including frequent collaborations with partners, suppliers, government agencies and customers to identify risks from increasing regulations, changing customer preferences, new disruptive technology, and public policy support for low carbon transportation infrastructure such as vehicle electrification and low carbon fuels. Product or transition related risks, including regulations, are identified and evaluated globally and reported to the Board of Directors quarterly. Evaluation of regulatory risks includes determination of the magnitude of the financial risk. The significance of the financial impact of identified risks, including climate-related risk, is based on the likelihood of occurrence and potential financial impacts. The financial impact of climate-related risk is based on key assessment aspects including the proportion of business units affected, the size of the impact on those business units and the potential shareholder or customer concern. A substantive financial impact could occur due to a large change in one of these key aspects or a small change in all three aspects. For example, product level regulation by EPA of greenhouse gas emissions from PACCAR's nameplate Kenworth and Peterbilt heavy-duty vehicles (see Federal Register Vol 76 No 179) sold in the U.S. is of strategic importance to PACCAR in the development of vehicles and in providing customers with operationally efficient and compliant trucks.
Emerging regulation	Relevant, always included	Emerging regulatory requirements are a strategic risk for PACCAR and are always evaluated because compliance with all applicable regulations for manufacturing and use of commercial vehicles must be achieved to retain market share as well to avoid fines. Regulatory risks are identified and assessed on a global basis by experienced internal management at semi-annual meetings, and through external stakeholder engagement including frequent collaborations with partners, suppliers, government agencies and customers to identify risks from increasing regulations, changing customer preferences, new disruptive technology, and public policy support for low carbon transportation infrastructure such as vehicle electrification and low carbon fuels. Product or transition related risks including emerging regulations are identified and evaluated globally and reported to the Board of Directors quarterly. Evaluation of regulatory risks includes determination of the magnitude of the financial risk. The significance of the financial impact of identified risks, including climate-related risk, is based on the likelihood of occurrence and potential financial impacts. The financial impact of climate-related risk is based on key assessment aspects including the proportion of business units affected, the size of the impact on those business units and the potential shareholder or customer concern. A substantive financial impact could occur due to a large change in one of these key aspects or a small change in all three aspects. PACCAR participates in industry groups and collaborates directly with government agencies to identify and provide support in the drafting of regulations related to road freight and manufacturing operations. For example, two of PACCAR's nameplates, Kenworth and Peterbilt, collaborated with the Port of Long Beach California, Transpower and the California Air Resources Control Board to develop all electric models to meet potential new requirements for zero emissions port logistics.
Technology	Relevant, always included	The strategic technology risk for PACCAR is not providing our customers with the highest quality, most advanced, and lowest operating cost vehicles in the market and thereby reducing market share and revenues. Technology risks are identified and assessed on a global basis by experienced internal management at semi-annual meetings, and through external stakeholder engagement including frequent collaborations with partners, suppliers, government agencies and customers to identify risks from increasing regulations, changing customer preferences, new disruptive technology, and public policy support for low carbon transportation infrastructure such as vehicle electrification and low carbon fuels. Product or transition related risks including new technology are identified and evaluated globally and reported to the Board of Directors quarterly. Evaluation of technology risks includes determination of the magnitude of the financial risk. The significance of the financial impact of identified risks, including climate-related risk, is based on the likelihood of occurrence and potential financial impacts. The financial impact of climate-related risk is based on key assessment aspects including the proportion of business units affected, the size of the impact on those business units and the potential shareholder or customer concern. A substantive financial impact could occur due to a large change in one of these key aspects or a small change in all three aspects. For example, PACCAR's goal is to provide our customers with the most technologically advanced vehicles, such as PACCAR's nameplate DAF's new XF, XG and XG+ conventional trucks improve fuel efficiency by up to 10 percent and the new Kenworth T680 and Peterbilt 579 models deliver up to a seven percent fuel efficiency improvement and reduced CO2 emissions.
Legal	Relevant, always included	PACCAR's core values include legal compliance in all aspects of the business. Legal risks are identified and assessed on a global basis by experienced internal management at semi-annual meetings, and through external stakeholder engagement including frequent collaborations with partners, suppliers, government agencies and customers to identify risks from increasing laws and regulations, changing customer preferences, new disruptive technology, and public policy support for low carbon transportation infrastructure such as vehicle electrification and low carbon fuels. Product or transition related risks including legal compliance are identified and evaluated globally and reported to the Board of Directors quarterly. Evaluation of legal risks includes determination of the magnitude of the financial risk. The significance of the financial impact of identified risks, including climate-related risk, is based on the likelihood of occurrence and potential financial impacts. The financial impact of climate-related risk is based on key assessment aspects including the proportion of business units affected, the size of the impact on those business units and the potential shareholder or customer concern. A substantive financial impact could occur due to a large change in one of these key aspects or a small change in all three aspects. Legal compliance is a part of strategic planning related to advanced vehicle technology and facility operations. For example, the risk of legal non-compliance and litigation with product related regulations from EPA of greenhouse gas emissions from PACCAR's nameplate Kenworth and Peterbilt heavy-duty vehicles (see Federal Register Vol 76 No 179) sold in the U.S. is of strategic importance to PACCAR in the development of vehicles and in providing customers with operationally efficient and compliant trucks. In addition, facility compliance with applicable emissions laws and regulations including greenhouse gas emissions trading and taxation is both a cost of doing business and an opportunity to reduce costs.
Market	Relevant, always included	The strategic market risk for PACCAR is not meeting customer expectations for product quality, advanced vehicle technology, operational efficiency, and lower environmental impact, and thereby reducing market share and revenues. Market risks are identified and assessed on a global basis by experienced internal management at semi-annual meetings, and through external stakeholder engagement including frequent collaborations with partners, suppliers, government agencies and customers to identify risks from increasing regulations, changing customer preferences, new disruptive technology, and public policy support for low carbon transportation infrastructure such as vehicle electrification and low carbon fuels. Product or transition related market risks are identified and evaluated globally and reported to the Board of Directors quarterly. Evaluation of market risks includes determination of the magnitude of the financial risk. The significance of the financial impact of identified risks, including climate-related risk, is based on the likelihood of occurrence and potential financial impacts. The financial impact of climate-related risk is based on key assessment aspects including the proportion of business units affected, the size of the impact on those business units and the potential shareholder or customer concern. A substantive financial impact could occur due to a large change in one of these key aspects or a small change in all three aspects. PACCAR's goal is to increase market share by providing customers with industry leading trucks with reduced operating costs and lower environmental impacts including emissions, such as PACCAR's nameplate DAF's new XF, XG and XG+ conventional trucks improve fuel efficiency by up to 10 percent and the new Kenworth T680 and Peterbilt 579 models deliver up to a seven percent fuel efficiency improvement and reduced CO2 emissions.

	Relevance & inclusion	Please explain
Reputation	Relevant, always included	The strategic reputational risk for PACCAR is not maintaining a reputation for product quality, advanced vehicle technology, operational efficiency, and low environmental impact, and thereby reducing market share and revenues. Reputational risks are identified and assessed on a global basis by experienced internal management at semi-annual meetings, and through external stakeholder engagement including frequent collaborations with partners, suppliers, government agencies and customers to identify risks from stakeholder opinion of PACCAR's reputation, increasing regulations, changing customer preferences, new disruptive technology and public policy support for low carbon transportation infrastructure such as vehicle electrification and low carbon fuels. Product or transition related reputational risks are identified and evaluated globally and reported to the Board of Directors quarterly. Evaluation of reputational risks includes determination of the magnitude of the financial risk. The significance of the financial impact of identified risks, including climate-related risk, is based on the likelihood of occurrence and potential financial impacts. The financial impact of climate-related risk is based on key assessment aspects including the proportion of business units affected, the size of the impact on those business units and the potential shareholder or customer concern. A substantive financial impact could occur due to a large change in one of these key aspects or a small change in all three aspects. For example, PACCAR's reputation for quality, advanced vehicles with lower operating costs and lower environmental impacts were enhanced with the introduction of PACCAR's nameplate DAF new CF and XF models with highly efficient transmissions and rear axles. Along with a new compact after-treatment system, sophisticated software and aerodynamic optimization, the new DAF new XF, XG and XG+ conventional trucks improve fuel efficiency by up to 10 percent and the new Kenworth T680 and Peterbilt 579 models deliver up to a seven percent fuel efficiency improvement and reduced CO2 emissions.
Acute physical	Relevant, always included	Extreme weather events can cause power outages, floods, landslides, and damage facility and transportation infrastructure such as buildings, roads, bridges, and rail tracks. The risk is that power outages, facility, and infrastructure damage from extreme weather events such as hurricanes and flooding can immediately disrupt PACCAR's operations, as well as PACCAR's suppliers and customers. Weather and infrastructure related risks including acute physical risks, such as hurricanes, are identified and assessed on a global basis through PACCAR's business continuity evaluation and planning process. In addition, third party reviews of physical risks to PACCAR facilities are also performed periodically. Evaluation of acute physical risks includes determination of the magnitude of the financial risk. The significance of the financial impact of identified risks, including climate-related risk is based on the likelihood of occurrence and potential financial impacts. The financial impact of climate-related risk is based on key assessment aspects including the proportion of business units affected, the size of the impact on those business units and the potential shareholder or customer concern. A substantive financial impact could occur due to a large change in one of these key aspects or a small change in all three aspects. The most significant weather-related event was the severe winter storm, freezing temperatures and rolling blackouts that impacted the state of Texas in 2021. PACCAR's manufacturing facility in Denton, Texas experienced a multi-day production shutdown and suffered physical damage. The costs of lost production and repairs were approximately $10 million, most of which were covered by insurance. The Company has not experienced any material physical effects of climate change on its operations and results during the periods covered by the 2022 SEC Form 10-K.
Chronic physical	Relevant, sometimes included	Weather and infrastructure related risks including chronic physical risks are identified and assessed on a global basis through PACCAR's business continuity evaluation and planning process. Also, third party reviews of physical risks to PACCAR facilities are performed periodically. Evaluation of chronic physical risks includes determination of the magnitude of the financial risk. The significance of the financial impact of identified risks, including climate-related risk, is based on the likelihood of occurrence and potential financial impacts. The financial impact of climate-related risk is based on key assessment aspects including the proportion of business units affected, the size of the impact on those business units and the potential shareholder or customer concern. A substantive financial impact could occur due to a large change in one of these key aspects or a small change in all three aspects. For example, one of PACCAR's chronic physical risks includes a potential rise in sea levels over the next century, which could disrupt operations of our largest manufacturing plant located in the Netherlands. Fifty percent of the Netherlands is less than one meter above sea level and 17% is below sea level, and as a result will be a region at risk of climate related flooding and storm surges. Eindhoven, The Netherlands, the location of DAF is approximately 17 meters above sea level. The Company has not experienced any material chronic physical effects of climate change on its operations and results during the periods covered by the 2022 SEC Form 10-K.

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

The Company evaluates climate-related risks and opportunities by tracking global regulation of greenhouse gas emissions, shifting customer preferences and expectations, and technological advances in truck design and logistics. It collaborates with suppliers, customers, and third parties with knowledge of emerging trends related to road freight.

The risk to PACCAR is changing customer preferences leading to lower sales if Kenworth, Peterbilt and DAF commercial vehicles are not meeting changing customer expectations for vehicles and engines with improved fuel economy and reduced greenhouse gas emissions. PACCAR's product planning is focused on customer preferences and consistent with climate change scenarios. An IEA "Future of Trucks" climate scenario prediction indicates that by 2060 diesel trucks will comprise 14% of

sales, hybrid vehicles will be 21% of sales, CNG/LNG 3%, and 64% of sales will be fuel cell and electric road system (ERS) capable.

The past decade, PACCAR has invested $7.3 billion in world-class facilities, next generation products and state of the art technologies. Investing in technologies that reduce greenhouse gas emissions such as highly fuel-efficient diesel engines, natural gas and biofuel engines, as well electric, hybrid, and hydrogen fuel cell powertrains. Kenworth, Peterbilt and DAF delivered battery-electric trucks to customers in 2022 and have nine zero emissions vehicle models in production with a backlog of hundreds of customer orders.

In 2022, PACCAR launched its SuperTruck 3 program to continue the development of its Class 8 Kenworth and Peterbilt battery-electric and fuel cell vehicles, along with its vehicle charging stations. SuperTruck 3 is a U.S. Department of Energy (DOE) initiative to develop state-of-the-art zero emissions medium- and heavy-duty trucks. The SuperTruck initiative was launched in 2009 by the DOE to improve heavy-duty truck freight efficiency. Kenworth and Peterbilt successfully developed state-of-the-art vehicles in the prior SuperTruck and SuperTruck 2 programs. Many of the technologies developed in the earlier SuperTruck programs were deployed in production vehicles, benefiting the environment and PACCAR's customers.

For risk and potential impact to PACCAR's future market share by changing customer preference based on the estimated 2060 market is a 12% margin on half to one percent of the market or approximately $25 million to $50 million.

Time horizon
Long-term

Likelihood
Unlikely

Magnitude of impact
Medium

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)
25000000

Potential financial impact figure – maximum (currency)
50000000

Explanation of financial impact figure
PACCAR's road freight product planning through 2030 takes into account customer preferences and is consistent with climate change scenario analysis for limiting global warming to below 2 degrees C through 2060. Key climate scenario prediction ("Future of Trucks", IEA https://www.iea.org/reports/the-future-of-trucks) of the size and composition of road freight vehicle sales indicate that by 2060 diesel trucks will comprise 14% of sales, hybrids will be 21% of sales, CNG/LNG 3%, and 64% of sales will be fuel cell and electric road system (ERS) capable trucks. Also, overall sales are projected to increase by 280% over 2015 sales (*Note: 2015 is used as the original baseline year for evaluating Scope 3 science based GHG emissions targets and remains relevant to the 2022 CDP report.).

Applying these projections to PACCAR's *2015 sales revenue of $14,782,500,000 indicates that if PACCAR is unable to offer customers a full range of industry leading, low carbon road freight vehicles including hybrids, CNG/LNG, fuel cell and ERS capable trucks, that by 2060, PACCAR truck sales revenue will be reduced by about 86% or close to $36 billion. This is calculated by multiplying 2015 revenue by projected sales growth through 2060 and then multiplied by the potential reduction in market share of non-diesel vehicles in 2060 ($14,782,500,000 x 280% x 86% = $35,596,260,000)

In 2022, it now appears unlikely that PACCAR will not offer competitive vehicle models and service solutions to sustain or expand market share and avoid the nearly $36 billion in estimated reduction in revenue by 2060. In 2022, PACCAR is a leader in the development of battery-electric, hybrid, hydrogen combustion and hydrogen fuel cell vehicles, as well as, launching truck models in North America and Europe with up to a 7% and 10% fuel efficiency gain respectively. However, risk remains as vehicles require renewable energy infrastructure and the IEA World Energy Outlook 2022 forecasts a "Net Zero Emissions by 2050 Scenario" will require a tripling in worldwide spending on clean energy infrastructure to 2030.

With competitive products and service entering the marketplace in 2022, a new estimation focuses in on an estimate of one half to one percent of market share estimated for 2060 and the lost margin estimated at 12% on unbuilt and unsold vehicles. ($14,782,500,000 x 280% x either 0.5% or 1%= range of approximately $206,955,000 to $413,910,000 x 12% lost vehicle margin).

Cost of response to risk
6500000000

Description of response and explanation of cost calculation
PACCAR manages the risk of shifting customer preferences, which could substantially impact PACCAR's revenues and market share by [Task] continuing to expand climate-related advanced technology truck offerings, which exceed customer performance expectations through innovative research and development, partnerships and collaboration. In the short- (0-3 years), medium- (4-10 years) term PACCAR continues to invest and develop innovative products.

