

**Module: Introduction****Page: Introduction**

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**CC0.1****Introduction**

Please give a general description and introduction to your organization.

CSX Corporation ("CSX"), and together with its subsidiaries, based in Jacksonville, Florida, is a premier transportation company. It provides rail-based transportation services including traditional rail service, rail-to-truck transloading services, and the transport of intermodal containers and trailers.

CSX's principal operating subsidiary, CSX Transportation, Inc., provides an important link to the transportation supply chain through its approximately 21,000 route mile network, which serves major population centers in 23 states east of the Mississippi River, the District of Columbia, and the Canadian provinces of Ontario and Quebec. It has access to over 70 ocean, river, and lake port terminals along the Atlantic and Gulf Coasts, the Mississippi River, the Great Lakes, and the St. Lawrence Seaway. The Company's intermodal business links customers to railroads via trucks and terminals. CSX also serves thousands of production and distribution facilities through track connections to approximately 240 short-line and regional railroads.

In addition to CSX Transportation, Inc., the Company's subsidiaries include CSX Intermodal Terminals, Inc., Total Distribution Services, Inc., TRANSFLO Terminal Services, Inc., CSX Technology, Inc. and other subsidiaries. CSX Intermodal Terminals owns and operates a system of intermodal terminals, predominantly in the eastern United States and also performs drayage services (the pickup and delivery of intermodal shipments) for certain CSX customers and trucking dispatch operations. TDSI serves the automotive industry with a network of world-class vehicle distribution centers and storage locations. TRANSFLO connects non-rail served customers to the many benefits of rail by transferring products between rail and trucks. CSX Technology and other subsidiaries provide support services for the Company. CSX's other holdings include CSX Real Property, Inc., a subsidiary responsible for the Company's real estate sales, leasing, acquisition and management and development activities.

The primary reporting company for purposes of the CDP is CSX Transportation, Inc. which is the principal operating subsidiary of CSX. To increase transparency, CSX has included all major subsidiaries in its greenhouse gas inventory and CDP response since 2012; this includes CSX Intermodal Terminals, TDSI, CSX Technology, TRANSFLO, and CSX Real Property, Inc. in addition to CSX Transportation, Inc.

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**CC0.2**

**Reporting Year**

Please state the start and end date of the year for which you are reporting data.

The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.

We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.

Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

**Enter Periods that will be disclosed**

Thu 01 Jan 2015 - Thu 31 Dec 2015

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**CC0.3****Country list configuration**

Please select the countries for which you will be supplying data. If you are responding to the Electric Utilities module, this selection will be carried forward to assist you in completing your response.

**Select country**

United States of America

Canada

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**CC0.4****Currency selection**

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

USD(\$)

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## CC0.6

### Modules

As part of the request for information on behalf of investors, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sub-industries, companies in the oil and gas sub-industries, companies in the information technology and telecommunications sectors and companies in the food, beverage and tobacco industry group should complete supplementary questions in addition to the main questionnaire.

If you are in these sector groupings (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will not appear below but will automatically appear in the navigation bar when you save this page. If you want to query your classification, please email [respond@cdp.net](mailto:respond@cdp.net).

If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below. If you wish to view the questions first, please see <https://www.cdp.net/en-US/Programmes/Pages/More-questionnaires.aspx>.

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## Further Information

**Module: Management**

**Page: CC1. Governance**

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## CC1.1

**Where is the highest level of direct responsibility for climate change within your organization?**

Board or individual/sub-set of the Board or other committee appointed by the Board

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## CC1.1a

**Please identify the position of the individual or name of the committee with this responsibility**

The Public Affairs Committee of the Board of Directors has oversight responsibility for environmental matters, including carbon emissions. The Audit Committee of the Board of Directors has responsibility for risk oversight and evaluation, including risks associated with energy and environmental policy. The Vice President of Public Safety, Health, and Environment (PSH&E) and the Vice President of Strategic Infrastructure are responsible for environmental policy, performance,

management, and associated risk. Their scope of responsibility includes communication with the 12-member Board on issues related to their purview. There are specific risk evaluations for Environmental Law and Regulation and Energy and Environmental Policy. The 12-member Board of Directors is composed of a diverse group of business professionals and supports the Executive Team. The Board oversees decisions made by management to support the company's long-term growth.

**CC1.2**

**Do you provide incentives for the management of climate change issues, including the attainment of targets?**

Yes

**CC1.2a**

**Please provide further details on the incentives provided for the management of climate change issues**

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
Chief Operating Officer (COO)	Monetary reward	Emissions reduction target Energy reduction target Efficiency target	Award based on meeting corporate goal of locomotive productivity and active fleet management which includes optimizing the fleet for best fuel and network efficiency. Progress toward these corporate goals will enable advancing progress towards CSX's CO2 emission intensity reduction target of 6 to 8% by 2020. Locomotive fuel accounts for 86% of CSX's Scope 1 and 2 carbon emissions; therefore, fuel efficiency targets are directly correlated to emissions intensity reductions.
Business unit managers	Monetary reward	Emissions reduction target Energy reduction target Efficiency target Behaviour change related indicator	Award based on meeting corporate goal of locomotive productivity and active fleet management which includes optimizing the fleet for best fuel and network efficiency. Progress toward these corporate goals will enable advancing progress towards CSX's CO2 emission intensity reduction target of 6 to 8% by 2020. Locomotive fuel accounts for 86% of CSX's Scope 1 and 2 carbon emissions; therefore, fuel efficiency targets are directly correlated to emissions intensity reductions.

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
Process operation managers		Emissions reduction target Energy reduction target Efficiency target Behaviour change related indicator	Award based on meeting corporate goal of locomotive productivity and active fleet management which includes optimizing the fleet for best fuel and network efficiency. Progress toward these corporate goals will enable advancing progress towards CSX's CO2 emission intensity reduction target of 6 to 8% by 2020. Locomotive fuel accounts for 86% of CSX's Scope 1 and 2 carbon emissions; therefore, fuel efficiency targets are directly correlated to emissions intensity reductions.

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**Further Information**

**Page: CC2. Strategy**

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**CC2.1**

**Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities**

Integrated into multi-disciplinary company wide risk management processes

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**CC2.1a**

**Please provide further details on your risk management procedures with regard to climate change risks and opportunities**

Frequency of monitoring	To whom are results reported?	Geographical areas considered	How far into the future are risks considered?	Comment
Annually	Board or individual/sub-set of the Board or committee appointed by the Board	CSX considers it's entire geographic operating system of 21,000 route miles located within the eastern United States, connecting population centers in 23 states east of the Mississippi River, the District of Columbia, and the Canadian provinces of Ontario and Quebec.	> 6 years	

### CC2.1b

#### Please describe how your risk and opportunity identification processes are applied at both company and asset level

At a company level, CSX uses a business risk management process to define risks and opportunities as strategic, external, or compliance based. Key business leaders own each process and report to an Executive Oversight Committee. Strategic risks and opportunities are defined as those risks and opportunities that have the potential to impede or enhance CSX's ability to achieve long-term business objectives. Environmental risks and opportunities are characterized as strategic and may include those outlined in responses to questions 5 and 6 including, for example, those associated with new technologies, availability of fuel sources, reputational risks and opportunities, and anticipated regulatory changes.

At an asset level, risks and opportunities are defined by a department level compliance based approach. Risks and opportunities at the asset level are impacted in scope by geography and may also include those outlined in response to questions 5 and 6. Most pertinent to asset level risk and opportunity identification are physical parameters such as localized changes in weather or storm frequency. To mitigate the physical risk of extreme weather, CSX has established comprehensive business continuity plans that are designed to ensure the continuity of train operations in the face of extreme weather events and are adaptable across the company's 23-state network. CSX also invests about 60% of it's annual capital spend to maintain and upgrade strategic infrastructure.

### CC2.1c

#### How do you prioritize the risks and opportunities identified?

Risks and opportunities are prioritized according to potential impact (ranging from limited to severe), likelihood of occurring (ranging from remote to expected), and velocity (or the speed at which the potential risk is approaching). Highest priority risks are defined as those with potentially severe impact and are expected to occur while lower level risks are those with limited potential impact and a remote likelihood of occurring. Highest priority opportunities are defined as those with potentially significant financial, regulatory, or operational impact and rated as likely to occur. CSX's risks and opportunities are identified as part of an integrated, company-wide approach and include those risks and opportunities defined in CSX's response to questions 5 and 6 of this response.

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**CC2.1d**

Please explain why you do not have a process in place for assessing and managing risks and opportunities from climate change, and whether you plan to introduce such a process in future

Main reason for not having a process	Do you plan to introduce a process?	Comment
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**CC2.2**

**Is climate change integrated into your business strategy?**

Yes

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**CC2.2a**

**Please describe the process of how climate change is integrated into your business strategy and any outcomes of this process**

i. How the Business Strategy has been Influenced:

CSX's strategic plan includes publicly communicating our environmental goals and the environmental benefits of rail through our earned and paid media work and responsibility programs; setting long- and short-term efficiency targets which are communicated, executed and tracked throughout our operations; and carefully considering risks and opportunities in long- and near-term commercial and network development planning and strategy. The CSX risk oversight committee monitors regulatory, operational and commercial strategic progress related to the overall risk profile which includes risks and opportunities associated with carbon emissions, and updates the Board of Directors once a year.

ii. Example of how the Business Strategy has been Influenced:

Severe winter weather in 2013 and 2014 reduced network velocity and increased expenses as CSX activated additional resources to protect network fluidity. Estimated weather impact on first quarter 2014 expense was around \$90 million dollars or six cents per share. Following that severe weather, in 2015, CSX

enhanced its weather preparedness procedures and Winter Action Plans to better address employee safety and potential impacts to customer service. CSX enhanced the pre-positioning of materials, vehicles and personnel to ensure timely response to weather events; used predictive analytics to estimate the impact of extreme temperatures; and reviewed and enhanced operating playbooks. CSX also worked with industry peers to enhance communication and planning through the critical Chicago gateway.

iii. What Climate Change Aspects have Influenced the Strategy:

It is CSX's strategy to reduce the amount of energy, fuel, and water required to move each ton of freight across company's 21,000 mile network. CSX works closely with its customers to demonstrate the option of freight rail as both a cost-effective and emission-reducing effort when compared with freight moved by highway. This strategy represents understanding of and sensitivity to the issues of fuel use and water scarcity.

iv. The Most Important Components of the Short Term Strategy that have been Influenced by Climate Change:

Operating fuel intensity reduction targets are one of the most important components of our short-term strategy. The targets are critical to further reduce the carbon intensity of our operations, while simultaneously achieving cost-based efficiency. Because about 86% of CSX's Scope 1 and 2 emissions are attributable to diesel consumed by locomotives in routine rail operations, CSX tracks carbon reduction performance through the Fuel Strategy Team. Each year this team sets annual short-term fuel consumption reduction targets. These targets are aligned with CSX's voluntary long-term commitment to reduce carbon intensity by 6-8% by 2020. These short-term goals, formalized initiatives, and tracking also help develop even longer term strategies that include the exploration of additional voluntary goal setting partnerships.

