

CDP Climate Change 2016 - Enerplus Corporation

Module: Introduction

Page: Introduction

CC0.1

Introduction

Please give a general description and introduction to your organization.

Enerplus Corporation (Enerplus) has a diversified portfolio of oil and gas properties throughout Western Canada and the United States and produced an average of approximately 106,500 BOE/day, with 56% of the total production originating from natural gas, and 44% from crude oil and natural gas liquids throughout 2015.

Enerplus' enterprise value is currently estimated at CAD 3,044,100,000. The head office is located in Calgary, Alberta, and the United States office is located in Denver, Colorado. Enerplus has twelve field offices located throughout British Columbia, Alberta, Saskatchewan, Montana and North Dakota. As of December 31, 2015, Enerplus employed a total of 588 people, including full-time benefit and payroll consultants.

Enerplus continuously improves the efficiency of its energy consumption, strives to reduce our greenhouse gas emissions intensity and provides resources, training and technology to meet our environmental objectives. We have several ongoing environmental initiatives in this regard, including:

- greenhouse gas reduction (GHG) and energy efficiency initiatives through an emissions reduction strategy, site environmental inspection and audit program;
- water management planning;
- waste management and waste reduction programs;
- fugitive emissions management program; and
- reclamation of disturbed landscapes to equivalent land capability.

In 2015, Enerplus reported its key environmental and safety metrics in its first ever Sustainability Report, and also as required as part of the Canadian Association of Petroleum Producers (CAPP) Responsible Canadian Energy (RCE) Program. Enerplus' efforts in key performance indicator disclosure, stakeholder engagement, activity and culture demonstrate its commitment to responsible resource development and to continuous improvement in environment, health and safety and social performance.

Enerplus also reports all of its air emissions, water use volumes and waste handling and disposal metrics as required by the regulatory agencies in the jurisdictions that it operates. Quantitative data on GHG emissions and trends are disclosed annually through the CDP. Specific GHG regulations have been

enacted on provincial, state and federal levels to facilitate reporting to the various voluntary and regulatory bodies and also provide publicly available data on our impacts.

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

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

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.

CAD (\$)

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.

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>.

Further Information

Module: Management

Page: CC1. Governance

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

CC1.1a

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

The Board of Directors Safety and Social Responsibility (S&SR) Committee is a committee established by the Enerplus' Board of Directors to assist the Board in carrying out its responsibilities with respect to the development and implementation of an effective S&SR management system, to ensure that Enerplus' activities are planned and executed in a safe and responsible manner, and to ensure there are adequate systems in place to support safety and environmental management, regulatory compliance, emergency response plans, and stakeholder engagement activities. The S&SR Committee reviews the Corporation's performance related to S&SR semi-annually and ensures that long-range preventative programs are in place to limit or mitigate future liability. The S&SR Committee is comprised of at a minimum of three independent Board of Director members which are appointed annually following the annual general meeting of the Corporation. The Enerplus Chief Executive Officer is responsible for Board Liaison. The S&SR Board Committee Chairman presents verbal and/or written reports regarding the Corporation's S&SR performance, Committee meetings and discussions at scheduled meetings of the Board of Directors

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 Executive Officer (CEO)	Monetary reward	Emissions reduction project Energy reduction project Efficiency project Behaviour change related indicator	The Corporation sets annual goals to improve its Safety and Social Responsibility performance. For example, greenhouse gas emissions reductions are expected through a specific target for the execution of a number of energy performance improvement projects. Also energy performance audits are completed to identify improvement opportunities across the company.
Executive officer	Monetary reward	Emissions reduction project Energy reduction project Efficiency project	The Corporation sets annual goals to improve its Safety and Social Responsibility performance. For example, greenhouse gas emissions reductions are expected through a specific target for the execution of a number of energy performance improvement projects. Also energy performance audits are completed to identify improvement opportunities across the company.
Business unit managers	Monetary reward	Emissions reduction project Energy reduction project Efficiency project	The Corporation sets annual goals to improve its Safety and Social Responsibility performance. For example, greenhouse gas emissions reductions are expected through a specific target for the execution of a number of energy performance improvement projects. Also energy performance audits are