For example, in 2022, PACCAR's strategic decision was to spend nearly 70% of the overall $341.2 million research and development spending, on climate related product innovation to reduce greenhouse gas emissions and improve fuel economy. As also seen in PACCAR's strategic focus on improving fuel economy, PACCAR invested in the further development of battery-electric, hybrid and hydrogen fuel cell vehicles. The long term impacts remain to be seen as markets adopt and transition to better fuel economy and battery-electric, hybrid and hydrogen fuel cell vehicles and the technology continue to evolve.

As a result, PACCAR's Kenworth and Peterbilt Divisions continues taking customer orders for production models including Kenworth K270E and T680E; Peterbilt Models 220EV, 579EV, 520EV; DAF LF, CF, XF and XD battery electric trucks in 2022. In addition, PACCAR's extensive zero emissions field testing program, with customers operating hundreds of Kenworth, Peterbilt and DAF test trucks, will provide valuable real-world experience to enhance these future product launches. Kenworth and Peterbilt customers are also able to order electric chargers from PACCAR Parts, and PACCAR Financial will provide flexible financing options for infrastructure and charging systems. PacLease bundles the cost of charging systems within full service lease offerings to customers.

The cost to manage long term changing customer preferences for innovative road freight technology is calculated by multiplying 50% of the estimated climate-related annual R&D expenses for 2022 times thirty-eight years to extrapolate the order of magnitude for R&D spending over the thirty-eight years between 2022 and 2060 (38 x 170,600,000 = $6,482,800,000).

Comment
none.

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Upstream

Risk type & Primary climate-related risk driver

Current regulation	Mandates on and regulation of existing products and services

Primary potential financial impact
Increased direct costs

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

Company-specific description
PACCAR's operations and products are subject to extensive statutory and regulatory requirements governing greenhouse gas and non-greenhouse gas emissions. These include standards imposed by the U.S. Environmental Protection Agency (EPA), the European Union, U.S. state regulatory agencies (such as the California Air Resources Board), regulatory agencies in other international markets where the Company operates, and nonbinding international accords related to climate change. The primary laws and regulations are the EPA's Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium and Heavy-Duty Engines and Vehicles, the Regulation of the European Parliament and of the Council on the Monitoring and Reporting of CO2 Emissions from Fuel Consumption of New Heavy-Duty Vehicles, and the Heavy-Duty Omnibus Regulation of the California Air Resources Board. PACCAR established its science-based greenhouse gas emission reduction targets to meet the goals of the Paris Agreement. The Company continually monitors developments in emissions and climate change-related laws and regulations in the markets in which the Company conducts business.

Regulations such as the U.S. EPA's Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles as found in Federal Register vol 78 No 116 require PACCAR to improve fuel efficiency and reduce greenhouse gas emissions from the commercial vehicles and engines sold in the U.S. Canada has similar regulations.

The risk for PACCAR is the potential increased costs due to fines if Kenworth and Peterbilt vehicles and engines are not compliant with greenhouse gas regulatory standards in the United States.

Recent penalties on a competitor's engines that exceeded EPA's engine emissions standards amounted to about $2,000 per engine. If the same penalty was applied to PACCAR's 2022 vehicle deliveries in the US and Canada with PACCAR engines, that would be a cost in the range of $34 million to $70 million due to non-compliance penalties.

Time horizon
Short-term

Likelihood
Unlikely

Magnitude of impact
Medium

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)
34000000

Potential financial impact figure – maximum (currency)
70000000

Explanation of financial impact figure
The potential financial impact for non-compliant vehicles and engines includes the loss of sales and/or fines and penalties. Penalties on a competitor's engines that exceeded EPA's engine emissions standards amounted to about $2,000 per engine.

If the same penalty was applied to PACCAR's 2022 vehicle deliveries with PACCAR engines in the US and Canada, that would be a cost range of an estimated $34 million to $70 million due to non-compliance penalties depending on the quantity of engines affected. This cost is calculated by multiplying $2,000 times a range of PACCAR's 2022 deliveries of vehicles in the US and Canada with PACCAR MX engines impacted by non-compliance ($2,000 x range of 17,000 to 34,000 = $34,000,000 to $70,000,000)

Cost of response to risk
239000000

Description of response and explanation of cost calculation
[Situation] The risk that new greenhouse gas regulation of products could adversely impact revenue, market share and operating costs is managed through continuous improvement of fuel efficiency, alternative and low carbon fuel compatible products. The cost to manage the product regulatory risk includes product research and development, policy engagement and compliance testing.

The Company invests in technologies that reduce emissions such as highly fuel-efficient diesel engines, natural gas and biofuel engines, as well as next generation electric, hybrid, and hydrogen fuel cell powertrains. To develop these industry-leading products and technologies, PACCAR makes significant R&D and capital investments every year. For example, in 2022, PACCAR spent nearly 70% of the 2022 $341.2 million R&D budget on climate-related advanced vehicle technology.

PACCAR's Zero Emissions Trucks - R&D efforts include several demonstration and development projects for Kenworth, Peterbilt and DAF vehicles, including battery-electric, hydrogen fuel cell, hydrogen combustion and hybrid technologies. PACCAR is currently producing nine battery-electric Kenworth, Peterbilt and DAF truck models. Low Carbon and Renewable Fuels – PACCAR's MX-13 and MX-11 engines are certified to use B10/B20/B30 and XTL biofuels in Europe and up to B20 biofuel in the U.S.

Advanced Vehicles - In 2022, PACCAR is launching its SuperTruck 3 program to continue the development of its Class 8 Kenworth and Peterbilt battery-electric and fuel cell vehicles, along with its vehicle charging stations. SuperTruck 3 is a U.S. Department of Energy (DOE) initiative to develop state-of-the-art zero emissions medium- and heavy-duty trucks. The SuperTruck initiative was launched in 2009 by the DOE to improve heavy-duty truck freight efficiency. Kenworth and Peterbilt successfully

developed state-of-the-art vehicles in the SuperTruck and SuperTruck 2 programs.

PACCAR announced launch of DAF's, industry-leading heavy-duty truck models in DAF XF, XG and XG+ trucks represent a $1 billion investment. The DAF truck's streamlined design delivers up to 10% greater fuel efficiency. PACCAR's research and development spending resulted in market leading development of alternative powertrains including battery-electric, fuel cell and hybrid commercial vehicles.

Comment
none

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Upstream

Risk type & Primary climate-related risk driver

Acute physical	Cyclone, hurricane, typhoon

Primary potential financial impact
Increased direct costs

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

Company-specific description
Extreme weather events can cause power outages, floods, landslides, and damage facility and transportation infrastructure such as buildings, roads, bridges and rail tracks. The risk is that power outages, facility and infrastructure damage from extreme weather events such as hurricanes, tornadoes, flooding and etc. can immediately disrupt PACCAR's operations and supply chain. Several examples include a hurricane in 2018 and severe freeze in 2021.

In September of 2018 Hurricane Florence disrupted deliveries of parts from several of PACCAR's suppliers in the southeastern region of the United States for an extended period due to flooding-related shutdowns. The National Weather Service reported that Hurricane Florence "was the wettest tropical cyclone to hit the Carolinas." Impacts included "thousands of downed trees which caused widespread power outages, a record breaking storm surge of 9 to 13 feet and devastating rainfall of 20 to 30 inches, which produced catastrophic and life-threatening flooding." As a result, production capacity was impacted at PACCAR's North American truck factories. Cost impacts were estimated to be in the $10 million range due to supply chain disruption and temporarily delayed production.

In 2021, a significant weather-related event was the severe winter storm, freezing temperatures and rolling blackouts that impacted the state of Texas. PACCAR's manufacturing facility in Denton, Texas experienced a multi-day production shutdown and suffered physical damage. The costs of lost production and repairs were approximately $10 million, most of which were covered by insurance.

Time horizon
Short-term

Likelihood
About as likely as not

Magnitude of impact
Medium

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

Potential financial impact figure (currency)
10000000

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

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

Explanation of financial impact figure
The potential financial impact of climate-related physical risk depends upon the extent and duration of the interruption of operations.

The 2018 prolonged flooding from Hurricane Florence disrupted PACCAR's supply chain resulting in a temporary production slowdown and higher costs of materials and labor within PACCAR's North American supply chain and operations. The financial impact is difficult to quantify, but, for the purpose of this CDP report, an estimate is made at about 50 basis points of gross margin. The cost impact was calculated by multiplying PACCAR's 2018 truck segment gross margin by 50 basis points (0.005 x $2,147,500,000 = 10,737,500 ~ $10 million), since the storm occurred in 2018. In 2021 event in Denton, Texas the costs of lost production and repairs were more accessible and calculated as approximately $10 million.

Cost of response to risk
160740

Description of response and explanation of cost calculation
Weather and infrastructure related risks are managed not only through PACCAR's business continuity evaluation and planning process, but as a normal part of managing PACCAR's supply chain and operations.

For example, 2018 response to parts shortages due to Hurricane Florence and in order to maintain or grow revenue and market share by managing supply chain disruption, PACCAR's Kenworth, Peterbilt and DAF factories, and purchasing and supplier management teams made an orchestrated effort to address supplier issues quickly and to manage off-line production flow in PACCAR factories to match parts shortages. In addition, Tier 1 suppliers invested in additional capacity and worked closely with Tier 2 suppliers to meet factory delivery requirements.

In 2021, a significant weather-related event was the severe winter storm, freezing temperatures and rolling blackouts that impacted the state of Texas. PACCAR's manufacturing facility in Denton, Texas experienced a multi-day production shutdown and suffered physical damage requiring contingencies plans to be activated at the location and with suppliers.

The situation in 2018 was normalized within four months of the extreme weather event, and that year (2018) PACCAR achieved the second highest Class 8 market share in its history and a record high market share of medium-duty in the US and Canada. In 2021, the multi-day shutdown in Texas due to extreme weather was managed and that year (2021) PACCAR achieved market share of 29.2% in Class 8 trucks as the U.S. economic growth in 2021 resulted in good freight tonnage and robust demand for Kenworth and Peterbilt trucks.

The potential cost impacts were estimated to be in the $10 million range (see “Explanation of financial impact figure” above), which represents a 0.06% impact to PACCAR's 2018 truck segment cost of sales and revenues ($10,000,000/$16,039,500,000 = 0.06%). As well as a similar estimate in the $10 million range in 2021, which represents also a 0.06% impact to PACCAR's 2021 truck segment cost of sales and revenues ($10,000,000/$15,494,500,000 = 0.06%).

Multiplying PACCAR’s 2018 Truck SG&A by the same 0.06% ratio of potential cost impact results in a $149,000 cost of management of weather related risks (0.06% x $248,300,000 = $148,900). In 2021, a similar multiplication results in $160,740 cost of management of weather related risks (0.06% x $267,900,000 = $160,740)

Comment
none

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

(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?
Upstream

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
PACCAR can increase revenues by developing innovative new products through research and development, and supplier partnerships and collaborations. The company's research and development spending decisions are strategically focused on supplier collaborations for new product innovation such as hybrid, electric, and hydrogen road freight vehicles.

An example of PACCAR’s product development research and development and supplier collaborations includes PACCAR’s multi-year collaboration with California’s Climate Investments and Low Carbon Transition programs and supplier, TransPower (acquired by Meritor), to develop and commercialize zero and near-zero emissions trucks. Phase I featured Kenworth’s CNG range-extended plug-in hybrid electric trucks developed under the SCAQMD/DOE ZECT 2 program, as well as Peterbilt/TransPower battery design for increased capacity at the same system weight to increase electric range. Later phases under the program included partnerships for Class 8 drayage hydrogen fuel cell truck as well as fueling infrastructure.

As a result of supplier collaborations the financial benefit to PACCAR is estimated to be in the $8 to $10 billion range based on climate scenario estimates of the growth in hybrid, LNG/CNG, hydrogen and electric road system vehicles through 2030.

Time horizon
Medium-term

Likelihood
About as likely as not

Magnitude of impact
High

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)
8200000000

Potential financial impact figure – maximum (currency)
10000000000

Explanation of financial impact figure
The financial benefit of PACCAR’s development of CNG range-extended plug-in hybrid electric trucks, such as those developed in collaboration with suppliers such as TransPower, as well as battery and hydrogen fuel cell and internal combustion engine trucks are a key part of PACCAR's business strategy to increase revenues in the medium term.

Using climate change scenario analysis for limiting global warming to below 2 degrees C through 2030, key climate scenario predictions (“Future of Trucks”, IEA

https://www.iea.org/reports/the-future-of-trucks) of the size and composition of road freight vehicle sales indicate that by 2030, the number of heavy duty trucks in use increases globally from about 25 million vehicles in 2015 to about 45 million vehicles in 2030, of which 7 million units will be hybrids.

Another 3 million units will be CNG/LNG and electric road system units by 2030. Assuming half of the 3 million CNG/LNG and ERS units in use in 2030 are CNG/LNG, the increase in PACCAR's vehicle sales and revenue growth due to expanding market share into hybrid and CNG/LNG in use vehicles could be in the range of 8.5 million (7 million + (1/2 x 3 million) = 8.5 million) units up to 10 million (7 million + 3 million = 10 million) units including ERS vehicles.

Diesel heavy duty vehicles are predicted by climate scenarios to comprise 28.3 million units and still the majority of in use vehicles in 2022. The new product market share for hybrid and CNG/LNG/ERS is predicted to grow by 8.5/28.3 = 30% to 10/28.3 = 35%. The potential financial benefit for PACCAR is based on 2022 revenue and the climate scenario growth in road freight in use units as a proxy for revenue growth through 2030.

The low range of revenue increase is calculated to be $8.2 billion, which is calculated by multiplying 2022 revenue by the low range market share growth of 30% ($28,819,700,000 x 0.3 = $8,645,910,000) through 2030. A high end estimate of additional potential revenue through 2030 is calculated to be $10 billion ($28,819,700,000 x 0.35 = $10,086,895,000) with the development of market competitive hybrid, CNG/LNG and ERS road freight heavy duty vehicles.

Cost to realize opportunity
239000000

Strategy to realize opportunity and explanation of cost calculation
Short term as defined in Section C2.1 is the investment in development, the mid-term strategy (4-10 years) is described below based on scenario analysis. Long term strategy (11-30) requires further evaluation as market evolves. [Situation] Climate scenario modelling of medium term, in use, road freight composition indicates that diesel trucks will compose a smaller market share in 2030 than in 2022. Hybrid and CNG/LNG trucks are expected to increase substantially in market share by 2030.

In order to increase revenues, [Task] PACCAR's supplier collaboration, and research and development spending decisions must be strategically focused on the predicted increasing demand for new products and services such as hybrid and CNG/LNG and ERS vehicles. [Action] In 2022, PACCAR spent nearly 70% of PACCAR's overall $341.2 million research and development spending, on climate-related advanced vehicle technology research and development and supplier collaboration ($341,200,000 x 70% = $238,840,000)

[Results] Because of PACCAR's focus on supplier partnerships, collaboration, and research and development spending on new product development, PACCAR's R & D spending included funding for the development of hybrid and CNG/LNG range extended, road freight vehicles providing PACCAR with the knowledge and partnerships needed to increase revenue over the medium term as the market for road freight vehicles transitions to low carbon, alternative powertrains.

Comment
none

Identifier
Opp2

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
PACCAR can increase revenue by understanding and exceeding customer's shifting preferences for environmentally innovative vehicles and engines that can reduce their carbon footprint and their operating costs by using less fuel. The opportunity for PACCAR is to increase revenues by collaborating with customers in developing advanced, low emission commercial vehicles that improve fuel economy and reduce greenhouse gas emissions and customer operating costs.

The SuperTruck initiative was launched in 2009 by the United States Department of Energy (DOE) to improve heavy-duty truck freight efficiency. Peterbilt successfully developed state-of-the-art vehicles in SuperTruck in partnership with Cummins and both Kenworth and Peterbilt with PACCAR Powertrain for SuperTruck 2 programs. Technologies developed in the programs were deployed in production vehicles, benefiting customers. For example, Kenworth and customer, UPS (United Parcel Services), collaborated on the SuperTruck 2 Program. For the project, UPS provided guidance on its drive-and-duty cycles to optimize performance. UPS also offered advice on the commercial feasibility and driver acceptance of technologies developed.