CSX utilizes multiple advanced technologies to attain higher levels of fuel efficiency in its locomotive fleet. As one example, in 2015, CSX continued to focus on improving the fuel efficiency of its locomotive fleet through Trip Optimizer (T.O.). TO has been installed on 1,788 locomotives at the end of 2015, reaching 85% of the planned locomotive installations. Through a significant training and outreach program to locomotive engineers, CSX worked in 2015 to drive utilization of TO on the locomotives that have the technology installed, saving nearly 4.7 million gallons of fuel in that year alone.

v. The Most Important Components of the Long Term Strategy that have been Influenced by Climate Change:

Intermodal is that portion of the business that most directly competes with trucks in the transportation sector. Anticipating an increase in intermodal business, CSX has taken on one of the most important components of our long term strategy, the National Gateway project - a public-private partnership CSX is leading with state and federal partners, which includes an approximately \$850 million investment to expand the intermodal capacity of key corridors by allowing double-stacking of intermodal containers. By improving the efficiency of our intermodal transport, the project will enable avoidance of 20 million tons of CO2 emissions in the project's first 30 years of operation.

In the long term, educating the public about the environmental benefits of freight rail helps to support CSX's strategic plans for long-term network growth. Corporate reputation and public perception are increasingly impacting companies' ability to do business. Those expectations dictate CSX's "license to operate" in communities across its 21,000-mile network. Environmental and energy risk includes the financial risk associated with failing to meet corporate social responsibility expectations and facing more challenges to our license to operate.

vi. How this is Gaining You Strategic Advantage over Your Competitors:

CSX is continuing to diversify its business by investing in markets with significant growth potential, particularly intermodal. CSX's merchandise and intermodal business represents 84% of CSX's total volume. Intermodal and merchandise combined revenue was more than \$9 billion in 2015, or more than three quarters of the total \$11.8 billion in revenue CSX generated for the year. At the same time, coal revenue was \$2.3 billion, less than 20 percent of total revenue. Intermodal



shipments, which capitalize on the environmental efficiency of freight rail to reduce highway congestion and carbon emissions from trucks, now represent 42 percent of CSX's portfolio by volume. Freight rail is on average, four times more fuel-efficient than trucks, so intermodal transportation significantly reduces emissions as well as highway congestion.

vii. Most Substantial Business Decisions in Reporting Year:

CSX continues to focus on improving the fluidity and capacity of the intermodal network. In 2015, CSX began construction on two critical projects for the capacity and flexibility of the intermodal network: in May 2015 on the Virginia Avenue Tunnel, in Washington, DC – a \$250 million upgrade and expansion project to reduce rail and highway congestion in the area. When completed, the new tunnel will offer double-stack and double-track capacity as well as enhanced safety. CSX also began construction in September 2015 on the Pittsburgh Intermodal Rail Terminal in Stowe Township and McKees Rocks, Pennsylvania, a more than \$60 million project which will enhance access to global markets for Western Pennsylvania businesses while providing a key terminal site between East Coast ports and the Northwest Ohio intermodal hub.

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**CC2.2b**

Please explain why climate change is not integrated into your business strategy

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**CC2.2c**

**Does your company use an internal price of carbon?**

No, and we currently don't anticipate doing so in the next 2 years

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**CC2.2d**

Please provide details and examples of how your company uses an internal price of carbon

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**CC2.3**

**Do you engage in activities that could either directly or indirectly influence public policy on climate change through any of the following? (tick all that apply)**

Direct engagement with policy makers  
Trade associations

**CC2.3a**

**On what issues have you been engaging directly with policy makers?**

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Energy efficiency	Support	CSX engages lawmakers to advocate for topics that the railroad supports, including advocating for responsible environmental legislation. One key topic of engagement is advocating for the expansion of the national freight network in order to benefit the environment and local communities by offering a surface transportation alternative that is, on average, four times less carbon intensive than other modes of land transportation and that helps relieve highway congestion. CSX advocates for this expanded network through a strong brand campaign which is designed to increase public awareness of the environmental benefits of rail, as well as direct engagement with policy makers at the local, state, and federal level. An example of this engagement is the National Gateway project, a public-private partnership through which CSX is working with federal, state, and local governments. Together, CSX and our public partners are investing approximately \$850 million to expand the environmental advantages of rail by improving intermodal capacity in key corridors via more efficient double stack intermodal operations in these areas.	As Congress considers legislation to limit emissions of carbon dioxide and other greenhouse gases, it should take into account the environmental friendliness of freight railroading. According to a recent independent study for the Federal Railroad Administration, railroads on average are four times more fuel efficient than trucks. Greenhouse gas emissions are directly related to fuel consumption. That means that moving freight by rail instead of truck reduces greenhouse gas emissions by 75 percent. Climate legislation offers an opportunity for policymakers to encourage the movement of more freight by environmentally-friendly rail and to spur the development of carbon capture and storage technology.

**CC2.3b**

**Are you on the Board of any trade associations or provide funding beyond membership?**

Yes

CC2.3c

Please enter the details of those trade associations that are likely to take a position on climate change legislation

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
Business Roundtable	Consistent	Business Roundtable (BRT) is an association of chief executive officers of leading U.S. companies with more than \$7.3 trillion in annual revenues and nearly 16 million employees. Greenhouse gas emissions, impacts of climate change, rising energy prices, and growing energy demand must be managed with thoughtful and far-sighted government policies and business strategies. BRT remains committed to a vision for America's energy future that is more diverse, more domestic, and more efficient.	CSX's position on climate legislation is consistent with the BRT. As Congress addresses legislation regarding environmental emissions, it should take into account the environmental friendliness of freight railroading, which provides the most fuel efficient method of transporting freight over land. Legislation could offer an opportunity for policymakers to encourage supply chain sustainability, including the movement of freight by environmentally-friendly rail and to spur the development of carbon capture and storage technology.
Association of American Railroads	Consistent	The Association of American Railroads (AAR) is the standard setting organization for North America's railroads. America's freight railroads operate the safest, most efficient, cost-effective and environmentally sound freight transportation system in the world. As Congress considers legislation to limit emissions of carbon dioxide and other greenhouse gases, it should take into account the environmental friendliness of freight railroading. Climate legislation offers an opportunity for policymakers to encourage the movement of freight by environmentally-friendly rail and to spur the development of carbon capture and storage technology.	CSX's position on climate legislation is consistent with the AAR. CSX understands that improving energy efficiency and maximizing clean and affordable domestic energy resources are crucial to continued economic growth, improved quality of life and environmental stewardship. Furthermore, this can help address the complex global challenge of climate concerns. Railroads, including CSX, are essential to moving these objectives forward through efficient transportation solutions, offering a decreased emissions impact compared to trucks; on average, rail is four times more efficient than highway transportation.
ACCCE	Consistent	The American Coalition for Clean Coal Electricity (ACCCE) represents energy resource providers, utilities, and companies that transport energy commodities. ACCCE is committed to a vision for America's energy future that is diverse, domestic, and efficient.	CSX ships a variety of energy products that help meet demand for new and changing options to improve U.S. energy independence. Like ACCCE, CSX supports a balanced regulatory framework that leverages the full spectrum of our abundant energy resources in pursuit of greater American energy independence and continuing economic recovery. Affordable, reliable energy is critical for the nation's future

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
			economic growth, security, and quality of life, and rail provides the most fuel efficient and safe method of transporting many of these energy sources over land.

**CC2.3d**

Do you publicly disclose a list of all the research organizations that you fund?

**CC2.3e**

Please provide details of the other engagement activities that you undertake

**CC2.3f**

**What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?**

Engagement activities are in line with our strategy. Strategy is developed by Environmental and Strategic Planning teams through 2020 sustainability goals and annual risk monitoring. It is then communicated by Federal and State Government Affairs teams, which all report to a single executive. This clear line of accountability aligns strategy development, activities, and communication. Further, CSX develops a Corporate Social Responsibility report each year that outlines our business, governance procedures, environment and safety performance, as well as interaction between the workforce, community, and value chain. The process of developing and publishing this report on an annual basis further aligns business strategy with execution and communication.

**CC2.3g**

Please explain why you do not engage with policy makers

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**Further Information**

**Page: CC3. Targets and Initiatives**

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**CC3.1**

**Did you have an emissions reduction or renewable energy consumption or production target that was active (ongoing or reached completion) in the reporting year?**

Intensity target

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**CC3.1a**

**Please provide details of your absolute target**

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions covered by target (metric tonnes CO2e)	Target year	Is this a science-based target?	Comment
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**CC3.1b**

**Please provide details of your intensity target**

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions covered by target	Target year	Is this a science-based target?	Comment
Int1	Scope 1+2 (location-based)	100%	6%	Other: metric tonnes CO2e per million revenue ton miles	2011	24.94	2020	No, and we do not anticipate setting one in the next 2 years	CSX has set a voluntary emissions intensity reduction goal of 6-8% from Base Year 2011 to Target Year 2020

**CC3.1c**

Please also indicate what change in absolute emissions this intensity target reflects

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comment
Int1	Decrease	6	No change	0	Reduction in absolute Scope 1 and 2 emissions is attributable to achieving CSX's 6-8% intensity reduction target with Base Year as 2011 and target completion in 2020. Locomotive operations represent approximately 86% of CSX GHG emissions, therefore reductions in absolute emissions are anticipated from improving locomotive fuel efficiency.