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
			completed to identify improvement opportunities across the company.
Facility managers	Monetary reward		The Corporation sets annual goals to improve its Safety and Social Responsibility performance. For example, greenhouse gas emissions reductions are expected through a specific target for the execution of a number of energy performance improvement projects. Also energy performance audits are completed to identify improvement opportunities across the company.
Environment/Sustainability managers	Monetary reward	Emissions reduction project Energy reduction project Efficiency project	The Corporation sets annual goals to improve its Safety and Social Responsibility performance. For example, greenhouse gas emissions reductions are expected through a specific target for the execution of a number of energy performance improvement projects. Also energy performance audits are completed to identify improvement opportunities across the company.
All employees	Monetary reward	Emissions reduction project Energy reduction project Efficiency project	The company recognizes energy performance improvements and greenhouse gas emission management initiatives through a variety of internal and external communications such as, the Corporate website, employee intranet site, and stakeholder engagement communication materials. In addition, employees participating an energy performance survey were recognized through cash incentives for their participation. The company also hosts an annual Technical Forum where innovative ideas to improve performance are presented. The Corporation sets

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
			annual goals to improve its Safety and Social Responsibility performance.

Further Information

Page: CC2. Strategy

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

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	All facilities in US and Canada	3 to 6 years	Risks to increased GHG and Fugitive emissions are identified and managed within our environmental management system where environmental aspects which do or can have significant impacts on the environment, including flaring, venting and air emissions are identified and managed. Within our facility licensing or amendment process and through our Fugitive Emissions Management Program and our Greenhouse Gas Management Program we create a standard to reduce emissions and exposure risk to regulations. These aspects

Frequency of monitoring	To whom are results reported?	Geographical areas considered	How far into the future are risks considered?	Comment
				are then used in consideration of future corporate or site-specific objectives and targets. We also invest efforts into disclose these risks and targets through our Annual Information Form and Sustainability Report, creating a channel for feedback from stakeholders through these reports.

CC2.1b

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

Risk and opportunities are identified at both company and asset level

At the company level, senior management and staff identify site-specific risks and opportunities through internal and external site inspections and audits. The results are documented in our corporate database Sustainability Information Management System (SIMS) and rolled up to both the asset and company levels. SIMS tracks and manages corrective actions and compliance issues associated with environmental aspects and risks in a transparent, effective manner with timelines and direct accountability.

Annual internal and third-party Risk Assessments are completed that identify climate related risks and opportunities. These assessments include climate risks to and from Enerplus', such as:

- Forest and grass fires
- Flooding (identification of flood risks)
- Windstorm exposures
- Earthquakes
- Fugitive emissions
- Flaring events
- Venting
- Fuel gas use reductions at facilities
- Electrical and energy draws and efficiencies
- Vapour recovery units
- Refrigeration

Site-specific inspections occur regularly by our field operations staff and audits are conducted by internal regulatory and environmental staff with a predetermined schedule. Larger facilities are inspected at least once per year and approximately eight extensive audits are scheduled annually. Approximately 15 to 20 audits are conducted each year by an external third party. The results are recorded within SIMS and are reported company-wide and are available to any staff member that accesses the online system. Additionally, the Manager - S&SR regularly reviews the SIMS results and communicates the results at regular meeting of the Health, Safety, Regulatory and Environment Action and Steering committees, and also to the S&SR Board of Directors Committee.

CC2.1c

How do you prioritize the risks and opportunities identified?

Enerplus prioritizes its identified risk and opportunities through a formal risk assessment process and has recently developed a complete EHS Risk Registry to introduce a higher level of active management and communication to all of Enerplus of our risks with regards to EHS, and their financial, regulatory, reputational and operational impacts (carbon and emissions related risks are a important section of this registry).

In addition, Enerplus uses a Process Hazard Assessment (PHA) that is a systematic and organized approach to identifying, evaluating and controlling risks specific to , These risks may be associated with events such as fires, explosions, toxic releases due to equipment failures, design errors, natural causes, or human error (e.g., H2S/SO2 exposures, LEL, benzene, NORM's, noise, heat, pressure). The Risk Assessment Matrix is used to identify each risk and to assess the risk with consideration of the severity or potential loss and the likelihood or probability of the risk to people, property, production (e.g., emissions), and environment (e.g., sound, lighting, heat, cold, ventilation, radiation). The potential risk exposure for people, property, production and environment is determined through the matrix. A risk score of one (low) to five (high) is assessed for each category and then a risk ranking is determined.

CC2.2

Is climate change integrated into your business strategy?

Yes

CC2.2a

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

(i) Enerplus' business strategy is influenced by the discussions and commitments set forth at the Board of Directors Safety and Social Responsibility (S&SR) Committee, the S&SR Steering Committee and the Health, Safety, Regulatory and Environment Action Committee and the Environment and Sustainability Team. We have a strong value of corporate social responsibility and strive to continue to improve our governance and transparency in this area. We report our environmental performance, including GHG

emissions, in our Annual Information Form, the Management and Discussion and Analysis, and voluntarily through the CDP, and the Canadian Association of Petroleum Producers Responsible Canadian Energy Stewardship Program.