In 2022, PACCAR launched SuperTruck 3 program to continue the development of its Class 8 Kenworth and Peterbilt battery-electric and fuel cell vehicles, along with its vehicle charging stations. PACCAR received a $33 million matching grant for the program as part of (DOE) initiative to develop state of the art zero emissions medium- and heavy-duty trucks.

This important program is designed to produce advancements that will benefit fleets and truck operators with future reductions in fuel usage and emissions. As a result of customer collaborations, such as with UPS, the financial benefit to PACCAR is estimated to be in the $5.2 to 5.8 billion range based on climate scenario estimates of the growth in advanced, low emission diesel vehicles by 2030.

Time horizon
Medium-term

Likelihood
About as likely as not

Magnitude of impact
High

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)
5200000000

Potential financial impact figure – maximum (currency)
5800000000

Explanation of financial impact figure
The financial benefit of new low emission, heavy-duty vehicles, such as those developed through the SuperTruck programs and in collaboration with customers, such as UPS, is estimated using climate change scenario analysis for limiting global warming to below 2 degrees C through 2030. Key climate scenario predictions ("Future of Trucks", IEA https://www.iea.org/reports/the-future-of-trucks) of the size and composition of road freight vehicle sales indicate that by 2030 the number of heavy duty trucks in use increases globally from about 25 million vehicles in 2015 to about 45 million vehicles in 2030. The numbers of diesel internal combustion engine units, such as the SuperTruck 1 and 2 models, peaks in 2030 at just over 35 million in use units out of a total of 45 million units.

This climate scenario predicts the growth of in use heavy duty diesel units to be about 10 million units by 2030 by subtracting the diesel internal combustion engine units in use in 2015 baseline of 25 million, from the 35 million in 2030 (35 million - 25 million = 10 million). Interpolating between 2015 and 2030 results in a 2022 baseline of about 29.7 million (10,000,000/15 x 7 = 4,666,667; 25,000,000 + 4,666,667 = 29.7 million) in use diesel vehicles in 2022. The climate scenario estimated growth between 2022 and 2030 is expected to be 5.3 million units (35 million – 29.7 million = 5.3 million) or about 18% (5.3/ 29.7 = 17.8%) growth of global in-use diesel vehicles.

Using global in-use vehicle predictions as a proxy for revenue growth, based on PACCAR's 2022 revenue of $28,817,700,000, the low range of financial benefit is estimated at $5.2 billion ($28,819,700,000 x 0.18 = $5,187,546,000), provided PACCAR maintains the current market share of global sales between 2022 and 2030. A 10% increase in market share of diesel units between 2022 and 2030 yields a high end range of financial benefit of $5.8 billion (0.10 x 5.3 million units = 530,000 units, 5.3 million units + 530,000 units = 5.8 million units, 5.8 / 29.7 = 19.5%, 0.20 x $28,819,700,000 = $5,763,940,000).

Increasing market share will require PACCAR to develop the most technologically advance diesel trucks in the market which will require complete biodiesel capable units, and the extreme efficiency improvements being developed through the SuperTruck program.

Cost to realize opportunity
239000000

Strategy to realize opportunity and explanation of cost calculation
[Situation] Demand for lower emissions vehicles can be driven by shifting customer preferences. For example, customers may be shifting demand to environmentally innovative vehicles and engines that can reduce their carbon footprint and their operating costs by using less fuel.

[Task] PACCAR's strategy is to increase revenue by developing low emission, advanced commercial vehicles that improve fuel economy and reduce greenhouse gas emissions and customer operating costs through customer collaboration, research and development and innovation.

[Action] PACCAR's research and development spending decisions are strategically focused on product innovation including reducing greenhouse gas emissions and improving fuel economy. PACCAR spent nearly 70% of $341.2 million of R&D on climate related advanced vehicle technology research and development in 2022 and launched many new products that offer better fuel economy and lower greenhouse gas emissions. A breakdown of new products is available at Paccar.com in the 2022 Annual Report as well as Paccar.com/investors where updated quarterly investor presentations are available.

[Results] Kenworth and customer, UPS, continue to collaborate on the DOE SuperTruck 2 Program. Kenworth is developing important advancements in Class 8 truck aerodynamics, engine and powertrain efficiencies under the SuperTruck 2 program with the Vehicle Technologies Office of the U.S.DOE. In 2022, PACCAR is launching its SuperTruck 3 program to continue the development and customer testing of its Class 8 Kenworth and Peterbilt battery-electric and fuel cell vehicles, along with its vehicle charging stations.

Comment
none

Identifier
Opp3

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

Opportunity type
Products and services

Primary climate-related opportunity driver
Development of climate adaptation, resilience and insurance risk solutions

Primary potential financial impact
Increased revenues resulting from increased production capacity

Company-specific description
PACCAR can increase revenues by optimizing production capacity through business continuity and resiliency planning to respond to climate related physical risks of extreme weather damage. Extreme weather events can cause power outages, floods, landslides, and damage facility and transportation infrastructure such as buildings, roads, bridges and rail tracks.

By understanding the potential impacts to production and distribution systems, PACCAR can mitigate impacts to operations and optimize recovery, thereby increasing resiliency and revenues. For example, PACCAR manages weather and infrastructure related opportunities not only through a business continuity evaluation and planning process, but also as a normal part of managing PACCAR's supply chain.

PACCAR's Kenworth, Peterbilt and DAF factories, and purchasing and supplier management teams coordinate quickly to orchestrate supplier opportunities, and if needed to manage off-line production flow in multiple PACCAR factories including the Peterbilt plant in Denton Texas, as well as Kenworth's Chillicothe Ohio factory to match parts logistics. In this way, PACCAR is able to optimize climate related production resiliency and capacity, which can increase revenue by approximately $215 million.

Time horizon
Short-term

Likelihood
About as likely as not

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)
215000000

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

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

Explanation of financial impact figure
The financial benefit of the climate-related opportunity to increase revenues by optimizing production capacity through business continuity and increased resiliency is due to PACCAR's ability to shift production and parts operations to other geographic areas, and to manage off-line production at facilities, which are not impacted by climate related impacts.

For example, PACCAR's successful production capacity resilience during Hurricane Florence in 2018 resulted in the second highest Class 8 market share in PACCAR's history, a record high market share of medium-duty vehicles in the US and Canada, and increased the contribution of truck manufacturing to revenue by 1%. In 2021, a significant weather-related event was the severe winter storm, freezing temperatures and rolling blackouts that impacted the state of Texas. PACCAR's manufacturing facility in Denton, Texas experienced a multi-day production shutdown and suffered physical damage. Again, production capacity resilience during the Texas freeze allowed PACCAR to sustain a Class 8 market share 29.2% contributing to truck manufacturing to revenue.

Applying the 1% increase in revenue contribution, for example, PACCAR can expect that increased production capacity resilience can increase revenues by $215 million due to a 1% annual increase in PACCAR's Truck segment contribution to revenues through business continuity and resiliency of production capacity. This is calculated by multiplying 2022 truck segment revenue by 1% (0.01 x $21,486,200,000 = $214,862,000). This a costing exercise for the purpose of this CDP report, PACCAR may not necessarily increase revenues based on business contiguity and resiliency as there are other contributing factors difficult to isolate.

Cost to realize opportunity
160740

Strategy to realize opportunity and explanation of cost calculation
[Situation] PACCAR's strategy for realizing opportunities to increase resiliency, revenues and market share is to optimize operational flexibility, production capacity and enhance supplier resiliency. [Task] In the event of extreme weather damage to supply chain distribution and PACCAR's operations, PACCAR's ability to shift production and parts operations to other geographic areas, and to manage off-line production at facilities, which are not impacted, is key to PACCAR's weather-related resiliency.

[Action] As an example, in 2018, the response to parts shortages due to Hurricane Florence, PACCAR's Kenworth, Peterbilt and DAF factories, and purchasing and supplier management teams made an orchestrated effort to address supplier issues quickly and to manage off-line production flow in factories to match parts shortages. In addition, Tier 1 suppliers invested in additional capacity and worked closely with Tier 2 suppliers to meet factory delivery requirements. During the severe winter storm in 2021 with freezing temperatures and rolling blackouts in Texas, PACCAR's manufacturing facility in Denton experienced a multi-day production shutdown and suffered physical damage. PACCAR's contingency planning and working with suppliers mobilized temporary workarounds and repairs to restore production.

[Result] Post Florence, operations normalized within four months and that year (2018) PACCAR achieved the second highest Class 8 market share in its history and a record high and increased the contribution of truck manufacturing to revenue by 1%. A similar result in 2021 as PACCAR normalized production in days preserving market share.

Management of weather risks is part of PACCAR's standard operating costs, specific costs of increasing production capacity in the context of climate resiliency are difficult to calculate. Potential impacts were estimated to be in the $10m range, when the events occurred in 2018 and 2021, representing 0.06% impact to PACCAR's 2018 and 2021 truck segment cost of sales and revenues (2018: $10,000,000/$16,039,500,000 = 0.06%; 2021: $10,000,000/$15,494,500,000 = 0.06%).

Multiplying PACCAR's 2018 Truck SG&A by the same 0.06% ratio of potential cost impact results in a $149,000 cost of management of weather related risks (0.06% x $248,300,000 = $148,900) and 2021, $160,740 cost of management of weather related risks (0.06% x $267,900,000 = $160,740).

Comment
none

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
Along with PACCAR's Annual Report, each year PACCAR's TCFD-CDP Report is made available on PACCAR.com containing updates to the essential elements of PACCAR's climate transition plan aligned with specific TCFD topics of Governance, Strategy, Risk Management, and Metrics & Targets. Information includes Science-based targets of PACCAR aligned to the goals of the Paris Agreement – limiting global warming to well-below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°.

PACCAR hosts a conference on the morning of its quarterly earnings press release. the Quarterly Financial Results webcasts are held approximately three weeks following the end of each calendar quarter (in late April, July, October and January) as a regular mechanism by which feedback is collected. In addition to quarterly calls, PACCAR responds to requests for individual investor inquiries made directly or via www.paccar.com/investors/investor-contacts/ and conducts more than 200 meetings per year with institutional shareholders.

Topics covered by PACCAR's annual reports, TCFD-CDP Report and investor presentations may include climate related discussions on capital and R&D investments, zero emissions trucks, low carbon and renewable fuel capabilities, and other advanced technology and manufacturing to fulfil PACCAR's strategy related to climate transition planning. Information is found at PACCAR.com/investors

Frequency of feedback collection
More frequently than annually

Attach any relevant documents which detail your climate transition plan (optional)
PCAR ESG Investor Presentation-2023.pdf
paccar-2022-annual-report-final.pdf
PACCAR Q1 2023 Investor Presentation.pdf
PACCAR 10k-q4-2022.pdf
tcfd-cdp-report-july-2023.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 B2DS	Facility	<Not Applicable>	[Parameters]EIA's WB2C Sectoral Decarbonization Approach (SDA) absolute contraction method for "other industry" sectors applies both quantitatively and qualitatively to Scope 1 and 2 for PACCAR's total global factories, warehouses and other facilities emissions. [Assumptions] The facility related climate scenario is based on Energy Technology Perspectives (ETP) assumptions including the predicted share of electricity in the energy mix, carbon intensity of electricity, energy efficiency and best available technology opportunities, decreases in fossil fuel use and the carbon intensity due to fuel switching and the reduction of carbon intensity due to increased use of renewables. The time horizons chosen include a baseline year of 2018 for Scope 1 and 2 emissions, along with the IEA WB2C and B2DS trajectory through 2060. A medium term timeline of 2030 was selected to allow detailed modelling of facility scenarios over both the medium and long term. [Analytical Choices] EIA WB2C (well below 2 degrees C) and B2DS (beyond 2 degrees) climate scenarios were selected based on their applicability to PACCAR's largest sources of Scope 1, and 2 GHG emissions. The result of this detailed climate scenario analysis, PACCAR obtained approval for Science Based Targets of 35% for Scope 1 and 2 greenhouse emissions between a baseline year of 2018 and target year of 2030.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios: IEA B2DS	Product-level	<Not Applicable>	[Parameters] IEA's B2DS SDA applies both quantitatively and qualitatively to PACCAR's Scope 3 Product-Use emissions for heavy and medium duty vehicle deliveries in the US, Canada and the EU. [Assumptions] Product use climate change modelling inputs include sales weighted, tank to wheel emissions and payloads. The product use climate scenario is based on the assumptions for the low carbon transition pathway in the IEA publication "The Future of Trucks" including predictions of lower transport related energy demand due to increased logistical efficiency, transportation energy efficiency improvements and fuel switching emissions reductions due to a larger role for biofuels and renewables in commercial transport. Product use analysis was conducted with online tools provided by Science Based Targets Initiative (SBTi) as well as spreadsheet and database analysis of PACCAR's sales product mix and related emissions. The time horizons chosen include a baseline year of 2018 for Scope 1, 2 and 3 emissions, along with the IEA WB2C and B2DS trajectory through 2060. A medium term timeline of 2030 was selected to allow detailed modelling of both facility and product use climate scenarios over both the medium and long term. Key model inputs included tank to wheel greenhouse emissions for heavy duty vehicles PACCAR sold in the US, Canada and in the EU in 2018 (89% of total units delivered). Country specific and sales weighted payloads were applied to develop emissions intensity in units of grams of CO2 per vehicle kilometer. [Analytical Choices] EIA WB2C (well below 2 degrees C) and B2DS (beyond 2 degrees) climate scenarios were selected based on their applicability to PACCAR's largest sources of Scope 3 GHG emissions. The result of this detailed climate scenario analysis, PACCAR obtained approval for Science Based Targets of 25% for Scope 3 Use of Product between a baseline year of 2018 and target year of 2030. [Note] In 2022, the Science-Based Target Initiative (SBTi) paused target validations & updates recognizing there is currently not a sectoral decarbonization approach (SDA) for transport sector allowing companies, like PACCAR, to align their use-phase emissions targets of new road vehicles with 1.5°C pathways. PACCAR's well-below 2°C trajectory 2021 approved science-based targets are granted extensions while an SDA for transport is developed and approved.
Transition scenarios: Customized publicly available transition scenario	Product-level	1.5ºC	[Parameters] As a manufacturer of heavy-duty commercial vehicles and diesel combustion engines, PACCAR is subject to extensive statutory and regulatory requirements governing reduction of greenhouse gas and non-greenhouse gas emissions that collectively cover a spectrum of milestones for between 2022 and 2050. A multitude of requirements applies both quantitatively and qualitatively to inform compliance scenario analysis. [Assumptions] These include standards imposed by the U.S. Environmental Protection Agency (EPA), the European Union, U.S. state regulatory agencies (such as the California Air Resources Board), regulatory agencies in other international markets where the Company operates, and non-binding international accords related to climate change. [Analytical Choices] The primary developments in these laws and regulations involve future stricter requirements, over time, under the EPA's Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium and Heavy-Duty Engines and Vehicles, the Regulation of the European Parliament and of the Council on the Monitoring and Reporting of CO2 Emissions from Fuel Consumption of New Heavy-Duty Vehicles, and the Heavy-Duty Omnibus Regulation of the California Air Resources Board. Scenario analysis based on the statutory and regulatory requirements listed above, as well as others, inform the Company's product strategy. As a result, PACCAR is on the pathway of advanced technology, smart manufacturing capability, and training its industry leading labor force to deliver battery electric, hybrid, fuel cell, and internal combustion engine technology in DAF, Peterbilt, and Kenworth trucks. In production today are nine industry leading battery-electric vehicle models and multiple hydrogen fuel vehicle models in development.
Transition scenarios: IEA NZE 2050	Company-wide	<Not Applicable>	[Parameters] PACCAR invests in technologies that reduce greenhouse gas emissions such as fuel-efficient diesel engines, natural gas and biofuel engines, and next-generation battery- electric, hybrid, hydrogen combustion, and hydrogen fuel cell powertrains. To develop and manufacture these industry leading products and technologies, the Company makes significant investments in capital expenditures and R&D each year. Various predictive models and interpretations applies both quantitatively and qualitatively to inform product strategy in the short, medium, and long term. [Assumptions] The Company's investment programs are primarily focused on developing cost-effective and fuel-efficient transportation solutions. Capital investments and R&D expenses incurred to develop next-generation truck models and engines have combined goals of reducing emissions and improving fuel efficiency while also enhancing performance, reliability, and durability. Capital investments incurred to expand or enhance the Company's manufacturing facilities similarly have the combined goals of reducing emissions and promoting sustainability by conserving energy and natural resources and lowering operating costs. Reducing emissions and improving fuel efficiency are critical aspects of meeting PACCAR's science-based targets. [Analytical Choices] PACCAR's manufacturing factories as well as product are reliant on clean, reliable, affordable and accessible energy in IEA member and association countries. In recent years, the energy sector was responsible for around three-quarters of global greenhouse gas (GHG) emissions. The Net Zero Emissions by 2050 Scenario (NZE) is a normative IEA scenario that shows a pathway for the global energy sector to achieve net zero CO2 emissions by 2050, as well as seeking to quantify the costs and benefits of increased infrastructure availability for transmission and distribution of alternative fuels to achieve those goals.
Physical climate scenarios: RCP 2.6	Company-wide	<Not Applicable>	[Parameters]Applicable physical climate scenarios are incorporated annually into supply chain, built assets, and operational parameters decisions on a site-by-site and project-by-project basis where physical risk to locations and supply chains require assessment and incorporation into risk control measures for identifying potential hazards to determine threats and develop mitigation measures. [Assumptions]The impacts vary by geographical location and project characteristics but generally involve identifying hazards associated with supply chain or operational interruptions. Physical risks that may be considered are increase concentrations of heat, cold, perception, drought, storm severity, flooding, etc. that may pose a hazard requiring evaluation. [Analytical choices] Physical risks parameters are evaluated over short-, mid-, and long-term time frames on various models to simulate the impacts associated with different climate scenarios to identify potential hazards. [Analytical Choices] Modeling includes evaluating different baselines levels for a specific geographic boundary for projects, sites, and suppliers' locations to apply various RCP scenarios – e.g., RCP 2.6 with low concentrations to RCP 4.5 as a moderate scenario in which emissions peak around 2040 and then decline vs. RCP 8.5 as an extreme baseline scenario in which emissions continue to rise with various overlay to evaluate physical risk parameters. Mitigation measures are evaluated at appropriate management levels depending on established bottom-to-top capital and operational risk and budget control measures.
Physical climate scenarios: RCP 4.5	Please select	<Not Applicable>	[Parameters]Applicable physical climate scenarios are incorporated annually into supply chain, built assets, and operational parameters decisions on a site-by-site and project-by-project basis where physical risk to locations and supply chains require assessment and incorporation into risk control measures for identifying potential hazards to determine threats and develop mitigation measures. [Assumptions]The impacts vary by geographical location and project characteristics but generally involve identifying hazards associated with supply chain or operational interruptions. Physical risks that may be considered are increase concentrations of heat, cold, perception, drought, storm severity, flooding, etc. that may pose a hazard requiring evaluation. [Analytical choices] Physical risks parameters are evaluated over short-, mid-, and long-term time frames on various models to simulate the impacts associated with different climate scenarios to identify potential hazards. [Analytical Choices] Modeling includes evaluating different baselines levels for a specific geographic boundary for projects, sites, and suppliers' locations to apply various RCP scenarios – e.g., RCP 2.6 with low concentrations to RCP 4.5 as a moderate scenario in which emissions peak around 2040 and then decline vs. RCP 8.5 as an extreme baseline scenario in which emissions continue to rise with various overlay to evaluate physical risk parameters. Mitigation measures are evaluated at appropriate management levels depending on established bottom-to-top capital and operational risk and budget control measures.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios: RCP 8.5	Company-wide	<Not Applicable>	[Parameters]Applicable physical climate scenarios are incorporated annually into supply chain, built assets, and operational parameters decisions on a site-by-site and project-by-project basis where physical risk to locations and supply chains require assessment and incorporation into risk control measures for identifying potential hazards to determine threats and develop mitigation measures. [Assumptions]The impacts vary by geographical location and project characteristics but generally involve identifying hazards associated with supply chain or operational interruptions. Physical risks that may be considered are increase concentrations of heat, cold, perception, drought, storm severity, flooding, etc. that may pose a hazard requiring evaluation. [Analytical choices] Physical risks parameters are evaluated over short-, mid-, and long-term time frames on various models to simulate the impacts associated with different climate scenarios to identify potential hazards. [Analytical Choices] Modeling includes evaluating different baselines levels for a specific geographic boundary for projects, sites, and suppliers' locations to apply various RCP scenarios – e.g., RCP 2.6 with low concentrations to RCP 4.5 as a moderate scenario in which emissions peak around 2040 and then decline vs. RCP 8.5 as an extreme baseline scenario in which emissions continue to rise with various overlay to evaluate physical risk parameters. Mitigation measures are evaluated at appropriate management levels depending on established bottom-to-top capital and operational risk and budget control measures.