**CC3.1d**

Please provide details of your renewable energy consumption and/or production target

ID	Energy types covered by target	Base year	Base year energy for energy type covered (MWh)	% renewable energy in base year	Target year	% renewable energy in target year	Comment
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**CC3.1e**

For all of your targets, please provide details on the progress made in the reporting year

ID	% complete (time)	% complete (emissions or renewable energy)	Comment
Int1	37.5%	42%	CSX is on track to meet their emissions intensity reduction goal in Target Year 2020. Percent time complete is based on the year our public goal was set - in 2012.

**CC3.1f**

Please explain (i) why you do not have a target; and (ii) forecast how your emissions will change over the next five years

**CC3.2**

Do you classify any of your existing goods and/or services as low carbon products or do they enable a third party to avoid GHG emissions?

Yes

CC3.2a

Please provide details of your products and/or services that you classify as low carbon products or that enable a third party to avoid GHG emissions

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
Company-wide	A typical CSX freight train is on average four times more fuel efficient than highway freight transportation. A typical intermodal train can carry the cargo load of 280 trucks. As a result of this efficiency, CSX enables our customers to avoid and/or reduce their Scope 3 emissions that would otherwise be generated from more carbon-intensive modes of transportation. This equates to a 75% reduction in transportation related CO2e emissions when shippers switch from truck to rail.	Avoided emissions	Other: See Comment Box	90%		According to a recent independent study for the Federal Railroad Administration, freight transport via rail is on average four times more fuel efficient than truck. The estimated avoided emissions in calendar year 2015 for freight transport via CSX rail vs truck were calculated using the following methodology, assumptions, and emission factors: Methodology - CSX freight rail emissions were estimated using the following data: • Revenue ton-mile (RTM) data as reported in the CSX 2015 R1 Report, Schedule 755, Line 110: 229,562,353,000 • CSX 2015 Average System Fuel Efficiency: 471 RTM/gal • Percent of CSX freight volume from non-bulk business ~50% • Percent of CSX



Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
						<p>freight volume from bulk commodity business ~50% • Note: The 50% of CSX freight volume from bulk transport was not included in the avoided emissions calculation because bulk commodities cannot be easily transported via truck. To conservatively estimate emissions avoided by using rail transport instead of truck transport, only items that can be transported by both rail and truck were included in the calculations. 2015 CSX Rail Emissions: [(RTM x 0.5)/CSX System Avg Fuel Efficiency] x 10.15 kg CO2/gal x 0.001 metric tons/kg 2015 Estimated Truck Emissions: [(RTM x 0.5)/CSX System Avg Fuel Efficiency] x 4 (rail/truck equiv. factor) x 10.15 kg CO2/gal x 0.001 metric tons/kg 2015 Avoided Emissions = 2015 Estimated Truck Emissions - 2015 CSX Rail Emissions = 7,420,567 metric tonnes CO2 Assumptions: CSX assumed that rail transport is 4 times more fuel efficient than truck transport. Emission factors: An emission factor of 10.15 kg CO2/gal was used for both freight truck and rail diesel fuel consumption.</p>

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

Yes

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**CC3.3a**

Please identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO<sub>2</sub>e savings

Stage of development	Number of projects	Total estimated annual CO <sub>2</sub> e savings in metric tonnes CO <sub>2</sub> e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	0	0
Implemented*	5	185700
Not to be implemented	0	0

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**CC3.3b**

For those initiatives implemented in the reporting year, please provide details in the table below

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Transportation: fleet	CSX locomotive fuel savings initiatives are overseen by a cross-functional team called the Fuel Strategy Team. These voluntary initiatives reduce Scope 1 emissions and follow the expected life-span of a locomotive (approx. 30 years). CSX has spent more than \$2.1 billion in the last 10 years to update its locomotive fleet with newer, more fuel efficient locomotives and technologies. The company added more than 30 ultra-low emission GenSet locomotives to its fleet in the past four years. These locomotives, which are replacing older switching locomotives, have multiple diesel engines that are automatically activated as needed, helping to improve fuel efficiency by up to 25%.	4600	Scope 1	Voluntary	64000000	1500000000	1-3 years	21-30 years	Typical locomotive life is 30 years.
Process emissions reductions	Idle Reducing Technology - To reduce fuel consumption and Scope 1 emissions during idling, CSX has invested more than \$50 million since 2000 in two separate idle reducing technologies: Auxiliary Power Units (APUs) and Automated	45200	Scope 1	Voluntary	14800000	40600000	1-3 years	21-30 years	Idle reducing technology is operable for the life of the locomotive. Typical locomotive life is 30 years.

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	<p>Engine Start Stop (AESS). APUs reduce the need to idle by providing auxiliary power to a locomotive while shut down. AESS automatically shuts down the locomotive when not in use and automatically starts it when needed. CSX also trains our employees on proper locomotive shut-down rules to eliminate unnecessary idling.</p>								
Behavioral change	<p>Employee Training – CSX provides locomotive operating employees with training, education and feedback to help them operate locomotives in the most fuel efficient manner possible, to reduce Scope 1 emissions. CSX uses locomotive Event Recorder Automated Download (ERAD) technology to monitor and record train operations data and provide feedback to the engineers on how to adjust their locomotive operation to improve fuel efficiency. CSX locomotive engineers are also trained on locomotive simulators, developing best practices and</p>	48700	Scope 1	Voluntary	75000000	21000000	1-3 years	Ongoing	Employee training is repeated periodically; benefits are expected for the extent of the career of each trained engineer.

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	improving their awareness of fuel-efficient train handling.								
Process emissions reductions	CSX has implemented a plan to install Trip Optimizer technology on about 2,100 locomotives (at the end of 2015, about 1788 installs are complete) to reduce Scope 1 emissions. The Trip Optimizer is an automated locomotive cruise control device that helps drivers achieve optimal fuel burn by automatically controlling locomotive speed and acceleration in real-time, reducing driver fluctuations for increased fuel efficiency.	48200	Scope 1	Voluntary	8500000	61000000	4-10 years	Ongoing	Trip Optimizer technology is operable for the life of the locomotive. Typical locomotive life is 30 years. New locomotives are delivered with
Process emissions reductions	Trailing Unit Shutdown is an operational change rather than a technology enhancement. By shutting down the back-up locomotives that are behind the lead locomotive when they are not needed, significant fuel savings have been achieved without any cost to velocity or reliability. In 2015, CSX saved approximately 3.8 million gallons of fuel and \$12.3 million	39000	Scope 1	Voluntary	12300000	0	<1 year	Ongoing	Trailing Unit Shutdown is a permanent change in operations that does not have an end date.

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**CC3.3c**

**What methods do you use to drive investment in emissions reduction activities?**

<b>Method</b>	<b>Comment</b>
Partnering with governments on technology development	The National Gateway project is a public private partnership between CSX and the government to complete an estimated \$850 million infrastructure initiative. CSX has committed approximately \$575 million over several years with the remainder of the funding coming from state and federal sources. The National Gateway project will enhance the existing rail network to allow for increased double stack intermodal clearance and therefore better enable CSX to provide a low-carbon transportation alternative.

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**CC3.3d**

**If you do not have any emissions reduction initiatives, please explain why not**

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**Further Information**

**Page: CC4. Communication**

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**CC4.1**

**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	Status	Page/Section reference	Attach the document	Comment
In mainstream reports (including an integrated report) but have not used the CDSB Framework	Complete	Item 1A Risk Factors: pages 6-10	<a href="https://www.cdp.net/sites/2016/20/4120/Climate Change 2016/Shared Documents/Attachments/CC4.1/2015 CSX Annual Report.pdf">https://www.cdp.net/sites/2016/20/4120/Climate Change 2016/Shared Documents/Attachments/CC4.1/2015 CSX Annual Report.pdf</a>	
In voluntary communications	Complete	Page 46, 48-52	<a href="https://www.cdp.net/sites/2016/20/4120/Climate Change 2016/Shared Documents/Attachments/CC4.1/CSX 2015 CSR Report.pdf">https://www.cdp.net/sites/2016/20/4120/Climate Change 2016/Shared Documents/Attachments/CC4.1/CSX 2015 CSR Report.pdf</a>	

#### Further Information

### Module: Risks and Opportunities

#### Page: CC5. Climate Change Risks

##### CC5.1

**Have you identified any inherent climate change risks that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply**

- Risks driven by changes in regulation
- Risks driven by changes in physical climate parameters
- Risks driven by changes in other climate-related developments

##### CC5.1a

**Please describe your inherent risks that are driven by changes in regulation**

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Air pollution limits	Air pollution limits have the potential to effect CSX's customers as well as the rail industry directly. Coal fired energy generation is expected to continue to decrease in 2016 as utility providers face regulatory pressures, and abundant and relatively low cost natural gas prices have allowed natural gas fired units to serve base load, while coal is increasingly being dispatched to serve intermediate load. CSX is working to adjust its business plan to respond to the declining coal market, including streamlining the workforce, rerouting resources away from the Appalachian region, and improving productivity related	Increased operational cost	1 to 3 years	Direct	Virtually certain	Medium-high	Limits specifically targeting locomotives could potentially limit CSX's ability to realize its long-term commitment to reinvest 16-17% of revenue into infrastructure each year. The impact of coal market changes continued to be felt through 2015, as plant closures and low natural gas prices combined for a \$1.4 billion loss in CSX's coal revenue since 2011. CSX expects a similar trend in 2016: coal fired generation is expected to continue to decrease as utility providers face regulatory pressures, and abundant and	To manage the impact of regulation limiting GHG emissions, CSX is continuing to invest in a diversified portfolio and investing in emission-reducing technologies. The company now has the most diverse business portfolio in its history, with 84 percent of its business not related to coal. CSX invested more than \$2.5 billion back into its business in 2015, approximately 16 percent of which was directed at strategic projects including intermodal. Intermodal capitalizes on the environmental efficiency of long haul rail shipments – rail is four times more fuel efficient than other transportation	To support continued market expansion, CSX is constantly reinvesting in infrastructure to ensure safe and efficient transportation of freight. In 2015 alone, CSX invested \$2.5 billion into its network, with approximately 16 percent of that investment into strategic projects which include intermodal. In anticipation of potential regulation, CSX plans to invest \$40 million over five years to continue to improve the company's environmental footprint.



Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	to the coal business.						relatively low cost natural gas prices have allowed natural gas fired units to serve base load, while coal is increasingly being dispatched to serve intermediate load. For 2016, full-year coal volume is expected to be down at least 25% reflecting low natural gas prices, compared to 1.063 million carloads in 2015 representing \$2.3 billion in revenue. Since 2011, CSX has invested \$9.4 billion into its network, despite this loss of revenue.	modes. CSX is investing in its highway-to-rail (H2R) program to convert intermodal freight from highway to rail. Over the past five years, CSX invested more than \$700 million to expand and enhance its intermodal network. CSX's intermodal volume grew 4 percent in 2015, and is expected to continue growing at a rate higher than GDP. CSX continues to invest in the intermodal market. CSX is also continuing to invest in fuel-efficient locomotives.	
Uncertainty surrounding new regulation	New costly regulation may limit CSX's ability to reinvest significant resources into	Increased operational cost	1 to 3 years	Indirect (Client)	More likely than not	Medium	Since freight rail was partially deregulated by the Staggers Act in 1980, the	The best method to manage this risk is to continue investing in infrastructure to	Over the past three years, CSX invested over \$7 billion back into the business,

Risk driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>network operations, potentially decreasing service levels, which could push customers back to less environmentally-friendly forms of transporting their freight, such as trucks. For example, the federal mandate to implement positive train control will cost the industry approximately \$10 billion. CSX alone will spend at least \$2.2 billion on PTC technology, with \$1.5 billion spent by CSX to date.</p>						<p>industry has invested more than \$500 billion of their own revenue to revitalize the networks and ensure safe and efficient service. Additional regulation could severely limit the industry from continuing this trajectory. For example, the federal mandate to implement positive train control will cost the industry approximately \$10 billion. CSX alone will spend at least \$2.2 billion on PTC technology, with \$1.5 billion spent by CSX to date.</p>	<p>deliver efficient, safe, environmentally-friendly service; fuel-efficiency and emissions reduction; and a diversified portfolio. Further, it is a priority of CSX to educate customers, communities, and policymakers about the environmental and economic benefits of freight rail. CSX invested more than \$2.5 billion into its network in 2015, and is committed to re-investing 16-17% of revenues annually over the long term.</p>	<p>despite losing nearly \$1.4 billion in coal revenue. Over the long term, CSX expects an annual investment of between 16-17% of revenues. Over the past decade, CSX invested \$2.1 billion to improve the fuel efficiency of its fleet, including \$50 million for idle-reducing technologies to improve efficiency. CSX spends more than \$20 million each year on branding and corporate social responsibility activities to better educate customers, communities and policymakers about the environmental and economic</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
									benefits of freight rail.

**CC5.1b**

Please describe your inherent risks that are driven by changes in physical climate parameters

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Tropical cyclones (hurricanes and typhoons)	Any increase in the number or intensity of hurricanes or extreme weather events in the United States can negatively affect CSX's operations and business by impacting safe operating speeds, causing service interruption, or increasing	Reduction/disruption in production capacity	Up to 1 year	Direct	Unknown	Low-medium	CSX spent approximately \$440 million responding to Hurricane Katrina in 2005, including recovery of approximately 100 miles of track and repairing buildings and systems. CSX and its employees contributed more than \$1.6 million in	To mitigate the physical risk of extreme weather, CSX has established comprehensive business continuity plans that are designed to ensure the continuity of train operations in the face of extreme weather events and are adaptable across the	CSX invests more than half of its annual capital spend to maintain and upgrade infrastructure. Capital spend in 2015 was more than \$2.5 billion. CSX also invested in a pole line removal plan that places train control signal wiring underground to better protect against weather-

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	track repair and recovery cost - which would reduce CSX's productivity and service capacity.						donations and in-kind support in the aftermath of Hurricane Sandy in 2012. These provide CSX with an understanding of the future implications of this risk.	company's 23-state network. CSX decentralized its train dispatching to mitigate the risk of extreme weather by reducing the impact of any single point of failure. CSX also invested significant capital in backup systems and redundancy for data centers.	related interruptions. CSX invests nearly \$2 million annually to maintain its ability to recover IT systems that support critical business operations.
Change in temperature extremes	Changes in extreme temperatures can negatively affect our operations and infrastructure by creating a harsher work environment for employees, increasing rail maintenance costs, and impacting service by decreasing the velocity of	Reduction/disruption in production capacity	1 to 3 years	Direct	More likely than not	Low-medium	Severe winter weather in 2013 and 2014 reduced network velocity and increased expenses as CSX activated additional resources to protect network fluidity. Estimated weather impact on first quarter 2014 expense was around	Following severe weather in 2014, CSX enhanced its weather preparedness procedures and Winter Action Plan to better address employee safety and potential impacts to customer service. CSX enhanced the pre-positioning of materials,	CSX invests heavily in its network to fortify it against the impact of extreme weather events, including changes in temperature extremes like the extreme record setting low-temperatures in the northern regions of CSX's territory (e.g. Chicago, OH, NY, and New

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	operations during extreme temperature events. Most CSX employees work outdoors and their safety productivity would be impacted by extreme temperatures.						\$90 million dollars or six cents per share. The revenue impact is more challenging to quantify, but we estimate about two to three cents per share in revenue contribution that we could not recover in the first quarter due to weather disruptions. CSX has invested over \$7 billion in its network over three years, including more than \$2.5 billion in 2015 and the expectation of a similar level of investment in 2016. About 60 percent of that investment goes to maintaining and upgrading	vehicles and personnel to ensure speedy response to weather events; used predictive analytics to estimate the impact of extreme temperatures; and reviewed and enhanced operating playbooks. CSX also worked with industry peers to enhance communication and planning through the critical Chicago gateway, which suffered significant congestion and delays during the severe weather of 2013 and 2014. These changes included a implementing a multi-railroad coordination team with daily scorecards and	England) during the first quarter of 2014. Estimated weather impact on first quarter 2014 expense was around \$90 million dollars or six cents per share. The revenue impact is more challenging to quantify, but we estimate about two to three cents per share in revenue contribution that we could not recover due to weather disruptions. CSX has invested over \$7 billion in its network over three years, including \$2.5 billion in 2015 and is committed to a similar level of capital in 2016. About 60 percent of that investment goes to maintaining

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							<p>physical infrastructure and rolling stock. Approximately 25 percent of CSX's work force is dedicated to those activities. Total cost of labor and fringe in 2015 was nearly \$3.3 billion.</p>	<p>weekly alert levels that triggered specific actions for each railroad. In January 2016, CSX reported that thanks to that enhanced coordination, Chicago operations were fluid for nearly 12 straight months. Additionally, In the event of a predicted hurricane landfall, CSX takes significant precautions to protect its employees, rail traffic and infrastructure. The company has thorough and well-honed hurricane preparedness plans with specific and escalating actions undertaken as a</p>	<p>and upgrading physical infrastructure and rolling stock. Approximately 25 percent of CSX's work force is dedicated to those activities. Total labor and fringe in 2015 was nearly \$3.3 billion.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								storm approaches at local, regional and network levels.	

CC5.1c

Please describe your inherent risks that are driven by changes in other climate-related developments

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Reputation	CSX's reputation could be negatively affected by failing to meet social, political, or investor expectations regarding CSX's environmental, community, and social responsibilities which could reduce stock price or market valuation.	Reduced stock price (market valuation)	1 to 3 years	Direct	Exceptionally unlikely	High	Corporate reputation and public perception are increasingly impacting companies' ability to do business. For example, a serious business issue in Florida impacting our license to operate, could impact the jobs of more than 5,100 people representing	Managing CSX's environmental performance is a business imperative. The CSX sustainability strategy focuses on reducing CSX's environmental footprint, promoting sustainable development, and increasing engagement in our workforce and other stakeholders. Reducing our footprint includes	Branding and corporate social responsibility resources at CSX are conservatively estimated at more than \$20 million, which includes citizenship and volunteerism programs, partnerships with national and regional nonprofits, a brand campaign

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							<p>nearly \$82.4 million in state wages and investment of more than \$247 million in statewide infrastructure. Similar impacts could be felt in other states; additionally, reputational loss and loss of market share could impact the entire network.</p>	<p>reducing impacts to air, land and water by improving operational efficiency and remediating environmental issues of concern. In 2015, CSX also invested in corporate social responsibility and branding activities to ensure that key stakeholders fully understand the company's brand promise and value proposition – that freight rail is the safest, most environmentally-friendly way to transport freight over land. Voluntary emissions reporting and goal setting is important for environmental stewardship and reputation management. After achieving the goal to reduce GHG intensity by 8 percent one year ahead of schedule,</p>	<p>designed to educate viewers about the environmental benefits of rail, and education outreach. CSX has invested \$700 million over five years to improve the company's intermodal network, including education about intermodal's environmental efficiency benefits.</p>



Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								CSX is making progress toward a new goal to reduce GHG emissions intensity by 6 to 8 percent more by 2020.	
Other drivers	There is risk to CSX associated with fuel cost increases that could arise from global economic response to environmental and greenhouse gas emission concerns. Fuel costs: locomotive fuel represents approximately 86% of CSX's Scope 1 and 2 carbon emissions and is one of the most significant annual costs – in 2015, CSX spent \$957 million on fuel.	Increased operational cost	1 to 3 years	Direct	More likely than not	Medium	Fuel costs: locomotive fuel represents approximately 86% of CSX's Scope 1 and 2 carbon emissions and is one of the most significant annual costs – in 2015, CSX spent \$957 million on fuel. The magnitude of climate legislation price impacts are yet to be seen, but year-over-year changes in CSX's fuel costs indicate potential impacts. For example, fuel expenses increased \$400 million from 2011 to 2012, primarily due to an	In 2015, CSX's Fuel Strategy Team continues to evaluate new ways to improve locomotive fuel efficiency and implement the current suite of initiatives and technologies - including Trip Optimizer, Top-of-Rail lubrication, trailing and idle unit shutdown programs. CSX has invested in idle reducing technologies, including Auxiliary Power Units and Automatic Engine Start Stop technology, and employee training and education to operate as	CSX spent \$2.1 billion in the last decade to update its locomotive fleet with newer, more fuel-efficient locomotives and technologies. To reduce fuel consumption and carbon emissions during idling, CSX has invested more than \$50 million since 2000 in two idle reducing technologies – Auxiliary Power Units, which provide auxiliary locomotive power allowing the large diesel engine to shut down, and Automatic Engine Start Stop, which automatically

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							increase in average price per gallon for locomotive diesel fuel.	efficiently as possible.	shuts down the locomotive when not needed.