The Enerplus Board of Directors, leadership, and employees, are committed not only to conducting all of our activities consistent with the environmental regulations that govern the oil and gas industry within each of our operating jurisdictions, but to proactively mitigate our impact on the environment. Our Environment Policy mandates that Enerplus' will "mitigate gas flaring and venting and work to improve the efficiency of our energy consumption and reduce greenhouse gas emissions intensity".

Enerplus' has recognized the need to integrate climate change issues into our business strategy and as a result, we have committed to engaging our internal stakeholders on such issues and ensuring that all of our activities and operations are conducted in compliance with relevant and applicable regulations and with good industry practice. The business strategy is also influenced through Enerplus' Energy Performance Working Group which is directed by a Steering Committee comprised of Executives and Senior Managers.

With respect to management of climate change risks at the operational level, Enerplus has avoidance and mitigative measures in place for the reduction of exposure to and contribution to fugitive emissions, flaring/venting, fuel gas use reductions at facilities, electrical and energy draws and efficiencies, the recovery of vapours during processing. These measures include Standards, Procedures or Process Hazard Assessment with follow through to the Management of Change Process.

(ii) Aspects of climate change that have influenced this strategy are related to regulatory and operational risk mitigation, improvements in energy performance, and value to various internal and external stakeholders.

(iii) Enerplus' has several environmental initiatives and programs; many of which either directly or indirectly affect our GHG inventory. Over the past three years, internal communication and collaboration between business unit functional groups has increased to better understand the GHG inventory, and the parameters in which we can target to reduce GHG emissions. One such change in business processes that occurred in 2014 that affects the GHG inventory is to consider equipment selection from an efficiency and GHG mitigation perspective in the design and construction of new facilities and retrofitting existing facilities (e.g., upgrading flare systems to achieve better combustion efficiency). In addition, we have refined a key information database used to track fugitive emissions information.

(iv) On a longer term scale (i.e., 5 to 10 years) we are continually increasing the accuracy of our data collection systems used to calculate the GHG emissions inventory and to implement, monitor and track the effectiveness of reduction initiatives towards proactively reducing our direct GHG emission intensity. This data accuracy initiative will be driven by the anticipated carbon regulatory requirements.

(v) The importance of these changes to the business strategy as it relates to climate change is to bring focus and drive value from implementing energy performance initiatives that consider GHG reductions

and to help strengthen communication and action on climate change issues both for our internal and external stakeholders including shareholders. Additionally, reducing operational costs through energy performance initiatives will deliver financial value to our shareholders and engage our employees.

(vi) Substantial business decisions such as the creation of the internal Energy Performance Working group is highly valuable in creating focused efforts in implementing projects that will drive reductions in the GHG emissions intensity and create long term changes in how new construction or equipment retrofit decisions are made going forward.

The most significant business decision in 2015 was to continue a company initiative to focus on its four core asset areas and non-core divestment strategy. The non-core divestments often included the divestment of less efficient infrastructure that had an influence on our GHG emission intensity. Over the longer-term (i.e., 1 to 5 years), Enerplus will continue its divestment strategy until its focus is 100% on its core assets, where new and upgraded infrastructure will be implemented.

We are also developing a strategy around integrating energy efficient equipment considerations in new facility builds and regulatory costs of upcoming measures related to methane emission reductions and future carbon tax burdens (e.g. AB climate leadership plan, 45% methane reduction targets in U.S. and Canada and how to best achieve these emission reduction goals in the most effective and cost-effective manner.

CC2.2c

Does your company use an internal price of carbon?

Yes

CC2.2d

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

We use a long term price forecast on the price of carbon for looking at the immediate and future impact of such regulations on our operations. The price of carbon is currently under further evaluation due to the evolving regulatory constraints in the jurisdictions in which we operate, and will be an integral part of future development planning, which will enable the evaluation of more energy efficient equipment and processes within our operations. For example, the projected cost of \$30/tonne for AB of combusted fuel is considered in decisions related to development. We are already currently under a carbon tax scheme in B.C. and are integrating projected increased carbon costs and risks in many project evaluations.

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

Funding research organizations

CC2.3a

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

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Clean energy generation	Support	Members of two energy efficiency/ sustainability initiatives through the Petroleum Technology Alliance of Canada and through CAPP	Working with the Canadian federal government through these associations to provide support in defining regulations for emissions from combustion sources, also known as the Multi-sector Air Pollutants Regulations
Regulation of methane emissions		Members of two methane emission reduction advisory groups through CAPP	Working on identifying the most beneficial methane reduction opportunities with regards to impact and marginal abatement cost, and providing data for better evaluation of opportunities to both the Alberta and federal Canadian governments.
Other:		Environment, Aboriginal Affairs and Communication Executive Policy Groups (EPGs) in Canada, and State councils in the U.S.	Support in developing clear and effective regulations around methane, flaring and fugitive reduction programs.