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

How can the use of climate-related scenario analysis help PACCR set science-based targets?
What can be learned by identifying and evaluating possible future developments as well as associated variables and data requirements to support decision-making?
What future developments have the potential to shape the future attainment of science-based targets?

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

PACCAR's understanding of climate scenarios resulted in approved Science Based Targets (SBTs). As a result of this detailed climate scenario analysis, PACCAR developed and obtained approval for Science Based Targets of 25% reduction for Scope 3 Use of Product (gram C02e/vkm) between a baseline year of 2018 and target year of 2030 while also increasing sectoral, regional, and operational understanding of achieving SBTs.

[Sectoral Context] The product use climate scenario is based on the assumptions for the low carbon transition pathway in the IEA publication "The Future of Trucks" including predictions of lower transport related energy demand due to increased logistical efficiency, transportation energy efficiency improvements and fuel switching emissions reductions due to a larger role for biofuels and renewables in commercial transport sector. This also requires as the IEA predicts in its report "Net Zero by 2050 A Roadmap for the Global Energy Sector" that clean energy innovation must accelerate rapidly, with governments putting R&D, demonstration and deployment at the core of energy and climate policy.

[Regional] EIA's B2DS SDA applies to PACCAR's Scope 3 Product-Use emissions for heavy and medium duty vehicle sales in the US, Canada and the European Union regions. Product use climate change modelling requires evaluating and identifying regional data inputs including sales weighted, tank to wheel emissions and payloads by regions and definitions for regulatory reporting, for example, the US EPA GHG Emission Model for the US and as applicable for Canada as well as the vehicle energy consumption calculation tool developed by the European Commission. Product use analysis was conducted with online tools provided by Science Based Targets Initiative (SBTi) as well as spreadsheet and database analysis of PACCAR's sales product mix and related emissions.

[Operational] As a result of scenario analysis, PACCAR has a broader understanding of the potential medium- and long-term trajectory of carbon intensity of both facility related and product use technology, energy supply, and the government's role in the energy transition through 2060. For example, climate scenario predictions that the share of electricity in the energy mix is expected to increase by 27% and the carbon intensity of electricity is expected to decrease by 98% by 2060, provides PACCAR with confidence in allocating capital, and research and development funding over the short and medium term towards low carbon technologies. This includes PACCAR's focus on electrification of heavy-duty vehicles and plans to participate in the roll-out of charging stations infrastructure for commercial vehicles is justified by a deeper understand of the predicted decarbonization of the electrical grid through 2060.

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

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	PACCAR operates in a highly competitive market and its future financial results will reflect its ability to develop, manufacture, and market competitive products that meet future customer demand. The Company has invested in technologies that reduce greenhouse gas emissions such as next generation diesel engines, natural gas and biofuel engines, and zero emissions battery-electric and hydrogen fuel cell powertrains. PACCAR is aware that its competitors are also developing lower emissions diesel and alternative powertrain commercial vehicles and that other companies are attempting to enter the alternative powertrain commercial vehicle market. PACCAR evaluates the impact of climate related risks and opportunities to its products and services by tracking global emerging regulation of road freight vehicle greenhouse gas emissions, shifting customer preferences and expectations, and technological advances in truck design and logistics, and by collaborating with suppliers, customers and third parties with knowledge of emerging trends related to road freight. PACCAR's research and development efforts include several demonstration and development projects for Kenworth, Peterbilt and DAF vehicles, including battery-electric, hydrogen fuel cell, hydrogen combustion and hybrid technologies. PACCAR is currently producing battery-electric Kenworth, Peterbilt and DAF trucks. PACCAR is launching its SuperTruck 3 program to continue the development of its Class 8 Kenworth and Peterbilt battery-electric and fuel cell vehicles, along with its vehicle charging stations. SuperTruck 3 is a U.S. Department of Energy (DOE) initiative to develop state-of-the-art zero emissions medium- and heavy-duty trucks. The DAF Connect fleet management system gives fleet customers real-time information on vehicle and driver performance including fuel consumption, fleet utilization, idle time and route optimization. This information enables customers to improve fleet operating efficiency and reduce fuel consumption and CO2 emissions. PACCAR has introduced technologies that train drivers to operate vehicles more efficiently. To develop these industry-leading products and technologies, PACCAR makes significant research and development and capital investments every year. PACCAR has invested $7.3 billion in capital projects, new products and technologies in the last decade ended 2022
Supply chain and/or value chain	Yes	PACCAR is evaluating the impact of climate related risks and opportunities to its supply chain by tracking global emerging regulation of road freight vehicle greenhouse gas emissions, shifting customer preferences and expectations, and technological advances in truck design and logistics. PACCAR collaborates with suppliers, customers, and third parties with knowledge of emerging trends related to road freight and participates in trade associations, such as The Truck and Engine Manufacturers Association in the U.S. and Canada and the European Automobile Manufacturers' Association in the E.U. By continuing to evaluate climate risks and opportunities, collaborations with suppliers can be fined tuned as development in road freight products and services evolve through 2030 and beyond. For example, PACCAR collaboration with Faith Technologies and Schneider Electric to provide charging infrastructure solutions for customers who purchase industry-leading battery electric Kenworth and Peterbilt trucks in the United States and Canada. PACCAR and Toyota continue to collaborate on fuel cell truck development and production. PACCAR Kenworth T680 and Peterbilt 579 models featuring Toyota's hydrogen fuel cell powertrain kit planned for customer deliveries in 2024. PACCAR has invested in a strategic partnership with Aurora to develop, test and commercialize autonomous Peterbilt and Kenworth trucks. PACCAR's autonomous vehicle platform will be integrated with the Aurora self-driving technologies and customers will benefit from the autonomous vehicles' enhanced safety and operational efficiency. PACCAR is working with Cummins Inc. to offer the new Cummins X15N natural gas engine in Kenworth and Peterbilt trucks. The X15N is the first natural gas engine to be specifically designed for heavy-duty truck applications. When operating on renewable natural gas, also known as RNG or biomethane, the X15N engine will be able to achieve major reductions in the lifecycle greenhouse gas emissions of Peterbilt and Kenworth trucks. This supply chain collaboration provides PACCAR with first hand insight into the complexities, risks and opportunities of electric and alternative fuel vehicle infrastructure, which is essential for evaluation of medium term strategies to address emerging, climate related supply chain risks and opportunities.
Investment in R&D	Yes	By continuing to evaluate climate-related risks and opportunities, PACCAR's strategic decisions regarding the focus and scale of R&D budgets will evolve as commercial transportation solutions are developed and be fined tuned as road freight products and services evolve through 2030 and beyond. PACCAR's evaluation process includes the tracking of global emerging regulation of road freight vehicle greenhouse gas emissions, shifting customer preferences and expectations, and technological advances in truck design and logistics, and collaborating with suppliers, customers and third parties with knowledge of emerging trends related to road freight, and participation in trade associations such as The Truck and Engine Manufacturers Association in the US and Canada and ACEA in the EU. PACCAR invests in technologies that reduce greenhouse gas emissions such as fuel-efficient diesel engines, natural gas and biofuel engines, and next-generation battery-electric, hybrid, hydrogen combustion, and hydrogen fuel cell powertrains. To develop and manufacture these industry leading products and technologies, the Company makes significant investments in capital expenditures and R&D each year. In 2022, capital investments were $505 million, and research and development expenses were $341 million. These investments enabled PACCAR's truck factories to build zero emissions vehicles, supported global production capacity increases and implemented advanced technologies to enhance manufacturing efficiency, including the expanded use of automated guided vehicles. PACCAR continues its investment in next generation clean diesel and electric powertrain technologies, autonomous driving systems, connected vehicle services, advanced manufacturing and distribution capabilities.
Operations	Yes	PACCAR's evaluation process for operational investment strategy development includes the evaluation processes related to new product develop described in "Products and Services" row of this response, as well as supply chain logistics and resiliency, and developments in factory automation. Geographic considerations are also part of PACCAR's evaluation process for operational investments, including the siting and locations of factories, warehousing, and options for supply chain logistics flexibility. PACCAR invests in technologies that reduce greenhouse gas emissions such as fuel-efficient diesel engines, natural gas and biofuel engines, and next-generation battery-electric, hybrid, hydrogen combustion, and hydrogen fuel cell powertrains. To develop and manufacture these industry leading products and technologies, the Company makes significant investments in capital expenditures and R&D each year. Investments for manufacturing property, plant and equipment in 2022 were $491.2 million. Over the past decade, the Company's combined investments in worldwide capital projects and R&D totaled $7.3 billion and have significantly increased the operating capacity and efficiency of its facilities and enhanced the quality and operating efficiency of the Company's premium products. Capital investments in 2023 are expected to be $525 to $575 million. PACCAR is in new and expanded manufacturing and distribution facilities, as well the factory tooling for manufacturing and parts distribution services advanced new vehicle models, and innovative technologies such as advanced powertrains, zero emissions vehicles, autonomous driving and connected services. PACCAR developed science based greenhouse gas emissions reduction targets of 35% in tonnes of CO2 on an absolute basis for global facilities between 2018 and 2030.

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	PACCAR has ongoing product development programs intended to address changing customer demand in the context of climate change and achieve its targeted reductions in emissions. These involve the continuing development of compliant clean diesel powertrains and the design, manufacture, and sale of alternative powertrain commercial vehicles (e.g., battery-electric, hybrid, hydrogen fuel cell, and hydrogen combustion). The pace of transition from diesel combustion to alternative powertrain commercial vehicles is highly uncertain and will be influenced by: • the success of the Company's research and development programs • customer demand for alternative powertrain vehicles • advancements in battery-electric, hydrogen fuel cell, and hydrogen combustion technology • the cost of batteries, hydrogen fuel cells and liquid hydrogen • global regulations requiring the use of alternative powertrain vehicles and/or providing incentives to facilitate the transition to alternative powertrain commercial vehicles • investments in energy and power infrastructure (e.g., renewable power supply, electric charging services, hydrogen supply and distribution) in key markets, as well as the associated utility costs • the ability of the supply chain to deliver components, including commodities and raw materials that are unique to alternative powertrain commercial vehicles • the success of new and existing competitors in developing and selling alternative powertrain commercial vehicles The Company believes its current strategies, programs and resources are sufficient to address changes in customer demand in the context of climate change and to meet its emissions reduction targets. If the Company is not successful in addressing the risks noted above, there may be a material adverse impact on its business, operations, and financial condition as noted section C2.3a. Capital Investments in 2022 were $505 million. Over the past decade, the Company's combined investments in worldwide capital projects and R&D totaled $7.3 billion and have significantly increased the operating capacity and efficiency of its facilities and enhanced the quality and operating efficiency of the Company's premium products. Capital investments in 2023 are expected to be $525 to $575 million, and R&D is expected to be $360 to $410 million. The Company is increasing its investment in next generation clean diesel and electric powertrain technologies, autonomous driving systems, connected vehicle services, advanced manufacturing and distribution capabilities.