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CC5.1d

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

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CC5.1e

Please explain why you do not consider your company to be exposed to inherent risks driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

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CC5.1f

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

**Further Information**

**Page: CC6. Climate Change Opportunities**

**CC6.1**

**Have you identified any inherent climate change opportunities that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply**

- Opportunities driven by changes in regulation
- Opportunities driven by changes in physical climate parameters
- Opportunities driven by changes in other climate-related developments

**CC6.1a**

**Please describe your inherent opportunities that are driven by changes in regulation**

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
General environmental regulations, including planning	Rail could gain competitive edge over other less efficient modes of freight transportation as general environmental	Increased demand for existing products/services	1 to 3 years	Direct	Very likely	Medium-high	Intermodal shipments represent a significant opportunity, because they capitalize on the environmental efficiency of freight rail to	CSX continues to invest in fuel efficient technologies and environmentally responsible network expansion. CSX has invested more	CSX's commitment to the National Gateway is \$575 million of the \$850 million total cost. Over the past five years, CSX invested more than

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>regulations increase in their scope. CSX has 21,000 route miles of freight rail over 23 states east of the Mississippi River, the District of Columbia and two Canadian provinces, and is poised to accept greater traffic moving from highway to rail. Since rail is on average four times more fuel efficient than highway transport, we continue to support policy that allows CSX to partner with trucking customers using train service for long haul and</p>						<p>reduce highway congestion and carbon emissions. They now represent 42% of CSX's volume. The anticipated intermodal opportunity in the East is approximately 9 million loads that travel more than 550 miles by truck. CSX's intermodal business delivered 2.8 million units in 2015 for revenues of \$1.8 billion, to give scale to the future intermodal opportunity of approximately 9 million loads in the East, of which CSX will capitalize on a share. CSX is investing in</p>	<p>than \$2.1 billion in the last decade to upgrade its fleet with more efficient, lower emission locomotives which help positively position the company in the near and long term. CSX continues to invest in its network, particularly intermodal, through public-private partnerships such as the National Gateway, which completed phase 1 construction in 2013. It will eliminate 20 million tons of carbon emissions and 1,000 tons of particulate matter, and</p>	<p>\$700 million to enhance its intermodal network. Overall, CSX invested more than \$2.5 billion in capital into its network in 2015, and expects a similar level of investment in 2016. Over the long term, CSX expects to reinvest 16-17% of revenue annually.</p>

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	truck service for local delivery for the most fuel efficient intermodal service. A typical intermodal freight train can carry the load of more than 280 trucks. Any carbon-constraining regulation could cause customers to shift business to rail; additionally, studies have shown that future carbon emissions legislation could increase diesel costs.						education and network enhancements to capitalize on that opportunity.	save nearly 2 billion gallons of fuel. CSX communicates the environmental benefits of freight rail to customers, including being the first Class I railroad to public a carbon calculator online, to help them understand how freight rail helps reduce scope 3 emissions. CSX saves emissions each year equivalent to taking 1 million passenger cars off the road.	
Voluntary agreements	Voluntary agreements have benefits for shareholders, customers,	Wider social benefits	1 to 3 years	Direct	Virtually certain	Medium-high	By achieving our commitment to reduce GHG emissions intensity by 8%	To reduce fuel consumption and GHG emissions due to locomotive idling, CSX has	In 2015, CSX invested more \$2.5 billion into its network and expects a similar level of

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>employees, and communities; these agreements are signals of commitment that drive environmental benefits at CSX and for our customers. CSX voluntarily participated in United States Environmental Protection Agency (EPA) Climate Leaders program with emission intensity reduction target of 8% over five years (2006-2011). CSX also set a second generation goal once the Climate Leaders goal was</p>						<p>between 2006 and 2011 one year early, CSX reduced diesel consumption by 110 million gallons, saving an estimated \$250 million. CSX is making progress toward its 2011 goal to reduce GHG emissions intensity by an additional 6 to 8 percent by 2020. By the end of 2015, CSX had reduced GHG emission intensity by 2.5 percent since 2011. Progress toward this goal achieved mainly through gains in fuel efficiency is expected to produce similar cost and fuel savings achievements</p>	<p>invested more than \$50 million since 2000 in two separate idle-reducing technologies: Auxiliary Power Units, which provide auxiliary locomotive power allowing the large diesel engine to shut down, and Automatic Engine Start Stop, which automatically shuts down the locomotive when not in use. CSX also continued participating in many cross-industry initiatives in 2015 to better understand the full breadth of possibilities for environmental stewardship and emissions reduction -</p>	<p>investment in 2016. Over the long term, the company is committed to reinvesting 16 to 17 percent of revenue annually. In the next five years, CSX expects to invest more than \$40 million in new locomotive efficiency technology. In 2013, CSX donated \$2.5 million of in-kind transportation to the largest oyster restoration project ever in the Chesapeake Bay.</p>

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>achieved. CSX is making progress toward its 2011 goal to reduce GHG emissions intensity by an additional 6 to 8 percent by 2020. CSX is a member of many voluntary initiatives including City Year, The Conservation Fund, National Fish and Wildlife Foundation, Arbor Day Foundation, Carbon Disclosure Project, EPA SmartWay, US Green Building Council, and St. Johns Riverkeeper. CSX's investment in lower</p>						to the previous goal.	<p>including the Conservation Fund, Carbon Disclosure Project, EPA SmartWay, US Green Building Council, and St. Johns Riverkeeper. CSX also provided employees with training in 2015 to help them operate trains as fuel-efficiently as possible. Locomotive Event Recorder Automated Download (ERAD) devices track operator behavior and provide feedback about opportunities to improve fuel efficiency.</p>	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	emission locomotives provides cleaner air and wider benefits to the communities we serve.								
Other regulatory drivers	Rail has benefited from government investments recognizing the environmental benefits of rail. CSX will benefit from the National Gateway, a public-private partnership requiring investment from government and CSX to increase freight capacity on current lines of rail.	Increased production capacity	Up to 1 year	Direct	Virtually certain	High	Public-private partnerships are an important way to capitalize on the economic and environmental benefits of freight rail in areas that are well suited to support rail expansion. The National Gateway, an \$850 million public-private partnership to more efficiently connect mid-Atlantic ports with Midwestern consumption markets, is a significant driver of	CSX actively pursues partnership opportunities through existing public funding sources and new initiatives. CSX was awarded approximately \$275 million in public funding to assist in development and construction of the National Gateway - a system of clearance projects that will allow for double stacked intermodal trains, increasing	CSX committed \$575 million to the National Gateway project, out of a total project cost of approximately \$850 million. The National Gateway provides more than \$10 billion in public benefits in the route's first 30 years of operations – that's \$36 in public benefits for every \$1 of public money invested. Additionally, CSX reinvested more than \$2.5



Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							<p>growth for CSX and of environmental benefits across the CSX network. CSX's commitment to the National Gateway is \$575 million of the \$850 million total cost. The future financial implications of this project are \$10 billion in public benefit over the next 30 years - that's \$36 in public benefits for every \$1 of public money invested.</p>	<p>capacity and fluidity of the network. The National Gateway decreases fuel consumption by nearly 2 billion gallons and reduces carbon dioxide emissions by nearly 20 million tons. Additionally, CSX invested more than \$2.5 billion into its network in 2015 to maintain safe, efficient and environmentally friendly service, and expects a similar level of investment in 2016.</p>	<p>billion into its network in 2015 to maintain safe, efficient and environmentally friendly service, and expects a similar level of investment in 2016. In 2016, CSX expects to enter into a partnership with the State of North Carolina to build an intermodal hub in the Southeast, to which CSX expects to contribute \$150 million and the state of North Carolina may contribute \$100 million from its strategic transportation infrastructure fund. The terminal is</p>

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
									forecast to produce more than \$329 million in public benefits for the state over 30 years.

**CC6.1b**

Please describe the inherent opportunities that are driven by changes in physical climate parameters

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Induced changes in natural resources	Induced changes in the availability of natural resources, like domestic natural gas, have created an opportunity for CSX to display its agility in responding to new and evolving markets and geographies. Low natural gas prices decreased demand for coal,	New products/business services	1 to 3 years	Direct	Very likely	Medium	CSX's chemical business generated revenues of \$2.1 billion in 2015; CSX has seen a 50 percent decline in its oil business year-to-date but the low price of natural gas supports the global competitiveness of U.S. producers in the	CSX ships a wide variety of energy products, with a vital role in supporting domestic energy production to promote American energy independence. CSX has invested in its network to	CSX has invested more than \$2.1 billion over the past decade in fuel-saving locomotive technologies, and plans to invest an additional \$40 million in the next five years in technology to further improve fuel

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>but also represent huge opportunities for CSX to support the development of other fuel sources with its efficient service for all industries. CSX opportunities include components supporting shale gas extraction such as frac sand and pipe, as well as natural gas liquids and crude oil. The impact of low-cost natural gas on petrochemical production is driving major opportunities for CSX to serve fractionators and ethylene crackers.</p>						<p>other chemical markets, and the core chemicals business is expected to show moderate growth despite a challenging macroeconomic environment. Since natural gas is a primary component in used in a wide range of petrochemicals, and prices are currently at historical lows, chemical companies are seizing the opportunity by investing in US production capacity. CSX opportunities include components supporting shale gas extraction such as frac sand and pipe, as well as natural gas liquids and crude oil. The impact of</p>	<p>support this growth, including \$26 million on its River Line to support growth in chemicals and other markets. CSX is working to support its other alternative energy businesses, including solar and wind energy. CSX also created a cross-functional team to explore the potential for LNG-powered locomotives, which could take advantage of the price differential between diesel and LNG. CSX evaluated the operational, safety and economic considerations of LNG power and expects to</p>	<p>efficiency and reduce environmental impact. CSX has invested \$700 million into the intermodal market over five years, to capitalize on the estimated approximately 9 million truckloads in the East that travel 550 miles or more and are suited for conversion from highway to rail.</p>

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							low-cost natural gas on petrochemical production is driving major opportunities for CSX to serve fractionators and ethylene crackers. Two crackers for the production of plastics are expected to come online later this decade, driving longer-term growth.	revisit this proposition in the future. To support customer expansion, CSX is continuing its Select Sites certification program, which reviews potential manufacturing and distribution sites that could easily utilize rail service. As of the end of 2015, CSX had 20 available select sites in Illinois, Indiana, Ohio, Kentucky, Tennessee, Alabama, North Carolina, South Carolina and Georgia and Florida.	