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 our climate transition plan	<Not Applicable>

C3.5a

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

Financial Metric
Other, please specify (R&D)

Type of alignment being reported for this financial metric
Alignment with our climate transition plan

Taxonomy under which information is being reported
<Not Applicable>

Objective under which alignment is being reported
<Not Applicable>

Amount of selected financial metric that is aligned in the reporting year (unit currency as selected in C0.4)
341200000

Percentage share of selected financial metric aligned in the reporting year (%)
70

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

Percentage share of selected financial metric planned to align in 2030 (%)
75

Describe the methodology used to identify spending/revenue that is aligned
An overwhelming majority of PACCAR's GHG Emissions is Scope 3 is downstream during product use phase. As such, PACCAR's historical, current and future annual R&D and capital investments continues to be significant investment into more efficient, cleaner, and safer products vehicle model year after vehicle model year along with the capability and infrastructure to procure materials, manufacture, and service future vehicle models. Capex and R&D is disclosed annually. Capital investments incurred to expand or enhance the Company's manufacturing facilities similarly have the combined goals of reducing emissions and promoting sustainability by conserving energy and natural resources and lowering operating costs. Reducing emissions and improving fuel efficiency are critical aspects of meeting PACCAR's science-based targets.

R&D aligns approximately to 70% of 2022 spending on R&D related to directly influencing fuel efficiency, battery electric vehicles and zero emission vehicle models. The ratio may change in the future depending on different taxonomies under development standardizing classifications for assigning capital aligned to climate mitigation and adaptation activities.

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

Well-below 2°C aligned

Year target was set

2021

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Location-based

Scope 3 category(ies)

<Not Applicable>

Base year

2018

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

121123

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

171594

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)
292717

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
100

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
100

Target year
2030

Targeted reduction from base year (%)
35

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
190266.05

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
121140

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
149503

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)
270643

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]
21.5459202672108

Target status in reporting year
Underway

Please explain target coverage and identify any exclusions
PACCAR achieved approval of science based targets (SBT) for Scopes 1, 2 and 3 in 2021. The Scope 1 and 2 SBT is a 35% absolute reduction of CO2 emissions from PACCAR's global facilities between a baseline year of 2018 and a target year of 2030 and is based on SBTi's "other industry SDA (sectoral decarbonisation approach)"

using the absolute contraction method for well below 2°C.

Plan for achieving target, and progress made to the end of the reporting year
Progress towards the target GHG emissions remains a steady focus year-on-year. PACCAR is an environmental leader in its global factory operations, with over 80 percent of PACCAR's manufacturing facilities achieving zero-waste-to-landfill and all manufacturing locations being ISO 14001 certified providing a focus of continuously looking for ways to reduce waste, reuse materials, conserve energy and reduce the environmental impact and achieve associated cost savings and GHG emission reductions.

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
2021

Target coverage
Country/area/region

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 tonnes CO2 per vehicle kilometer (vkm))

Base year
2018

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)
0.001005

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)
0.001005

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)
0.001005

% 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
87

% 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
87

% of total base year emissions in all selected Scopes covered by this intensity figure
87

Target year
2030

Targeted reduction from base year (%)
25

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]
0.00075375

% change anticipated in absolute Scope 1+2 emissions
0

% change anticipated in absolute Scope 3 emissions
-37

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)
0.001081

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)
0.001081

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)
0.001081

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]
-30.2487562189054

Target status in reporting year
Underway

Please explain target coverage and identify any exclusions
Scope 3 science based target is a 25% reduction in product use greenhouse gas emissions in grams of CO2 emissions per vehicle kilometre, well to wheel, from the heavy duty vehicles PACCAR sells in the US, Canada and the EU, and the medium duty vehicles PACCAR sells in the US and Canada between a baseline year of 2018 and a target year of 2030. This science based target is a medium term target for product use emissions based on the Sectoral Decarbonization Approach Transport Tool for below two degrees Celsius (B2DS). Note, SBTi does not currently classify the temperature ambition of Scope 3 approved targets. SBTi continues its pause on target validations & updates for medium- and heavy-truck makers recognizing there is no sectoral decarbonization approach (SDA) for transport sector allowing companies to align their use-

phase emissions targets of new road vehicles with 1.5°C pathways. PACCAR's well-below 2°C trajectory verified science-based targets are granted extensions until an SDA for transport is developed and approved. https://sciencebasedtargets.org/sectors/transport#our-updated-oems-policy

Plan for achieving target, and progress made to the end of the reporting year
Emissions intensity of PACCAR's heavy duty vehicle sold within the US, Canada, and the EU increased between 2020 and 2021 due to PACCAR's progress in reducing vehicle greenhouse gas emissions and a mixture of vehicles delivered in 2021 containing vehicle types with higher greenhouse gas emissions. An annual cycle of higher and lower emissions intensity of heavy duty vehicles will trend towards PACCAR's SBT once the mixture of alternative powertrains, including battery-electric, hydrogen fuel cell, hybrid and natural gas vehicles displace higher emission fuel. The reporting year for Int 1 is 2021, as the complete GHG emissions data for vehicle model year 2022 is not ready prior to CDP's July 2022 disclosure deadline. A short, mid, and long-term strategy and climate transition plan achieving this target are underway. PACCAR is a leader in the development of alternative powertrains, including battery-electric, hydrogen fuel cell, hybrid and natural gas. Kenworth, Peterbilt and DAF have 9 production models of zero emissions trucks in 2022 as well as hydrogen fuel cell and hydrogen internal combustion engines in development. DAF's new XF, XG and XG+ conventional trucks improve fuel efficiency by up to 10 percent and the new Kenworth T680 and Peterbilt 579 models deliver up to a seven percent fuel efficiency improvement and reduced CO2 emissions.

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?
No other climate-related targets

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	20	
To be implemented*	1	4527
Implementation commenced*	24	15029
Implemented*	25	5471
Not to be implemented	8	

C4.3b

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

Initiative category & Initiative type

Energy efficiency in buildings	Insulation

Estimated annual CO2e savings (metric tonnes CO2e)
976

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

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
26740

Investment required (unit currency – as specified in C0.4)
133700

Payback period
4-10 years

Estimated lifetime of the initiative
16-20 years

Comment
None

Initiative category & Initiative type

Energy efficiency in production processes	Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)
338

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

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
135938

Investment required (unit currency – as specified in C0.4)
271876

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
None

Initiative category & Initiative type

Energy efficiency in production processes	Electrification

Estimated annual CO2e savings (metric tonnes CO2e)
4060

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
576820

Investment required (unit currency – as specified in C0.4)
2884102

Payback period
4-10 years

Estimated lifetime of the initiative
11-15 years

Comment
None

C4.3c

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

Method	Comment
Internal incentives/recognition programs	PACCAR's six sigma and EcoDesign programs include annual monetary awards and recognition for best environmental projects including energy and emissions reduction projects.
Employee engagement	PACCAR's manufacturing locations are ISO14001 certified and include continuous environmental improvement including reducing energy use and emissions.
Financial optimization calculations	Energy and greenhouse gas reduction projects are included in PACCAR's global capital budget review process.
Compliance with regulatory requirements/standards	PACCAR's global capital budget process fast tracks regulatory compliance projects including emissions reductions and energy efficiency requirements.

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
Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon
Other, please specify (US Department of Energy - Energy Efficiency & Renewable Energy: Alternatives Fuels Data Center)

Type of product(s) or service(s)

Biofuels	Fatty acid methyl ester (FAME)

Description of product(s) or service(s)
PACCAR's MX 13 and MX 11 engines are certified to use B10/B20/B30 and XTL biofuels in Europe and B20 in the U.S. including renewable fuels. Biofuel capable unit sales represents 52% of PACCAR's total global trucks delivered.

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 (WRI GHG Protocol GHG Emissions from Transport or Mobile Sources http://www.ghgprotocol.org/calculation-tools/all-tools)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
Use stage

Functional unit used
PACCAR's MX 13 and MX 11 engines are certified to use B10/B20/B30 and XTL biofuels in Europe and B20 in the U.S. including renewable fuels.

Reference product/service or baseline scenario used
Road transport scope one fuel use for heavy duty vehicle emission factor for one liter of on-road diesel fuel vs. one liter of B20 biodiesel/diesel. https://afdc.energy.gov/fuels/biodiesel_blends.html

Life cycle stage(s) covered for the reference product/service or baseline scenario
Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
0.001

Explain your calculation of avoided emissions, including any assumptions
0.001 (metric tons C02e) emission factor difference between diesel fuel which is 0.003 vs. B20 biodiesel/diesel that is 0.002.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
52

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?
No

Name of organization(s) acquired, divested from, or merged with
<Not Applicable>

Details of structural change(s), including completion dates
<Not Applicable>

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	No	<Not Applicable>

C5.2

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

Scope 1

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
121123

Comment
None

Scope 2 (location-based)

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
171594

Comment
None

Scope 2 (market-based)

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
178892

Comment
None

Scope 3 category 1: Purchased goods and services

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
3765405

Comment
None

Scope 3 category 2: Capital goods

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
1040603

Comment
None

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

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
25549

Comment
None

Scope 3 category 4: Upstream transportation and distribution

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
1806487

Comment
None

Scope 3 category 5: Waste generated in operations

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
309

Comment
None

Scope 3 category 6: Business travel

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
11312

Comment
None

Scope 3 category 7: Employee commuting

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
45276

Comment
None

Scope 3 category 8: Upstream leased assets

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
0

Comment
None

Scope 3 category 9: Downstream transportation and distribution

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
566042

Comment
None

Scope 3 category 10: Processing of sold products

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
89387

Comment
None

Scope 3 category 11: Use of sold products

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
104471826

Comment
None

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

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
14009

Comment
None

Scope 3 category 13: Downstream leased assets

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
16136985

Comment
None

Scope 3 category 14: Franchises

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
0

Comment
None

Scope 3 category 15: Investments

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
0

Comment
None

Scope 3: Other (upstream)

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
0

Comment
None

Scope 3: Other (downstream)

Base year start
January 1 2018

Base year end
December 31 2018

Base year emissions (metric tons CO2e)
0

Comment
None

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

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)
121140

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
None

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
None

C6.3

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

Reporting year

Scope 2, location-based
149503

Scope 2, market-based (if applicable)
164645

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
None

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
CO2 emission related to CH4 and N2O from some fuel combustion and electricity purchased.

Scope(s) or Scope 3 category(ies)
Scope 1

Relevance of Scope 1 emissions from this source
Emissions are not relevant

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
<Not Applicable>

Date of completion of acquisition or merger
<Not Applicable>

Estimated percentage of total Scope 1+2 emissions this excluded source represents
0

Estimated percentage of total Scope 3 emissions this excluded source represents
<Not Applicable>

Explain why this source is excluded
N2O and CH4 emissions amount to less than a 1% change in PACCAR's overall emissions.

Explain how you estimated the percentage of emissions this excluded source represents
Most of the emission factors PACCAR uses are CO2e which include CH4 and N20 emissions. Those locations (for electricity emission factors) or fuels where we have not used CO2e emission factors have CO2e emission factors that are less than 1% larger than the emission factor used or represent far less than 1% of PACCAR's overall GHG emissions.

Source of excluded emissions
CO2 emissions from various small offices or leased facilities where energy usage data is not readily available.

Scope(s) or Scope 3 category(ies)
Scope 1
Scope 2 (location-based)

Relevance of Scope 1 emissions from this source
Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source
Emissions are not relevant

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

Relevance of Scope 3 emissions from this source
<Not Applicable>

Date of completion of acquisition or merger
<Not Applicable>

Estimated percentage of total Scope 1+2 emissions this excluded source represents
0.7

Estimated percentage of total Scope 3 emissions this excluded source represents
<Not Applicable>

Explain why this source is excluded
Based on the square footage of these small offices and leased facilities, and the average energy intensity of similar facilities operated by PACCAR, the consolidated CO2 emissions are less than 1% of PACCAR's overall CO2 emissions.

Explain how you estimated the percentage of emissions this excluded source represents
Miscellaneous other facilities operated by PACCAR that are not currently individually tracked but estimated using intensity factor per footprint (SF).

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
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
1525189

Emissions calculation methodology
Average product method

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

Please explain
Calculations are based on the number of new truck deliveries in 2022 and internal life cycle assessment (LCA) of material components of heavy-duty trucks. The internal LCA was compared with industry-wide analysis by the Argonne National Laboratory to verify data quality. Component emission factors are based on published values including those from the IPCC (2019 Refinements), UNFCCC and ICLEI. The calculated CO2e emissions from purchased goods and services are much less than 5% of overall Scope 3 emissions.

Capital goods

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
397565

Emissions calculation methodology
Spend-based method

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

Please explain
The 2022 spend for property plant and equipment including equipment acquired for operating leases less asset disposal proceeds was multiplied by the appropriate emission factor for supply chain emissions from DEFRA Environmental Reporting Guidelines. The calculated capital goods related CO2e emissions are much less than 5% of overall Scope 3 emissions.

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

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
11010

Emissions calculation methodology
Fuel-based method

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

Please explain
The IPCC default emissions factors for upstream emissions from natural gas, diesel, propane, butane, gasoline and jet fuel were applied to PACCAR's 2022 fuel usage. Global emission factors for electricity transmission and distribution losses were obtained from the World Bank online data tables and multiplied by PACCAR's location specific electricity usage. The calculated upstream fuel and energy CO2e emissions are much less than 5% of overall Scope 3 emissions.

Upstream transportation and distribution

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
2404200

Emissions calculation methodology
Hybrid method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
54

Please explain
Calculation based on PACCAR's global new truck deliveries in 2022, actual logistics miles traveled in the North America, PACCAR's 2022 EPA SmartWay composite freight emission factor, North American spend for ocean and air freight and DEFRA's Environmental Reporting Guidelines emission factors for ocean and air freight. Global emissions are extrapolated based on proportional new truck deliveries and updated global road freight CO2 emission factors. The calculated upstream transportation and distribution CO2 emissions are much less than 5% of overall Scope 3 emissions which is the threshold considered to be relevant.

Waste generated in operations

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
214

Emissions calculation methodology
Supplier-specific method

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

Please explain
PACCAR recycles or recovers energy from most of its waste with most manufacturing facilities achieving Zero Waste to Landfill status. CO2 emissions from waste are calculated based on internal tracking of manufacturing waste and EPA's warm model for emissions for waste disposed in a landfill. Emissions credits due to recycling and energy recovery are not reported, nor used in the calculation of waste related emissions, as part of a conservative approach to determining PACCAR's greenhouse gas emissions inventory. The calculated CO2 emissions from waste generated from operations are much less than 5% of overall Scope 3 emissions which is the threshold considered to be relevant.

Business travel

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
7874

Emissions calculation methodology
Supplier-specific method

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

Please explain
Air travel CO2 emissions are provided by PACCAR's global travel agent. Business travel in company owned and leased vehicles is included in Scope 1 emissions. The calculated CO2 emissions from business air travel are provided by our travel supplier and are much less than 5% of overall Scope 3 emissions which is the threshold considered to be relevant.

Employee commuting

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
50289

Emissions calculation methodology
Average data method

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

Please explain
Calculated based on CDP data for industrial and auto manufacturers multiplied by the current number of PACCAR's worldwide full time employees. Sensitivity analysis of industry specific emission factors using high, low and average values does not change the finding that CO2e emissions from employee commuting does not exceed the 5% relevancy threshold.

Upstream leased assets

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
CO2e emissions from leased assets that are operated by PACCAR are included in Scope 1 and 2 emissions reported.

Downstream transportation and distribution

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
324605

Emissions calculation methodology
Hybrid method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
60

Please explain
Calculation is based on PACCAR's global new truck deliveries in 2022, outbound finished truck delivery miles in North America, and PACCAR's 2022 EPA SmartWay composite freight emission factor. Global emissions are extrapolated based on proportional new truck deliveries and updated global road freight CO2 emission factors. The calculated CO2 emissions for downstream transportation and distribution are less than 5% of overall Scope 3 emissions, which is the threshold considered relevant.

Processing of sold products

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
82810

Emissions calculation methodology
Average data method

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

Please explain
PACCAR's products are processed further by adding trailers and equipment, or mounting winches. Estimating downstream emissions related to processing of sold products is based on the new truck deliveries multiplied by an emission factor using internal emissions intensity for similar processes. The calculated CO2 emissions downstream processing of sold products are much less than 5% of overall Scope 3 emissions.

Use of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
109724549

Emissions calculation methodology
Hybrid method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
48

Please explain
Calculations are based on PACCAR global sales mix for new truck deliveries in 2022 and PACCAR's weighted CO2 emissions intensity for heavy and medium duty vehicles sold in the US and Canada, and heavy duty vehicles sold in the EU. Vehicle emissions are as reported to US EPA, Environment and Climate Change Canada (ECCC), and the EU Environmental Agency (EEA), and other geographically specific emission factors, as well as regionally appropriate average vehicle life cycle kilometers and payloads. Product use emissions are based on CO2 emission factors for heavy and medium duty vehicle specific to PACCAR's sales mix by model and region to the extent available. Regionally specific life cycle miles or kilometers, as well as payloads are also used.

End of life treatment of sold products

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
13772

Emissions calculation methodology
Waste-type-specific method

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

Please explain
Calculations are based on the 2022 new truck deliveries and life cycle assessment modeling of recyclable content. Emission factors for non-recyclable plastics, rubber and miscellaneous materials such as textiles are based on EPA's WARM waste emissions model. The calculated CO2e emissions for the end of life treatment of product sold are much less than 5% of Scope 3 emissions and are not considered relevant.

Downstream leased assets

Evaluation status
Not relevant, calculated

Emissions in reporting year (metric tons CO2e)
785

Emissions calculation methodology
Average data method

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

Please explain
CO2 emissions for downstream leased assets is limited to the estimated emissions from downstream leased buildings which we own but do not operate based on the emissions intensity factor for each type of building use. The calculated CO2e emissions for the downstream leased assets are much less than 5% of Scope 3 emissions and are not considered relevant. Downstream CO2 emissions from truck leasing is included in Use of Sold Products above

Franchises

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
Company owned dealerships are included in Scope 1 and 2 emissions. All other dealerships are independently owned and operated.

Investments

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
Investments are related to financing of PACCAR branded truck purchases and are included in the new truck delivery estimates of "Use of Sold Product" category.

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
No other upstream CO2 emissions have been identified.

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
No other downstream CO2 emissions have been identified.

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
0.000009

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
270643

Metric denominator
unit total revenue

Metric denominator: Unit total
28819700000

Scope 2 figure used
Location-based

% change from previous year
13

Direction of change
Decreased

Reason(s) for change
Other emissions reduction activities
Change in revenue

Please explain
PACCAR's 2022 GHG emissions per unit of revenue decreased by 13% due to a 23% increase in revenue and continued effort to lower Scope 1 and 2 emissions.

Intensity figure
1.46

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
270643

Metric denominator
Other, please specify (vehicle delivered)

Metric denominator: Unit total
185900

Scope 2 figure used
Location-based

% change from previous year
12

Direction of change
Decreased

Reason(s) for change
Other emissions reduction activities

Please explain
PACCAR's 2022 greenhouse gas emissions per unit of new truck delivery decreased by 12% due to a 14% increase in truck deliveries and diligence to manage Scope 1 and 2 Emissions.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?
Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	119241	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	1898	IPCC Fourth Assessment Report (AR4 - 100 year)

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	3165
Belgium	13069
Canada	6026
Mexico	4945
Netherlands	29037
United States of America	60023
United Kingdom of Great Britain and Northern Ireland	2436
Other, please specify (Rest of the World)	2439

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)
Manufacturing	106362
Test Facilities	6475
Warehouses	1430
Other facilities including office buildings, used truck lots and PacLease facilities.	6873

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	106362	<Not Applicable>	Includes manufacturing only. Test facilities, office buildings, warehouses, and other facilities are excluded.
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	5328	5328
Belgium	10379	7639
Canada	39	761
Mexico	19643	19643
Netherlands	34324	37295
United States of America	76366	88799
United Kingdom of Great Britain and Northern Ireland	1858	3508
Other, please specify (Rest of World)	1567	1671

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)
Manufacturing	137717	152271
Test Facilities	2927	3000
Warehouses	3512	3597
Other facilities including office buildings and used truck lots and PacLease facilities.	5348	5777

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?
Yes

C7.7a

(C7.7a) Break down your gross Scope 1 and Scope 2 emissions by subsidiary.

Subsidiary name
The Truck Segment

Primary activity
Heavy vehicles

Select the unique identifier(s) you are able to provide for this subsidiary
Another unique identifier, please specify (PACCAR is a multinational company operating in three principal segments)

ISIN code – bond
<Not Applicable>

ISIN code – equity
<Not Applicable>

CUSIP number
<Not Applicable>

Ticker symbol
<Not Applicable>

SEDOL code
<Not Applicable>

LEI number
<Not Applicable>

Other unique identifier
Description of business SEC 2022 Form 10-K page 3

Scope 1 emissions (metric tons CO2e)
105908

Scope 2, location-based emissions (metric tons CO2e)
134357

Scope 2, market-based emissions (metric tons CO2e)
148984

Comment
None

Subsidiary name
The Parts Segment

Primary activity
Transportation equipment wholesale & dealing

Select the unique identifier(s) you are able to provide for this subsidiary
Another unique identifier, please specify (PACCAR is a multinational company operating in three principal segments)

ISIN code – bond
<Not Applicable>

ISIN code – equity
<Not Applicable>

CUSIP number
<Not Applicable>

Ticker symbol
<Not Applicable>

SEDOL code
<Not Applicable>

LEI number
<Not Applicable>

Other unique identifier
Description of business SEC 2022 Form 10-K page 3

Scope 1 emissions (metric tons CO2e)
1716

Scope 2, location-based emissions (metric tons CO2e)
3826

Scope 2, market-based emissions (metric tons CO2e)
3918

Comment
None

Subsidiary name
The Financial Services Segment

Primary activity
Banks

Select the unique identifier(s) you are able to provide for this subsidiary
Another unique identifier, please specify (PACCAR is a multinational company operating in three principal segments)

ISIN code – bond
<Not Applicable>

ISIN code – equity
<Not Applicable>

CUSIP number
<Not Applicable>

Ticker symbol
<Not Applicable>

SEDOL code
<Not Applicable>

LEI number
<Not Applicable>

Other unique identifier
Description of business SEC 2022 Form 10-K page 3

Scope 1 emissions (metric tons CO2e)
788

Scope 2, location-based emissions (metric tons CO2e)
665

Scope 2, market-based emissions (metric tons CO2e)
813

Comment
None

Subsidiary name
Other and Corporate

Primary activity
Heavy vehicles

Select the unique identifier(s) you are able to provide for this subsidiary
Another unique identifier, please specify (PACCAR is a multinational company operating in three principal segments)

ISIN code – bond
<Not Applicable>

ISIN code – equity
<Not Applicable>

CUSIP number
<Not Applicable>

Ticker symbol
<Not Applicable>

SEDOL code
<Not Applicable>

LEI number
<Not Applicable>

Other unique identifier
Description of business SEC 2022 Form 10-K page 3

Scope 1 emissions (metric tons CO2e)
12728

Scope 2, location-based emissions (metric tons CO2e)
10655

Scope 2, market-based emissions (metric tons CO2e)
10930

Comment
None

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	137717	152271	Includes manufacturing only. Test facilities, office buildings, warehouses, and other facilities are excluded.
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
Heavy Duty Vehicles (HDV)

Emissions intensity figure
0.000054

Metric numerator (Scope 3 emissions: use of sold products) in Metric tons CO2e
109724549

Metric denominator
t.km

Metric denominator: Unit total
2030028000000

% change from previous year
-12

Vehicle unit sales in reporting year
185900

Vehicle lifetime in years
10

Annual distance in km or miles (unit specified by column 4)
70000

Load factor
The average payload for heavy and medium duty vehicles PACCAR sold in the US and Canada was 15.6 tons in 2022 vs 15.0 tons in 2021

Please explain the changes, and relevant standards/methodologies used
The year-over-year change in total lifetime product use C02 emissions was an increase of 31% between 2021 and 2022 and a decrease of 12% when normalized for total vehicles sold by PACCAR due to a 4% increase in sales weighted, tonne-mile emissions intensity in the US and Canada, and more overall vehicles sold.

Calculations are based on PACCAR global sales mix for new trucks deliveries in 2022 and PACCAR's weighted C02 emissions intensity for heavy and medium duty vehicles sold in the US and Canada, and heavy duty vehicles sold in the EU. Vehicle emissions are as reported to US EPA, Environment and Climate Change Canada (ECCC), and the EU Environmental Agency (EEA), and other geographically specific emission factors, as well as regionally appropriate average vehicle life cycle kilometers and payloads.

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?
Increased

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	1176	Decreased	3	PACCAR's consumption of renewable energy in increased in 2022. PACCAR increased purchases of renewable energy in 2022 by 3428 MWhs compared with 2021. However, PACCAR's reported overall emissions for previous years did not subtract out the amount of renewable energy used and therefore year-over-year comparisons of reported emissions will not be impacted by the reduction of renewable energy use.
Other emissions reduction activities	25027	Decreased	9	PACCAR's production increased 14% and Energy Usage was flat increasing less than 1%, but overall Scope 1 and 2 emissions only increased 4% as work continues to de-couple GHG emissions from energy usage for production.
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output		<Not Applicable>		
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

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?

Location-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	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	No

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	554554	554554
Consumption of purchased or acquired electricity	<Not Applicable>	60244	361180	421424
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
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>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	60244	915734	975978

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	No

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
<Not Applicable>

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
<Not Applicable>

Comment
Not applicable

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
<Not Applicable>

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
<Not Applicable>

Comment
Not applicable

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
<Not Applicable>

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
<Not Applicable>

Comment
Not applicable

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
<Not Applicable>

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
<Not Applicable>

Comment
Not applicable

Oil

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
<Not Applicable>

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
<Not Applicable>

Comment
Not applicable

Gas

Heating value
LHV

Total fuel MWh consumed by the organization
427880

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

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
<Not Applicable>

Comment
None

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value
LHV

Total fuel MWh consumed by the organization
126674

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

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
<Not Applicable>

Comment
None

Total fuel

Heating value
LHV

Total fuel MWh consumed by the organization
554554

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

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
<Not Applicable>

Comment
None

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
United States of America

Sourcing method
Physical power purchase agreement (physical PPA) with a grid-connected generator

Energy carrier
Electricity

Low-carbon technology type
Wind

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
40043

Tracking instrument used
Contract

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?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2019

Comment
None

Country/area of low-carbon energy consumption
United States of America

Sourcing method
Physical power purchase agreement (physical PPA) with a grid-connected generator

Energy carrier
Electricity

Low-carbon technology type
Solar

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
19901

Tracking instrument used
Contract

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?
Yes

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
2020

Comment
None

Country/area of low-carbon energy consumption
Germany

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier
Electricity

Low-carbon technology type
Wind

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
158

Tracking instrument used
Contract

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
None

Country/area of low-carbon energy consumption
Netherlands

Sourcing method
Retail supply contract with an electricity supplier (retail green electricity)

Energy carrier
Electricity

Low-carbon technology type
Wind

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
142

Tracking instrument used
Contract

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
None

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)
6268

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]
6268

Country/area
Belgium

Consumption of purchased electricity (MWh)
52952

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]
52952

Country/area
Canada

Consumption of purchased electricity (MWh)
16878

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]
16878

Country/area
Mexico

Consumption of purchased electricity (MWh)
46438

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]
46438

Country/area
Netherlands

Consumption of purchased electricity (MWh)
84960

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]
84960

Country/area
United States of America

Consumption of purchased electricity (MWh)
194644

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]
194644

Country/area
United Kingdom of Great Britain and Northern Ireland

Consumption of purchased electricity (MWh)
9607

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]
9607

Country/area
Other, please specify (Rest of world)

Consumption of purchased electricity (MWh)
9677

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]
9677

C-TO8.5

(C-TO8.5) Provide any efficiency metrics that are appropriate for your organization's transport products and/or services.

Activity
Heavy Duty Vehicles (HDV)

Metric figure
1.46

Metric numerator
tCO2e

Metric denominator
Production: Vehicle

Metric numerator: Unit total
270643

Metric denominator: Unit total
185900

% change from previous year
-14

Please explain
PACCAR's 2022 GHG emissions per unit of new truck delivery decreased by 14% due to a 14% increase in truck deliveries combined with keeping Scope 1 and Scope 2 GHG emissions in check year-on-year in manufacturing locations and spare part distribution warehouses.

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

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
Heavy Duty Vehicles (HDV)

Metric
Sales

Technology
Vehicle using bio-fuel

Metric figure
52

Metric unit
Other, please specify (% of units delivered)

Explanation
PACCAR's MX 13 and MX 11 engines are certified to use B10/B20/B30 and XTL biofuels in Europe and B20 in the U.S. including renewable fuels. Biofuel capable unit sales represents 52% of PACCAR's total global trucks delivered.

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	None

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
Heavy Duty Vehicles (HDV)

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
70

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)
341200000

Average % of total R&D investment planned over the next 5 years
75

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan
PACCAR invests in technologies that reduce emissions such as highly fuel-efficient diesel engines, improved aerodynamics, IT capabilities, natural gas and biofuel engines, as well as next generation electric, hybrid, and hydrogen fuel cell powertrains. To develop industry-leading products and technologies, the Company makes significant investments every year. In 2022, PACCAR spent nearly 70% of the 2022 $341.2 million R&D budget on climate-related technology. PACCAR's R&D spending resulted in market leading development of alternative powertrains including battery-electric, fuel cell and hybrid commercial vehicles, for example:

Advanced Vehicles - In 2022, PACCAR is launched its multi-year SuperTruck 3 program to continue the development of its Class 8 Kenworth and Peterbilt battery-electric and fuel cell vehicles, along with its vehicle charging stations. SuperTruck 3 is a Department of Energy (DOE) initiative to develop state-of-the-art zero emissions medium- and heavy-duty trucks. The ongoing SuperTruck initiative was launched in 2009 to improve heavy-duty truck freight efficiency. Kenworth and Peterbilt successfully developed state-of-the-art vehicles in the SuperTruck and SuperTruck 2 programs.

Zero Emissions Trucks - R&D efforts include several demonstration and development projects for Kenworth, Peterbilt and DAF vehicles, including battery-electric, hydrogen fuel cell, hydrogen combustion and hybrid technologies. PACCAR is currently producing nine battery-electric Kenworth, Peterbilt and DAF truck models.

Low Carbon and Renewable Fuels – Investment in MX-13 and MX-11 engines are certified to use B10/B20/B30 and XTL biofuels in Europe and up to B20 biofuel in the U.S.

Aerodynamics - PACCAR announced industry-leading heavy-duty truck models in DAF XF, XG and XG+ trucks. The truck's streamlined design delivers up to 10% greater fuel efficiency.

It is difficult to disaggregate by technology area. Investment in low carbon activities have multiple goals, including reduction of environmental impacts. Investment expenses incurred for technology in next-generation truck models and engines, because combined they deliver goals of reducing emissions and improving fuel efficiency while also enhancing performance, reliability, and durability. The Company anticipates increasing its investment over the next 5 years. Examples of investments on applied research and development, fuel-efficient materials, and pilot demonstrations with examples in rows below.