CC6.1c

Please describe the inherent opportunities that are driven by changes in other climate-related developments

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Reputation	Improved reputation will positively influence recruiting, employee morale and shareholder value. CSX sustains a high employee retention rate and strives to maintain a good reputation with the general public. Public sensitivity to carbon emissions provides an opportunity to explain the environmental advantages of rail to an increasingly interested audience. Environmental awareness among community members, customers and policymakers is continuing to	Increased demand for existing products/services	Up to 1 year	Direct	Virtually certain	Medium-high	Improved reputation will positively influence recruiting, employee morale and shareholder value. For example, an independent ranking agency determined that in 2015, CSX's brand reputation is valued at \$3.38 billion. That equity increases when CSX is perceived as a positive force in communities, and decreases when CSX is perceived as detrimental. If a positive view of CSX's reputation were to cause an increase in our brand reputation of 1%, that is equal to	CSX leverages the environmental advantages of rail to enhance reputation in a variety of ways, including an advertising campaign, customer communications, public outreach and corporate giving. The advertising campaign includes a series of print, radio, and online advertisements aimed at informing engaged citizens – including influencers and policymakers – about the environmental benefits of rail. For example, that rail is four times more fuel efficient than other modes of transportation, and one CSX intermodal freight train can carry the cargo of 280	Combined, CSX commits more than \$20 million to brand reputation and corporate social responsibility activities each year. In 2015, CSX contributed more than \$16 million in community investments and in-kind support. In addition, CSX has contributed \$2.5 million in in-kind transportation moves to support the largest oyster restoration project ever in the Chesapeake Bay – transporting 125,000 cubic yards of oyster shells from Florida to Baltimore to help restore the

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>grow – presenting an opportunity for CSX to enhance its corporate reputation by further communicating the environmental advantages of rail. CSX's work to improve its environmental footprint can positively impact its brand value.</p>						<p>\$33.8M in reputational value.</p>	<p>trucks, reducing highway congestion, maintenance costs and emissions. Aligning and accelerating citizenship activities helps to support business growth and positive reputation outcomes. In 2015, CSX contributed more than \$16 million in community investments and in-kind support. Support for national and regional partnerships includes environmental organizations such as The Conservation Fund, the Nature Conservancy, Alliance for Community Trees, and others. CSX also fulfilled our Trees for Tracks program pledge to</p>	<p>historic oyster population.</p>

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								plant 21,000 trees, and recommitted an additional 21,000 trees to be planted. In 2015, CSX volunteers logged nearly 25,000 hours of community service, leading to over \$93,000 in contributions to nonprofit organizations through our Dollars for Doers employee volunteerism program.	
Changing consumer behaviour	CSX provides efficient freight transportation that is extremely competitive in current markets. We expect an increased demand for freight transportation in general and also an increased demand for transportation of renewable	Increased demand for existing products/services	Up to 1 year	Direct	Virtually certain	Medium-high	Intermodal shipments, which capitalize on the environmental efficiency of rail to reduce highway congestion, maintenance costs and emissions, now represent 42 percent of CSX's volume. The anticipated	CSX is constantly investing in its network to promote safe, efficient, and environmentally friendly service. In 2015, CSX invested more than \$2.5 billion in its network, nearly 16 percent in strategic projects including intermodal. CSX continues to	In 2015, CSX invested more than \$2.5 billion in its network, nearly 16 percent in strategic projects including intermodal. Over the past 5 years, CSX invested more than \$700 million to expand and

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>energy technologies. As the global supply chain becomes longer and more integrated, and as businesses look to increase the sustainability of their entire supply chain, freight rail becomes an ever-more attractive mode of transportation for long-haul shipments, and investments in the CSX freight rail network are making it even more competitive at shorter lengths of haul.</p>						<p>intermodal opportunity in the East is 9 million loads traveling more than 550 miles, a significant potential growth opportunity for the Eastern railroads. CSX's domestic intermodal volume grew 12% in 2015, and CSX expects intermodal shipments to continue growing between 5 and 10 percent per year.</p>	<p>invest in fuel efficiency improvements to continually enhance its ability to be the lowest-emission transportation alternative. Since 1980, CSX has taken action to improve fuel efficiency by 100%. Overall, the CO2 savings provided by CSX in one year has approximately the same environmental impact as taking one million passenger vehicles off the road. These actions help CSX maximize fuel efficiency opportunities and better educate customers about their ability to improve their carbon footprint by shipping goods via freight rail. To support customer</p>	<p>enhance its intermodal network. In 2016, CSX expects a similar capital investment, and over the long term is committed to reinvesting 16 to 17 percent of revenue annually. In the last decade, CSX has invested \$2.1 billion to upgrade its fleet with more efficient locomotives and technologies. CSX communicates the environmental advantages of rail via its more than \$20 million brand and corporate social media campaigns and via a carbon calculator that</p>



Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								expansion, CSX is continuing its Select Sites certification program, which reviews potential manufacturing and distribution sites that could easily utilize rail service. As of the end of 2015, CSX had 20 available select sites in Illinois, Indiana, Ohio, Kentucky, Tennessee, Alabama, North Carolina, South Carolina and Georgia and Florida.	allows customers to estimate potential emissions reductions associated with using freight rail transportation.

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CC6.1d

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

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CC6.1e

Please explain why you do not consider your company to be exposed to inherent opportunities driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

---

CC6.1f

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

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**Further Information**

**Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading**

**Page: CC7. Emissions Methodology**

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CC7.1

**Please provide your base year and base year emissions (Scopes 1 and 2)**

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 1	Sat 01 Jan 2011 - Sat 31 Dec 2011	5400086

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 2 (location-based)	Sat 01 Jan 2011 - Sat 31 Dec 2011	295354
Scope 2 (market-based)	Sat 01 Jan 2011 - Sat 31 Dec 2011	295354

---

**CC7.2**

**Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions**

**Please select the published methodologies that you use**

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

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**CC7.2a**

**If you have selected "Other" in CC7.2 please provide details of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions**

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**CC7.3**

**Please give the source for the global warming potentials you have used**

Gas	Reference
CO2	IPCC Second Assessment Report (SAR - 100 year)
CH4	IPCC Second Assessment Report (SAR - 100 year)
N2O	IPCC Second Assessment Report (SAR - 100 year)

---

#### CC7.4

Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data at the bottom of this page

Fuel/Material/Energy	Emission Factor	Unit	Reference
Distillate fuel oil No 2	10.15	Other: kg CO2 per gallon	See attached spreadsheet for emission factors

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#### Further Information

#### Attachments

[https://www.cdp.net/sites/2016/20/4120/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC7.EmissionsMethodology/CSX 2016 CDP Response - CC7.4 Emission Factors.xlsx](https://www.cdp.net/sites/2016/20/4120/Climate%20Change%202016/Shared%20Documents/Attachments/ClimateChange2016/CC7.EmissionsMethodology/CSX%202016%20CDP%20Response%20-%20CC7.4%20Emission%20Factors.xlsx)

**Page: CC8. Emissions Data - (1 Jan 2015 - 31 Dec 2015)**

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#### CC8.1

Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Operational control

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**CC8.2**

Please provide your gross global Scope 1 emissions figures in metric tonnes CO<sub>2</sub>e

5300099

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**CC8.3**

Does your company have any operations in markets providing product or supplier specific data in the form of contractual instruments?

Yes

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**CC8.3a**

Please provide your gross global Scope 2 emissions figures in metric tonnes CO<sub>2</sub>e

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
280588	280588	Supplier specific and residual mix emission factors were not available to quantify market-based emissions, therefore location-based Scope 2 emissions will be a proxy for market-based Scope 2 emissions until those emission factors become available.

**CC8.4**

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

No

**CC8.4a**

Please provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure

Source	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why the source is excluded
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**CC8.5**

Please estimate the level of uncertainty of the total gross global Scope 1 and 2 emissions figures that you have supplied and specify the sources of uncertainty in your data gathering, handling and calculations

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	More than 2% but less than or equal to 5%	Assumptions Extrapolation	For fuel related emissions, a portion of the fuel data relies on purchase records rather than directly metered measurements.

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 2 (location-based)	More than 2% but less than or equal to 5%	Assumptions Extrapolation	Approximately 28% of the purchased electricity data (KWH) is extrapolated from purchase records rather than meter readings.
Scope 2 (market-based)	More than 2% but less than or equal to 5%	Assumptions Extrapolation	Location-based data was used a proxy for market-based data, because supplier specific and residual mix emission factors were not available to quantify market-based emissions. Approximately 28% of the purchased electricity data (KWH) is extrapolated from purchase records rather than meter readings.

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**CC8.6**

**Please indicate the verification/assurance status that applies to your reported Scope 1 emissions**

Third party verification or assurance process in place

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**CC8.6a**

**Please provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements**

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
Annual process	Complete	Reasonable assurance	<a href="https://www.cdp.net/sites/2016/20/4120/Climate Change 2016/Shared Documents/Attachments/CC8.6a/CSX_AudRep_Final.pdf">https://www.cdp.net/sites/2016/20/4120/Climate Change 2016/Shared Documents/Attachments/CC8.6a/CSX_AudRep_Final.pdf</a>	Page 7-1/Section 7	ISO14064-3	100

#### CC8.6b

Please provide further details of the regulatory regime to which you are complying that specifies the use of Continuous Emissions Monitoring Systems (CEMS)

Regulation	% of emissions covered by the system	Compliance period	Evidence of submission

#### CC8.7

Please indicate the verification/assurance status that applies to at least one of your reported Scope 2 emissions figures

Third party verification or assurance process in place

#### CC8.7a

Please provide further details of the verification/assurance undertaken for your location-based and/or market-based Scope 2 emissions, and attach the relevant statements



Location-based or market-based figure?	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 2 emissions verified (%)
Location-based	Annual process	Complete	Reasonable assurance	<a href="https://www.cdp.net/sites/2016/20/4120/Climate%20Change%202016/Shared%20Documents/Attachments/CC8.7a/CSX_AudRep_Final.pdf">https://www.cdp.net/sites/2016/20/4120/Climate Change 2016/Shared Documents/Attachments/CC8.7a/CSX_AudRep_Final.pdf</a>	Page 7-1/Section 7	ISO14064-3	100

#### CC8.8

Please identify if any data points have been verified as part of the third party verification work undertaken, other than the verification of emissions figures reported in CC8.6, CC8.7 and CC14.2

Additional data points verified	Comment
Year on year emissions intensity figure	Emissions intensity figures are verified during 3rd party verification of annual GHG Inventory

#### CC8.9

Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

#### CC8.9a

Please provide the emissions from biologically sequestered carbon relevant to your organization in metric tonnes CO2

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**Further Information**

**Page: CC9. Scope 1 Emissions Breakdown - (1 Jan 2015 - 31 Dec 2015)**

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**CC9.1**

**Do you have Scope 1 emissions sources in more than one country?**

Yes

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**CC9.1a**

**Please break down your total gross global Scope 1 emissions by country/region**

Country/Region	Scope 1 metric tonnes CO2e
United States of America	5298699
Canada	1400

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**CC9.2**

**Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)**

By GHG type  
By activity

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**CC9.2a**

Please break down your total gross global Scope 1 emissions by business division

Business division	Scope 1 emissions (metric tonnes CO2e)
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**CC9.2b**

Please break down your total gross global Scope 1 emissions by facility

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude
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**CC9.2c**

Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 emissions (metric tonnes CO2e)
CO2	5246685
CH4	40906
N2O	12386
HFCs	122

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#### CC9.2d

Please break down your total gross global Scope 1 emissions by activity

Activity	Scope 1 emissions (metric tonnes CO2e)
Stationary Combustion Sources	49867
Mobile Combustion Sources	5246176
Landfills	3157
Refrigerants	122
Oil/Water Separators	777

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#### Further Information

**Page: CC10. Scope 2 Emissions Breakdown - (1 Jan 2015 - 31 Dec 2015)**

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#### CC10.1

Do you have Scope 2 emissions sources in more than one country?

Yes

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**CC10.1a**

**Please break down your total gross global Scope 2 emissions and energy consumption by country/region**

<b>Country/Region</b>	<b>Scope 2, location-based (metric tonnes CO2e)</b>	<b>Scope 2, market-based (metric tonnes CO2e)</b>	<b>Purchased and consumed electricity, heat, steam or cooling (MWh)</b>	<b>Purchased and consumed low carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)</b>
United States of America	280323	280323	568974	
Canada	265	265	1318	

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**CC10.2**

**Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)**

By activity

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**CC10.2a**

**Please break down your total gross global Scope 2 emissions by business division**

Business division	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
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**CC10.2b**

Please break down your total gross global Scope 2 emissions by facility

Facility	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
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**CC10.2c**

Please break down your total gross global Scope 2 emissions by activity

Activity	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Purchased Electricity	280588	280588

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**Further Information**

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**CC11.1**

**What percentage of your total operational spend in the reporting year was on energy?**

More than 20% but less than or equal to 25%

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**CC11.2**

**Please state how much heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year**

Energy type	Energy purchased and consumed (MWh)
Heat	0
Steam	0
Cooling	0

---

**CC11.3**

**Please state how much fuel in MWh your organization has consumed (for energy purposes) during the reporting year**

20966674

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**CC11.3a**

**Please complete the table by breaking down the total "Fuel" figure entered above by fuel type**

Fuels	MWh
Distillate fuel oil No 2	20414506
Motor gasoline	330538
Jet kerosene	8733
Propane	75087
Natural gas	127367
Other: Used Oil	10443

---

**CC11.4**

Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor in the market-based Scope 2 figure reported in CC8.3a

Basis for applying a low carbon emission factor	MWh consumed associated with low carbon electricity, heat, steam or cooling	Comment
No purchases or generation of low carbon electricity, heat, steam or cooling accounted with a low carbon emissions factor	0	

---

**CC11.5**

Please report how much electricity you produce in MWh, and how much electricity you consume in MWh



Total electricity consumed (MWh)	Consumed electricity that is purchased (MWh)	Total electricity produced (MWh)	Total renewable electricity produced (MWh)	Consumed renewable electricity that is produced by company (MWh)	Comment
570292	570292	0	0	0	

#### Further Information

Page: **CC12. Emissions Performance**

#### CC12.1

How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?

Decreased

#### CC12.1a

Please 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

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Emissions reduction activities	3.2	Decrease	Locomotive diesel fuel emission reduction activities implemented during calendar year 2015 decreased absolute emissions by approximately 185,700 metric tonnes CO <sub>2</sub> e. The total Scope 1 and Scope 2 emissions in 2014 was 5,840,133 metric tonnes CO <sub>2</sub> e, therefore the percent emissions reduction was estimated as $(185,700/5,840,133) \times 100 = 3.2\%$ .
Divestment			
Acquisitions			

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Mergers			
Change in output			
Change in methodology			
Change in boundary			
Change in physical operating conditions			
Unidentified			
Other			

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**CC12.1b**

**Is your emissions performance calculations in CC12.1 and CC12.1a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Location-based

---

**CC12.2**

**Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue**

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator: Unit total revenue	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
0.0004724992	metric tonnes CO2e	11811000000	Location-based	2.50	Increase	The increase is attributable to the 6.7% decrease in total revenue and 4.4% decrease in absolute emissions. Absolute emissions decreased due to emissions reduction activities.

### CC12.3

Please provide any additional intensity (normalized) metrics that are appropriate to your business operations

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
24.31	metric tonnes CO2e	Other: million revenue ton-mile	229562	Location-based	2.07	Increase	Economic declines in business caused the emissions intensity figure to increase, however, absolute emissions decreased due to emissions reduction activities.

### Further Information

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**CC13.1**

**Do you participate in any emissions trading schemes?**

No, and we do not currently anticipate doing so in the next 2 years

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**CC13.1a**

Please complete the following table for each of the emission trading schemes in which you participate

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO <sub>2</sub> e	Details of ownership

---

**CC13.1b**

What is your strategy for complying with the schemes in which you participate or anticipate participating?

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**CC13.2**

**Has your organization originated any project-based carbon credits or purchased any within the reporting period?**

No

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**CC13.2a**

Please provide details on the project-based carbon credits originated or purchased by your organization in the reporting period

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes of CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits cancelled	Purpose, e.g. compliance
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**Further Information**

**Page: CC14. Scope 3 Emissions**

**CC14.1**

**Please account for your organization’s Scope 3 emissions, disclosing and explaining any exclusions**

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Relevant, calculated	1282339	Emissions were estimated using the WRI/WBCSD GHG Protocol Scope 3 Evaluator Tool. The online tool is based on the Quantis Suite 2.0 software. The tool estimates emissions in terms of expenditures in a given economic sector, using environmental input-output datasets based on the World Input-Output Database (WIOD) and the Open IO Database. Since these supply chain emission estimates are rough approximations based on simplified approaches, they will not be included in CSX's GHG Inventory.	0.00%	It is important to note that emissions from purchased goods and services are not included in CSX's GHG inventory because they are rough approximations based on simplified approaches.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			CSX continues to work to understand emission sources in the supply chain.		
Capital goods	Relevant, calculated	1757328	Emissions were estimated using the WRI/WBCSD GHG Protocol Scope 3 Evaluator Tool. The online tool is based on the Quantis Suite 2.0 software. The tool estimates emissions in terms of expenditures in a given economic sector, using environmental input-output datasets based on the World Input-Output Database (WIOD) and the Open IO Database. Since these supply chain emission estimates are rough approximations based on simplified approaches, they will not be included in CSX's GHG Inventory. CSX continues to work to understand emission sources in the supply chain.	0.00%	It is important to note that emissions from capital goods are not included in CSX's GHG inventory because they are rough approximations based on simplified approaches.
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Not relevant, explanation provided				All of CSX's fuel and energy related activities are included in reported Scope 1 and 2 emission sources.
Upstream transportation and distribution	Relevant, not yet calculated				CSX does purchase goods and services for the purpose of maintaining operations throughout its network. There are emissions associated with the manufacturing and delivery of these products. This emission source has not yet been calculated for inclusion in the greenhouse gas inventory.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Waste generated in operations	Relevant, calculated	154865	Activity data sources for waste generated in operations were the annual total mass of waste (short tons) and the proportion of waste being landfilled, recycled, and incinerated provided by the CSXT Manager Environmental Programs – Waste. The Average-Data Method outlined in the WRI/WBCSD GHG Protocol Technical Guidance for Calculating Scope 3 Emissions (Version 1.0, April 2013) was used to quantify emissions. Emission factors were obtained from the EPA Waste Reduction Model (WARM) Version 13 (Management Practices & Background Documents, March 2015). Only end-of-life process emission factors were used from the WARM documentation. For landfilled waste, the emission factor associated with mixed municipal solid waste (MSW) material was used. For recycled waste, emissions from material recovery in preparation for recycling were assumed to have been allocated to the recycled material, therefore, the emission factor used for recycled waste was zero MTCO2e/short ton. For incinerated waste, the emission factor associated with mixed MSW material was used. CSX wastes were assumed to be composed of mixed MSW and mixed recyclables because it was difficult to determine all the types of waste generated in operations.	100.00%	
Business travel	Relevant, calculated	59222	Employee Business Travel activity data sources were personal vehicle mileage, rental car mileage, taxi/shuttle mileage and air travel mileage. GHG emissions were calculated using emission factors and GWP values from the US EPA Center for Corporate Climate Leadership GHG Emission Factors Hub, WRI GHG Protocol, and WRI GHG Emission Factors Compilation (April 2014). Activity data quality is overall reasonable and dependable. Personal vehicle mileage is managed by CSX Accounts Payable	90.00%	