Activity
Heavy Duty Vehicles (HDV)

Technology area

Hydrogen fuel cell

Stage of development in the reporting year
Applied research and development

Average % of total R&D investment over the last 3 years
0

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)

Average % of total R&D investment planned over the next 5 years
0

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan
The aggregated investment in the row above includes advanced vehicles - In 2022, PACCAR launched a multi-year SuperTruck 3 program to continue the development of technology for its Class 8 Kenworth and Peterbilt battery-electric and fuel cell vehicles, along with its vehicle charging stations. SuperTruck 3 is a U.S. Department of Energy (DOE) initiative to develop state-of-the-art zero emissions medium- and heavy-duty trucks. The battery-electric and fuel cell technology is key for a pathway transitioning towards zero emissions by 2050 and relates to emission reduction targets within PACCAR's climate transition plan.

Activity
Heavy Duty Vehicles (HDV)

Technology area
Materials

Stage of development in the reporting year
Pilot demonstration

Average % of total R&D investment over the last 3 years
0

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)

Average % of total R&D investment planned over the next 5 years
0

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan
The aggregated investment in the first row above includes advanced vehicles - The multi-year SuperTruck initiative was launched in 2009 by the DOE to improve heavy-duty truck freight efficiency. Kenworth and Peterbilt successfully developed state-of-the-art vehicles in the SuperTruck and SuperTruck 2 programs and continue demonstrating and testing technology related to these platforms. The development and demonstration of SuperTruck platforms for testing of next-generation advanced vehicle models is key to fuel efficiency and emission reductions aligned to PACCAR's climate transition plan.

Activity
Heavy Duty Vehicles (HDV)

Technology area
Battery electric vehicle

Stage of development in the reporting year
Small scale commercial deployment

Average % of total R&D investment over the last 3 years
0

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)

Average % of total R&D investment planned over the next 5 years
0

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan
The aggregated investment in the first row above includes PACCAR's Zero Emissions Trucks - R&D efforts include several demonstration and development projects for Kenworth, Peterbilt and DAF vehicles, including battery-electric, hydrogen fuel cell, hydrogen combustion and hybrid technologies. PACCAR is currently producing nine battery-electric Kenworth, Peterbilt and DAF truck models. Battery electric and Zero Emission Trucks are area the Company continues investing as part of PACCAR's product strategy and climate transition plan.

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
Y
PACCAR 2022 CDP Audit Verification Letter.pdf

Page/ section reference
Pages 1-3

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
81

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 location-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
Y
PACCAR 2022 CDP Audit Verification Letter.pdf

Page/ section reference
Pages 1-3

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
94

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: 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
PACCAR 2022 CDP Audit Verification Letter.pdf

Page/section reference
Page 1-3

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
96

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?
No, but we are actively considering verifying within the next two years

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.
EU ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

EU ETS

% of Scope 1 emissions covered by the ETS
14

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1 2022

Period end date
December 31 2022

Allowances allocated
3707

Allowances purchased
13407

Verified Scope 1 emissions in metric tons CO2e
17114

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment
None

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

The strategy is to reduce greenhouse gas emissions by reducing consumption of energy, and purchasing credits, if needed, or if the market circumstances are profitable to do so. Currently, energy conservation is pursued using energy management systems and the systematic replacement of process equipment with higher energy efficient models. In 2022, DAF Eindhoven facility has multiple building efficiency initiatives underway while continuing to complete energy assessments of all facilities. In the future, the storage of unused allowances will be used throughout the EU-ETS 2021-2030 trading period.

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?
Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits canceled by your organization in the reporting year.

Project type
Transport

Type of mitigation activity
Emissions reduction

Project description
PACCAR is subject to EPA's Heavy Duty Vehicle and Engine Greenhouse Gas (GHG) regulatory program, as well as Environment and Climate Change Canada's (ECCC) regulations for engines and vehicles produced by PACCAR Engine Company, and PACCAR divisions: Kenworth and Peterbilt. The U.S. regulations are found in 40 CFR 1036 for engines and 40 CFR 1037 for vehicles. PACCAR generates credits by surpassing the applicable standards in any given model year. The 2022 detailed report for Model Year 2022 PACCAR created CO2 emissions credits in the US and Canada and PACCAR retired tonnes of product use CO2 credits in excess of what was needed for regulatory compliance was not yet available as of July 26, 2023 CDP disclosure deadline.

Credits canceled by your organization from this project in the reporting year (metric tons CO2e)
0

Purpose of cancellation
Voluntary offsetting

Are you able to report the vintage of the credits at cancellation?
No

Vintage of credits at cancellation
<Not Applicable>

Were these credits issued to or purchased by your organization?
Issued

Credits issued by which carbon-crediting program
Other regulatory carbon crediting program, please specify (EPA's Heavy Duty Vehicle and Engine Greenhouse Gas (GHG) regulatory program, as well as Environment and Climate Change Canada's (ECCC) regulations for engines and vehicles.)

Method(s) the program uses to assess additionality for this project
Investment analysis
Other, please specify (Methods maintained by EPA's Heavy Duty Vehicle and Engine Greenhouse Gas (GHG) regulatory program, as well as Environment and Climate Change Canada's (ECCC) regulations for engines and vehicles)

Approach(es) by which the selected program requires this project to address reversal risk
Other, please specify (Approaches maintained by EPA's Heavy Duty Vehicle and Engine Greenhouse Gas (GHG) regulatory program, as well as Environment and Climate Change Canada's (ECCC) regulations for engines and vehicles)
No risk of reversal

Potential sources of leakage the selected program requires this project to have assessed
Market leakage
Other, please specify (As evaluated by EPA's Heavy Duty Vehicle and Engine Greenhouse Gas (GHG) regulatory program, as well as Environment and Climate Change Canada's (ECCC) regulations for engines and vehicles)

Provide details of other issues the selected program requires projects to address
In September 2011, in response to a US Presidential Memorandum issued in May 2010, EPA in coordination with NHSTA issued greenhouse gas emissions and fuel economy standards for medium and heavy duty trucks manufactured in model years 2014-2018. In October 2016, EPA and NHTSA jointly finalized Phase 2 standards for medium- and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution to reduce the impacts of climate change, while bolstering energy security and spurring manufacturing innovation.

Comment
None

C11.3

(C11.3) Does your organization use an internal price on carbon?
Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Type of internal carbon price
Shadow price

How the price is determined
Cost of required measures to achieve emissions reduction targets

Objective(s) for implementing this internal carbon price
Drive energy efficiency

Scope(s) covered
Scope 1
Scope 2
Scope 3 (downstream)

Pricing approach used – spatial variance
Uniform

Pricing approach used – temporal variance
Evolutionary

Indicate how you expect the price to change over time
One-for-one based on tonnes of CO2 emissions associated with capital investments, including increases and decreases in CO2 emissions.

Actual price(s) used – minimum (currency as specified in C0.4 per metric ton CO2e)
1

Actual price(s) used – maximum (currency as specified in C0.4 per metric ton CO2e)
1

Business decision-making processes this internal carbon price is applied to
Capital expenditure
Operations
Product and R&D

Mandatory enforcement of this internal carbon price within these business decision-making processes
Yes, for some decision-making processes, please specify (Capital budget allocation process.)

Explain how this internal carbon price has contributed to the implementation of your organization's climate commitments and/or climate transition plan
PACCAR's internal capital budgeting process includes project specific estimates of the resulting changes to CO2 emissions for both facilities and product-use projects as part of the approval process. These changes to CO2 emissions result in a second return on investment using the CO2 emissions changes as the shadow price, which can be for either decreasing or increasing emissions to better inform decision making in the context of CO2 emissions reduction goals. PACCAR's internal approval return on investment (ROI) threshold is higher than many energy efficiencies related projects can achieve, allowing the second carbon price return to help otherwise marginal investment, by PACCAR's standards, gain approval. In 2022, PACCAR is evaluating capital funding to install solar panels at the DAF head office building at the Eindhoven site producing 64 kWp, which reduces greenhouse gas emissions, but the project offered a low ROI. In 2022, PACCAR Parts has several solar panel projects under investigation in several US States with variables in utility generation emissions and business cases for the projects. Embedding a shadow price for carbon within PACCAR's capital budgeting process provides information and visibility to project specific carbon impacts to the capital budget teams at our divisions. This expands climate change awareness at both the project and facility levels, which is essential for generating facility specific emissions reductions initiatives year after year.

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
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
8

% total procurement spend (direct and indirect)
82

% of supplier-related Scope 3 emissions as reported in C6.5
99

Rationale for the coverage of your engagement
PACCAR is driven to provide its customers with the highest quality truck with the lowest lifetime operating costs especially related to fuel economy, safety, reduced emissions and next generation transport technology. PACCAR challenges all suppliers to improve vehicle fuel efficiency and reduce greenhouse gas emissions using cutting-edge technology. Active collaboration with approximately 100 suppliers, accounting for over 82% of PACCAR's total supply chain spend and around 99% of supplier related GHG emissions, is strategically focused on those suppliers who can best contribute to vehicle fuel economy improvements and reduced emissions.

Impact of engagement, including measures of success
Success is measured by the improvement in fuel economy and reduction of greenhouse gas emissions from PACCAR's trucks and will reflect in SBTi approved science-based target (SBT) reducing Scope 3, category 11 Use of Sold product, by 25% in 2030 on a 2018 baseline. Suppliers are critical partners in technology to achieve the SBT. For example, PACCAR collaboration with Faith Technologies and Schneider Electric to provide charging infrastructure solutions for customers who purchase industry-leading battery electric Kenworth and Peterbilt trucks in the United States and Canada. PACCAR and Toyota continue to collaborate on fuel cell truck development and production. PACCAR Kenworth T680 and Peterbilt 579 models featuring Toyota's hydrogen fuel cell powertrain kit planned for customer deliveries in 2024. PACCAR has invested in a strategic partnership with Aurora to develop, test and commercialize autonomous Peterbilt and Kenworth trucks. PACCAR's autonomous vehicle platform will be integrated with the Aurora self-driving technologies and customers will benefit from the autonomous vehicles' enhanced safety and operational efficiency. PACCAR is working with Cummins Inc. to offer the new Cummins X15N natural gas engine in Kenworth and Peterbilt trucks. The X15N is the first natural gas engine to be specifically designed for heavy-duty truck applications. When operating on renewable natural gas, also known as RNG or biomethane, the X15N engine will be able to achieve major reductions in the lifecycle greenhouse gas emissions of Peterbilt and Kenworth trucks. When the X15N is operating on renewable natural gas, also known as RNG or biomethane, the X15N engine will be able to achieve major reductions in the lifecycle greenhouse gas emissions of Peterbilt and Kenworth trucks. This can range from a 90 percent reduction to carbon neutral, or even carbon negative, depending on the bio-source and waste feedstock used to produce the fuel. The new X15N is capable of lower NOx levels than the 2024 EPA and CARB standards.

Comment
None

Type of engagement
Information collection (understanding supplier behavior)

Details of engagement
Collect climate-related risk and opportunity information at least annually from suppliers

% of suppliers by number
8

% total procurement spend (direct and indirect)
82

% of supplier-related Scope 3 emissions as reported in C6.5
99

Rationale for the coverage of your engagement
PACCAR has ongoing product development programs intended to address changing customer demand in the context of climate change and achieve its targeted reductions in emissions. These involve the continuing development of compliant clean diesel powertrains and the design, manufacture, and sale of alternative powertrain commercial vehicles (e.g., battery-electric, hybrid, hydrogen fuel cell, and hydrogen combustion). The pace of transition from diesel combustion to alternative powertrain commercial vehicles is highly uncertain and will be influenced by the ability of the supply chain to deliver components, including commodities and raw materials that are unique to alternative powertrain commercial vehicles.

Impact of engagement, including measures of success
Active collaboration with the approximately 100 suppliers annually, which accounts for over 80% of PACCAR's total spend and most of supplier-related scope 3 GHG emissions, is strategically focused on those suppliers who can best contribute to vehicle fuel economy improvements and reduced emissions. In addition, the top 100 suppliers are screened using the International Sustainability Standard Boards (ISSB, part of the International Financial Reporting Standards Foundation) to identify relevant climate-related sustainability issues attributed to the industry sector associated with each supplier (https://sasb.org/standards/materiality-finder/find/); as well as evaluating each suppliers' annual sustainability scoring for S&P Global CSA, Sustainalytics, and CDP Climate and noting Science-based Target Initiative (SBTi) greenhouse emission reduction targets commitments. PACCAR's Purchasing and Quality managers may then use the supplier specific sustainability information when evaluating supplier performance, contracts, and discussions during quarterly and annual reviews. PACCAR is on a pathway with suppliers of advanced technology, smart manufacturing capability, and training its industry leading labor force to deliver battery electric, hybrid, and fuel cell technology in DAF, Peterbilt, and Kenworth trucks. With supplier support, in 2022, PACCAR has in production nine industry leading battery-electric vehicle models and multiple hydrogen vehicle models in development contributing to achievement of science-based targets.

Comment
None

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Education/information sharing	Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

% of customers by number

100

% of customer - related Scope 3 emissions as reported in C6.5

100

Please explain the rationale for selecting this group of customers and scope of engagement

PACCAR provides information, training and recognition to all customers to optimize fuel economy and reduce greenhouse gas emissions of PACCAR's nameplate DAF, Peterbilt and Kenworth trucks because the driver's skills in using PACCAR advanced vehicles can reduce transport related greenhouse gas emissions significantly. For example, the delivery of a new DAF LF, CF or XF always comes with a comprehensive explanation of the vehicle's features. After everything has been explained and the keys handed over, the driver also receives a voucher for a DAF EcoDrive+ Training program. This voucher is valid for six months and the driver can use it to participate in an intensive 1-on-1 training session in their own truck. The training is provided by an instructor trained and certified by DAF. PACCAR offers all customers driver training through instructional videos, hands-on classroom Driver Academy and in-vehicle driver information centers to reduce fuel consumption and CO2 emissions, improve vehicle reliability and driver productivity, and enhance the health and safety of the driver and the environment. For example, at the start of the DAF EcoDrive training the driver is challenged to show his or her actual driving skills. During the session, time, fuel consumption and DAF Driver Performance Assistant scores are monitored. In the second stage of training, the driver receives all the theoretical information on how to make optimum use of all the DAF truck systems that enable him or her to drive as economically as possible. The final part of the DAF Driver Training is a coached driving session, during which all theoretical information is put into practice and new scores are monitored to show the improvement, which is a measure of success for each driver. Also, the DAF, Kenworth and Peterbilt Driver Performance Assistant offers interactive in-dash coaching for customers to continue improvement in driver skills on-the-job, and to provide real-time truck and fleet information on truck systems that can improve fuel economy including tire pressure, aerodynamic settings of cab roof spoilers, fuel efficient shifting, braking, and predictive cruise control.

Impact of engagement, including measures of success

Lowering GHG emissions of PACCAR trucks is influenced by the fuel efficiency of the vehicle and the skills of drivers. The performance of PACCAR trucks is measured by SBTi approved science-based target (SBT) reducing Scope 3, category 11, Use of Sold product, by 25% in 2030 on a 2018 baseline. The skills of drivers of PACCAR's DAF, Kenworth and Peterbilt trucks are part of achieving the highest possible fuel efficiency and reduction of greenhouse gas emissions. The impact of providing driver training to all PACCAR customers in the use of PACCAR's advance vehicles is improved vehicle reliability, increased driver productivity, enhanced driver safety, better fuel economy, reduced operating expense, and reduced vehicle emissions including greenhouse gas emissions. The measure of success is the fuel efficiency increase and operational safety improvement for our customers. For example, the EcoDrive+ Training programme generally takes about one day to complete and involves both theory and practical training. "Our drivers who have taken the training drive at least 10% more efficiently. That's an impressive return on investment," says Marek Gunia, Transport Director at BATIM in Poland. "I've also noticed a significant decrease in the damages of my vehicles. EcoDrive+ improves the drivers skills and their knowledge of the various vehicle systems. This makes my drivers even better professionals and noticeably happier in their work. Customer surveys track customer satisfaction including training impacts. One Kenworth customer recently noted, "The driver assist provides feedback to our drivers wherever they go, so we don't have to ride along with them to evaluate their driving. It offers them guidance in situations as they happen. We think that's a much more effective way for drivers to learn how to improve their driving. It can advise them when to shift to get optimum fuel economy. The performance assist coupled with the Kenworth T680's aerodynamics and fuel efficiency of the PACCAR MX-engine, have all contributed to the T680 delivering an average 1.2 mpg improvement in fuel economy over the other trucks in our fleet. That's a 21 percent improvement in fuel economy performance." As an impact, in 2022, Kenworth and Peterbilt new trucks are seeing up to a 7% fuel efficiency improvement and up to 10% in Europe with DAF's new line of trucks and contributing to SBT.

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

PACCAR pursues multi-stakeholder opportunities, including not only suppliers and customers, but also other value chain partners such as government agencies and universities, for collaboration to both expedite and enhance advances in road freight including vehicle electrification, improved fuel economy, zero-emissions, autonomous and advanced driver assistance technologies. As an example, Kenworth, a division of PACCAR, continued its collaboration with the Department of Energy, Mississippi State University, the National Renewable Energy Laboratory, as well as Eaton, AVL and UPS to develop important advancements in Class 8 truck aerodynamics, engine and powertrain efficiencies as part of the DOE SuperTruck 2 Project. The PACCAR Technical Center and DAF Trucks, a subsidiary of PACCAR, also participated. The project utilizes Kenworth's T680 highway flagship tractor and the fuel-efficient PACCAR MX engine. The project's target goals include the demonstration of greater than 100 percent improvement in freight efficiency over the 2009 equivalent model and achieving 55 percent engine brake thermal efficiency. While SuperTruck 2 effeciencies are applied in the market, PACCAR launched its SuperTruck 3 program to continue the development of its Class 8 Kenworth and Peterbilt battery electric and fuel cell vehicles, along with its vehicle charging stations. SuperTruck 3 is a U.S. Department of Energy initiative to develop state of the art zero emissions medium- and heavy-duty trucks. PACCAR received a $33 million matching grant for the highly selective program. "The SuperTruck 3 award underscores PACCAR's industry leadership in zero emissions commercial vehicles," said John Rich, PACCAR chief technology officer. A tangible impact of climate related engagement with government agencies and universities, Peterbilt, with the Department of Energy, achieved over 14 miles per gallon in highway driving with a full trailer with SuperTruck 2.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

Yes, climate-related requirements are 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
PACCAR requires all suppliers to be in compliance with IATF 16949 Quality System Requirements published by the Automotive Industry Action Group, Detroit MI (www.aiag.org). PACCAR expects its suppliers to comply with the standards set forth in its Supplier Code of Conduct, and all laws, rules and regulations in the countries in which they operate. PACCAR selects suppliers after detailed reviews of their operations. PACCAR conducts periodic on-site supplier visits, announced and unannounced, for various reasons, including verification and auditing of contract compliance. These expectations apply to all PACCAR suppliers, their affiliates and locations worldwide.

% 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
100

Mechanisms for monitoring compliance with this climate-related requirement
Certification
Supplier self-assessment
First-party verification
Grievance mechanism/Whistleblowing hotline
Supplier scorecard or rating

Response to supplier non-compliance with this climate-related requirement
Other, please specify (Suppliers who fail to meet these standards risk the loss of all existing and future business with PACCAR.)

Climate-related requirement
Setting a science-based emissions reduction target

Description of this climate related requirement
PACCAR is driven to provide its customers with the highest quality truck with the lowest lifetime operating costs especially related to fuel economy, safety, reduced emissions, and next generation transport technology. PACCAR challenges all suppliers to improve vehicle fuel efficiency and reduce greenhouse gas emissions using cutting-edge technology. Active collaboration with the top 100 suppliers annually is strategically focused on those suppliers who can best contribute to vehicle fuel economy improvements and reduced emissions. The top 100 suppliers are evaluated using the International Sustainability Standard Boards (ISSB, part of the International Financial Reporting Standards Foundation) to identify relevant ESG issues attributed to the industry sector associated with each supplier (https://sasb.org/standards/materiality-finder/find/); as well as evaluating each suppliers' CDP Climate responses and noting Science-based Target Initiative (SBTi) greenhouse emission reduction targets or targets commitments. PACCAR's Purchasing and Quality managers may then use the supplier specific sustainability information when evaluating supplier performance, contracts, and setting continuous improvement requirements during quarterly and annual reviews.

% suppliers by procurement spend that have to comply with this climate-related requirement
0

% suppliers by procurement spend in compliance with this climate-related requirement
26

Mechanisms for monitoring compliance with this climate-related requirement
Certification
Supplier self-assessment
First-party verification
Second-party verification
Supplier scorecard or rating

Response to supplier non-compliance with this climate-related requirement
Retain and engage

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

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)
Y
SASB-ESG-combined-report-july-2023 rev1.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
PACCAR's policies, investments, technologies, engineering, and business capability support achieving science-based targets aligned with the Paris Agreement goals. PACCAR's policy engagement and lobbying activity at the local, state, regional, and national level are centrally managed by region. For example, in the U.S., PACCAR's public affairs office in Washington, D.C. reports to the corporate General Counsel to ensure consistent alignment with overall business strategy including climate related priorities. In the EU, DAF engages in climate policy outreach through the European Automobile Manufacturer's Association (ACEA) and reports to PACCAR's President. Both PACCAR's President and General Counsel are members of PACCAR's executive operating committee ensuring consistent climate strategy across business units and geographies.

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
EPA's Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium and Heavy-Duty Engines and Vehicles

Category of policy, law, or regulation that may impact the climate
Climate change mitigation

Focus area of policy, law, or regulation that may impact the climate
Climate-related reporting
Climate-related targets
Emissions – CO2
Emissions – other GHGs

Policy, law, or regulation geographic coverage
National

Country/area/region the policy, law, or regulation applies to
United States of America

Your organization's position on the policy, law, or regulation
Neutral

Description of engagement with policy makers
PACCAR engages with United States government agencies and policymakers seeking public comment and technical input on legislative, regulatory, and other public policy issues effecting supply chains, manufacturing, sales, and operations of medium- and heavy-duty commercial vehicles. This public input is vital for elected officials and career civil servants who rely on the expertise of engineers, scientists, economists, business analysts, and other industry professionals to ensure that the public policies they are pursuing will achieve positive real-world outcomes and avoid negative unintended consequences.

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?
PACCAR established its science-based greenhouse gas emission reduction targets to meet the goals of the Paris Agreement. The Company continually monitors developments in emissions and climate change-related laws and regulations in the markets in which the Company conducts business. The Company will continue to fund capital and R&D projects to meet future emissions and certification requirements through the introduction of new technologies to our products, engines and exhaust after-treatment systems.

Specify the policy, law, or regulation on which your organization is engaging with policy makers
Regulation of the European Parliament and of the Council on the Monitoring and Reporting of CO2 Emissions from Fuel Consumption of New Heavy-Duty Vehicles.

Category of policy, law, or regulation that may impact the climate
Climate change mitigation

Focus area of policy, law, or regulation that may impact the climate
Climate-related reporting
Climate-related targets
Emissions – CO2
Emissions – other GHGs

Policy, law, or regulation geographic coverage
Regional

Country/area/region the policy, law, or regulation applies to
Belgium
Netherlands

Your organization's position on the policy, law, or regulation
Neutral

Description of engagement with policy makers
PACCAR engages with EU government agencies and policymakers seeking public comment and technical input on legislative, regulatory, and other public policy issues effecting supply chains, manufacturing, sales, and operations of medium- and heavy-duty commercial vehicles. This public input is vital for elected officials and career civil servants who rely on the expertise of engineers, scientists, economists, business analysts, and other industry professionals to ensure that the public policies they are pursuing will achieve positive real-world outcomes and avoid negative unintended consequences.

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?
PACCAR established its science-based greenhouse gas emission reduction targets to meet the goals of the Paris Agreement. The Company continually monitors developments in emissions and climate change-related laws and regulations in the markets in which the Company conducts business. The Company will continue to fund capital and R&D projects to meet future emissions and certification requirements through the introduction of new technologies to our products, engines and exhaust after-treatment systems.

Specify the policy, law, or regulation on which your organization is engaging with policy makers
Heavy-Duty Omnibus Regulation of the California Air Resources Board

Category of policy, law, or regulation that may impact the climate
Climate change mitigation

Focus area of policy, law, or regulation that may impact the climate
Climate-related reporting
Climate-related targets
Emissions – CO2
Emissions – other GHGs

Policy, law, or regulation geographic coverage
Sub-national

Country/area/region the policy, law, or regulation applies to
United States of America

Your organization's position on the policy, law, or regulation
Neutral

Description of engagement with policy makers
PACCAR engages with California government agencies and policymakers seeking public comment and technical input on legislative, regulatory, and other public policy issues effecting supply chains, manufacturing, sales, and operations of medium- and heavy-duty commercial vehicles. This public input is vital for elected officials and career civil servants who rely on the expertise of engineers, scientists, economists, business analysts, and other industry professionals to ensure that the public policies they are pursuing will achieve positive real-world outcomes and avoid negative unintended consequences.

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?
PACCAR established its science-based greenhouse gas emission reduction targets to meet the goals of the Paris Agreement. The Company continually monitors developments in emissions and climate change-related laws and regulations in the markets in which the Company conducts business. The Company will continue to fund capital and R&D projects to meet future emissions and certification requirements through the introduction of new technologies to our products, engines and exhaust after-treatment systems.

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 (Engine Manufacturers Association (EMA))

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?
No, we did not attempt to influence 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
Trade associations provide a collective industry perspective and bring additional expertise to help inform public policy debates and rulemaking activities in areas such as vehicle safety, electrification, emissions reduction, alternative fuels, tax and trade policies, automation, and driver assistance technologies. The Engine Manufacturers Association works cooperatively with regulatory agencies, including the US Environmental Protection Agency (EPA), the California Air Resources Board (ARB), the National Highway Transportation Safety Administration (NHTSA), state governments and international regulatory agencies to develop and implement cost-effective and technologically feasible emissions, fuel efficiency and safety regulations that result in fewer emissions, better fuel efficiency, and enhanced safety. EMA's President recently stated, "our members continue to increase fuel efficiency and lower greenhouse gas emission in line with standards that will continue to challenge us through the next decade. EMA members are ready to build upon these successes to achieve even greater reductions."

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding
<Not Applicable>

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
European Automobile Manufacturers Association

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?
No, we did not attempt to influence 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
Trade associations provide a collective industry perspective and bring additional expertise to help inform public policy debates and rulemaking activities in areas such as vehicle safety, electrification, emissions reduction, alternative fuels, tax and trade policies, automation, and driver assistance technologies. In their position paper, ACEA presents a ten point plan for addressing climate change risks and opportunities of road freight in Europe including industry support for reaching carbon neutrality in road freight by 2050, predictions for market share of battery electric medium and heavy-duty vehicles in Europe by 2025 and 2030, as well as fuel cell electric vehicles by 2030, recommended infrastructure targets for battery electric and fuel cell hydrogen refueling stations for 2025 and 2030, and recommendations to expedite the infrastructure roll out by providing the necessary financial incentives to support both public and private investments, as well as transport operators transition challenges.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

Describe the aim of your organization's funding
<Not Applicable>

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

C12.4

(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

Status
Complete

Attach the document
Y
paccar-2022-annual-report-final.pdf
PACCAR 10k-q4-2022.pdf

Page/Section reference
PACCAR-2022-annual-report Pages 3 to 9, 11, 13, 16, 19, 22, 25, 28, 29, 45; PACCAR 2022 Form 10-K Pages 3-13

Content elements
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment
None

Publication
In mainstream reports, incorporating the TCFD recommendations

Status
Complete

Attach the document
Y
tcfd-cdp-report-july-2023.pdf

Page/Section reference
PACCAR 2022 TCFD-CDP Report

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment
None

Publication
In voluntary sustainability report

Status
Complete

Attach the document
Y
SASB-ESG-combined-report-july-2023 rev1.pdf

Page/Section reference
SASB-ESG Annual Report pages 4-9, 14, 18-20

Content elements
Governance
Strategy
Emissions figures
Emission targets
Other metrics
Other, please specify (Global Code of Conduct; Supplier Code of Conduct)

Comment
None

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	Task Force on Climate-related Financial Disclosures (TCFD) Other, please specify (International Sustainability Standards Board (ISSB), CDP (formally climate disclosure project), and Science Based Targets initiative (SBTi))	PACCAR aligns to frameworks from four organizations for climate-related sustainability commitments and disclosures, namely, ISSB, CDP, TCFD, and SBTi. The ISSB, part of the IFRS Foundation, is developing standards with the objective of high-quality, comprehensive global baseline of sustainability disclosures, including climate-related disclosures, focused on the needs of investors and the financial markets. CDP is a not-for-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to disclose their climate-related impacts. The Financial Stability Board (FSB) created the Task-force for climate related financial disclosures (TCFD) to develop recommendations on the types of information that companies may disclose to support investors, lenders, and insurance underwriters in assessing specific set of risks—risks related to climate change. The Science Based Targets initiative (SBTi) is a global body enabling businesses to set emissions reduction targets in line with the latest climate science. The initiative is a collaboration between CDP, the United Nations Global Compact, World Resources Institute (WRI) and the World Wide Fund for Nature (WWF), and one of the We Mean Business Coalition commitments.

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	Yes, both board-level oversight and executive management-level responsibility	N/A	<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	Yes, we have endorsed initiatives only	<Not Applicable>	Other, please specify (N/A)

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
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>

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?

No

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	No, we are not taking any actions to progress our biodiversity-related commitments, but we plan to within the next two years	<Not Applicable>

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	No, we do not use indicators, but plan to within the next two years	Other, please specify (N/A)

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
No publications	<Not Applicable>	<Not Applicable>

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.

PACCAR CDP Climate Change Questionnaire responses may contain statements that are forward looking. These statements are based on current expectations and assumptions that are subject to risks and uncertainties, which may cause actual results to differ materially. A summary of risks and uncertainties is described in more detail in our periodic reports filed with the Securities and Exchange Commission (SEC). We undertake no duty to update or revise these responses whether as a result of new information, future events or otherwise. For the most recent financial, risk and other information about PACCAR, please see our SEC filings and most recent earnings release available on the Investor Relations page of www.paccar.com.

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	Director of Sustainability, PACCAR, Inc.	Other, please specify (Global Director)

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	28819700000

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.

Requesting member
The Coca-Cola Company

Scope of emissions
Please select

Scope 2 accounting method
<Not Applicable>

Scope 3 category(ies)
<Not Applicable>

Allocation level
Please select

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e

Uncertainty (±%)

Major sources of emissions

Verified
No

Allocation method
Please select

Market value or quantity of goods/services supplied to the requesting member

Unit for market value or quantity of goods/services supplied
Please select

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Customers are encouraged to request Scope 3 product use emissions during their purchasing process as greenhouse gases are in part dependent on the customer's selection of unit configurations. Customer's lifetime Scope 3 emissions are also highly dependent on customer driving practices, duty cycles, and selection of fuels including biofuels. Customers allocation of scope 1 and 2 greenhouse gas emissions can be calculated by them based on PACCAR's CDP disclosures and customer's knowledge of the number of units purchased. Unique product level allocations of scope 1 and 2 are not available.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

PACCAR's CDP disclosures

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 (See explanations for customer scope 1, 2 and 3 allocations)	See above

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

Requesting member
The Coca-Cola Company

Group type of project
Please select

Type of project
Please select

Emissions targeted
Please select

Estimated timeframe for carbon reductions to be realized
Please select

Estimated lifetime CO2e savings

Estimated payback
Please select

Details of proposal
Customer's are encouraged to discuss possible collaborations as part of their purchasing discussions with PACCAR.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

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