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			<p>and obtained from employee expense reports and Mileage Reimbursement Plan records. Rental car mileage is managed by CSX's rental car vendor, who tracks/provides annual rental vehicle mileage for all CSX employees. Taxi/Shuttle mileage is managed by CSX Director of Purchasing Services, who obtains total mileage and average fuel economies from taxi/shuttle companies. Annual air travel mileage is managed by CSX's travel agency, who tracks/provides the total annual air travel mileage for all CSX employees. Employee business travel GHG emissions were calculated using calculation methodologies from the US EPA Climate Leaders GHG Inventory Protocol and WRI GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard. The following assumptions were made: (1) Personal vehicle mileage – employee vehicles used for business travel were assumed to be gasoline light duty trucks, model years between 2005-2015 with an average fuel economy of 16.2 mpg. (2) Rental vehicle mileage – rental vehicles were assumed to be intermediate-sized passenger cars, model years 2010-2015, with an average fuel economy of 22.5 mpg. (3) Taxi/Shuttle mileage – Taxi/shuttle vehicles were assumed to be vans, SUVs, and trucks in the Light Duty Truck EPA classification with an average fuel economy of 16.2 mpg. (4) Air Travel Mileage – The airline travel distance (i.e. long haul, medium haul, or short haul) for each trip was not available, therefore the emission factors were selected based on the "Distance Not Known" category of the EPA Climate Leaders Core Module Guidance for Optional Emissions from Commuting, Business Travel and Product Transport (May 2008)</p>		
Employee commuting	Relevant, calculated	112160	Employee commute mileage was obtained from the employee work and home zip codes. Mileage was determined based on the	69.00%	



Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			<p>direct line distance between work and home zip codes. GHG emissions were calculated using emission factors, average fuel economies, and GWP values from the US EPA Center for Corporate Climate Leadership GHG Emission Factors Hub, WRI GHG Protocol, and WRI GHG Emission Factors Compilation (April 2014). Exact employee commuting mileage was not available. CSX Corporate Human Resources was able to provide employee work and home zip codes to estimate the commuting mileage. Since there were over 13,000 unique zip code locations, it was impractical to manually obtain the driving distance between each employee home and work zip code. Mileage was determined based on the direct line distance between work and home zip codes by converting zip code data into the latitude and longitude of the geographic center of the zip code location. The direct line distance between employee work and home locations was calculated using an Excel formula obtained from <a href="http://www.cpearson.com/excel/LatLong.aspx">http://www.cpearson.com/excel/LatLong.aspx</a> and <a href="http://bluemm.blogspot.com/2007/01/excel-formula-tocalculatedistance.html">http://bluemm.blogspot.com/2007/01/excel-formula-tocalculatedistance.html</a>. Zip code data was converted into the latitude and longitude of the geographic center of the zip code location using the United States ZIP Code Database. The calculated distance was multiplied by the number of employees who lived and worked in those zip codes and by the number of commutes per year. Commuting was assumed to include two commuting trips per day, 5 days a week, 48 weeks per year (considering holidays &amp; vacations), for a total of 480 commutes per employee per year. The average one-way commuting distance was 18.93 miles. This average was applied to employees whose commute could not be accurately calculated (i.e. work and/or home zip code not available or calculated</p>		

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			distance was over 100miles). Calculated distances that were over 100 miles for a one-way commute were not used because it was not realistic for a 5-day a week commute. Employee vehicles used for commuting were assumed to be gasoline intermediate-sized passenger cars, model years between 2005-2016, with an average fuel economy of 22.5mpg.		
Upstream leased assets	Not relevant, explanation provided				While CSX occasionally leases properties from third parties, this represents a very limited emissions source. Emissions from these properties would mainly be attributable to purchased electricity for an office environment.
Downstream transportation and distribution	Not relevant, explanation provided				CSX is a transportation company and so our "sold products" are transportation services that are fully accounted for as part of Scope 1 emissions. Any transportation of a customer's commodity that occurs after the completion of CSX's transportation is the Scope 3 emissions source of the customer.
Processing of sold products	Not relevant, explanation provided				CSX is a transportation company and so our "sold products" are transportation services that are fully accounted for as part of

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					Scope 1 emissions. "Processing of" these sold transportation services is not relevant to our business.
Use of sold products	Not relevant, explanation provided				CSX is a transportation company and so our "sold products" are transportation services that are fully accounted for as part of Scope 1 emissions. "Use of" these transportation services are already counted as part of CSX's Scope 1 emissions.
End of life treatment of sold products	Not relevant, explanation provided				CSX is a transportation company and so our "sold products" are transportation services that are fully accounted for as part of Scope 1 emissions. "End of life treatment" of these transportation services is not relevant to our business.
Downstream leased assets	Not relevant, explanation provided				While CSX occasionally leases owned properties to third parties, this represents a very limited emissions source, in consideration of size, influence, and risk to the Company. Emissions from ownership of these properties would mainly be attributable to purchased

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					electricity, a Scope 2 source for the tenant of the property.
Franchises	Not relevant, explanation provided				CSX does not have any franchises.
Investments	Relevant, not yet calculated				CSX has an extensive network of investments whose potential emissions have not yet been calculated for inclusion in the GHG inventory.
Other (upstream)	Not evaluated				
Other (downstream)	Not evaluated				

**CC14.2**

**Please indicate the verification/assurance status that applies to your reported Scope 3 emissions**

Third party verification or assurance process in place

**CC14.2a**

**Please provide further details of the verification/assurance undertaken, and attach the relevant statements**

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 3 emissions verified (%)
Annual process	Complete	Reasonable assurance	<a href="https://www.cdp.net/sites/2016/20/4120/Climate%20Change%202016/Shared%20Documents/Attachments/CC14.2a/CSX_AudRep_Final.pdf">https://www.cdp.net/sites/2016/20/4120/Climate Change 2016/Shared Documents/Attachments/CC14.2a/CSX_AudRep_Final.pdf</a>	Page 7-1/Section 7	ISO14064-3	10

### CC14.3

Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?

Yes

### CC14.3a

Please identify the reasons for any change in your Scope 3 emissions and for each of them specify how your emissions compare to the previous year

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Business travel	Change in output	7.79	Increase	Business travel increased in 2015 due to increased in-person meetings where teleconference was not a suitable substitution.

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Employee commuting	Change in output	2.39	Decrease	In 2015, the number of commuting employees decreased by approximately 3% compared to 2014. This attributes to the decrease in employee commuting emissions.
Waste generated in operations	Change in output	188	Increase	In 2015 CSX generated more landfilled waste due to increased construction and demolition activities to improve operating efficiency.

#### CC14.4

**Do you engage with any of the elements of your value chain on GHG emissions and climate change strategies? (Tick all that apply)**

Yes, our suppliers  
Yes, our customers

#### CC14.4a

**Please give details of methods of engagement, your strategy for prioritizing engagement and measures of success**

i. Method of Engagement:

CSX participates in the CDP Supply Chain. In 2015, eighty of CSX's largest suppliers were asked to identify the proportion of their greenhouse gas emissions that they can attribute to business with CSX. CSX plans to extend this effort to a greater number of suppliers in the future. In addition, CSX is providing new opportunities for customers to understand how shipping their goods by rail will benefit their business. These customer forums allow companies to collaborate, work through logistic challenges that occur when changing shipping methods, and quantify the sustainability benefit that is provided by CSX. CSX also gains powerful insight from the results of its Voice of the Customer Survey results.

ii. Strategy for Prioritizing Engagements:

CSX has chosen to engage both with its suppliers and customers. CSX has high expectations of its suppliers in areas of ethics, compliance, and environmental stewardship. Engagement on GHG emissions and risks and opportunities around climate change is an extension of that expectation and a method for CSX to evaluate risk within the supply chain. Because CSX offers a mode of land transportation that is, on average four times more fuel efficient than trucks, the company is well-poised to expand services to companies who are looking to reduce the emissions associated with their upstream and downstream transportation. CSX is working with its customers as partners in the supply chain, with the goal of reducing the environmental footprint of freight transportation by the conversion of highway transportation to rail transportation.

iii. Measures of Success:

CSX is at the beginning of the process to fully engage its value chain and so, is still defining what the measures of success will be. CSX currently evaluates its suppliers according to safety, compliance, quality standards, and sustainability and makes recommendations for future improvements. CSX works with customers to move freight from highway to rail and continually strives to increase the value customers feel by shipping their goods with CSX. Success in gaining that value is determined by increased rates of conversion from highway to rail and by results of the J.D. Power Customer Satisfaction survey. In 2002, CSX launched a customer satisfaction assessment program where customers can share their feedback and provide improvement suggestions. The company uses an independent firm to survey customers on a wide range of factors that influence their sense of satisfaction. These factors include speed and consistency of service, problem resolution and ease of order placement. In 2012, CSX received its highest score ever from customers, highlighting sustained operating success. The main driver of the increase in total score was the progress CSX has made in local service delivery.

**CC14.4b**

**To give a sense of scale of this engagement, please give the number of suppliers with whom you are engaging and the proportion of your total spend that they represent**

Number of suppliers	% of total spend (direct and indirect)	Comment
80	50%	CSX is participating in CDP Supply Chain for the fourth year. Suppliers were asked to identify the proportion of their greenhouse gas emissions that they can attribute to business with CSX.

**CC14.4c**

**If you have data on your suppliers' GHG emissions and climate change strategies, please explain how you make use of that data**

How you make use of the data	Please give details
Use in supplier scorecards	CSX currently evaluates its suppliers according to safety, compliance, quality standards, and sustainability; and makes recommendations for future improvements.
Managing the impact of regulation in the supply chain	While CSX is at the beginning of the process to fully engage its value chain in management of its GHG emissions and allocation of those emissions to CSX, we anticipate that data gathered will allow the company greater visibility of risks within the supply chain.

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CC14.4d

Please explain why you do not engage with any elements of your value chain on GHG emissions and climate change strategies, and any plans you have to develop an engagement strategy in the future

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**Further Information**

**Module: Sign Off**

**Page: CC15. Sign Off**

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CC15.1

Please provide the following information for the person that has signed off (approved) your CDP climate change response

Name	Job title	Corresponding job category
Carl A. Gerhardstein	Assistant Vice President - Public Safety, Health and Environment	Business unit manager

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**Further Information**

**CDP 2016 Climate Change 2016 Information Request**