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?
North American Environmental Management (NAEM)	Consistent	Greenhouse Gas reduction is an ongoing priority for companies that want to be environmental and sustainability leaders. Members	Enerplus' has seven employees that actively participate in NAEMs leadership, policy positions

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?
		<p>develop strategies for measuring, managing and reducing emissions. NAEMs solicit feedback and participation in the coordination of policy and compliance reviews. Members also are connected to the largest community of EHS and Sustainability decision-makers through peer-led educational conferences and a private, online knowledge-sharing network.</p>	<p>and events. Our Manager of Safety and Social Responsibility sits on the Board of Directors and the Board of Regeants for NAEMs.</p>
Canadian Heavy Oil Association	Consistent	<p>To support the Canadian Heavy Oil community in providing a sustainable energy source for the worlds energy needs. The CHOA provides collective member position papers on climate issues.</p>	<p>Our Manager of Safety and Social Responsibility is the President of this Association.</p>
CAPP Environment Executive Policy Group	Consistent	<p>Promote Climate policy / GHG regulation being underpinned by competitiveness and technology and innovation considerations, and aligned with a broader national policy framework. Alberta has a sound framework in place for GHG regulation. The federal regulations for the oil and gas sector should build on this foundation and be developed in a manner that addresses the competitiveness of the Canadian oil and gas sector and be compatible with the final form of the Air Quality Management System (AQMS).</p>	<p>Enerplus actively participates in EPG meetings and provides effective feedback for new policies and regulations are relevant, forward thinking and sustainable .Our CEO is a part of the board of Governors for CAPP.</p>
CAPP Air Regulatory Committee	Consistent	<p>This committee's purpose is to actively monitor, engage in and influence air initiatives affecting the</p>	<p>Enerplus actively participates in EPG meetings and provides</p>

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?
		oil and gas industry, and to prioritize and establish air strategies for the CAPP membership.	effective feedback for new policies and regulations are relevant, forward thinking and sustainable.
CAPP Environment Executive Policy Group	Consistent	The Environment EPG addresses CAPP federal and inter-governmental environmental and regulatory policy issues for the upstream oil and gas industry.	Enerplus actively participates in EPG meetings and provides effective feedback for new policies and regulations are relevant, forward thinking and sustainable.
Fuel Gas Efficiency Benchmark group	Consistent	This committee is responsible for communicating and monitoring fuel gas efficiency/usage in Alberta and supporting the implementation of efforts to improve fuel gas efficiency and reduce fuel gas consumption.	Enerplus actively participates in EPG meetings and provides effective feedback for new policies and regulations are relevant, forward thinking and sustainable.
Alberta Executive Policy Group	Consistent	This EPG addresses Alberta environmental and regulatory policy issues for the Upstream Oil and Gas Industry in the province.	Enerplus actively participates in EPG meetings and provides effective feedback for new policies and regulations are relevant, forward thinking and sustainable.

CC2.3d

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

Yes

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?

Enerplus participates with Canadian Association of Petroleum Producers (CAPP) on the Environment Executive Policy Group for Alberta, British Columbia and Saskatchewan –and Environment, Aboriginal Affairs and Communication Executive Policy Groups (EPGs) and on various working committees including the Climate Change Working Group and the National Air Issues Committee and direct engagement on approaches to reduce flaring and vented emissions within our U.S. operations. Enerplus’ participation in regular CAPP committee and working group meetings allows us the opportunity to dialogue with various levels of governments and agencies (e.g., Environment Canada, Alberta Energy Regulator (AER), Alberta Energy Resources, British Columbia Ministry of Environment, and Saskatchewan Ministry of Environment) to shape the regulatory framework for climate change. Along with participating in regular meetings, we actively provide verbal and written feedback to regulators primarily through CAPP groups on new regulation or proposed changes to existing regulations. In addition, for our U.S. business unit, we join with state, regional and federal trade associations to engage and advocate for air emissions regulatory clarity. Feedback received and provided on changing climate regulations is coordinated through the Energy Performance Working Group within Enerplus where input is solicited from Executives, Facility Engineers, leadership in Operations and members from the Environment and Sustainability Team. This approach ensures that all effectual employees within Enerplus are engaged and contribute to the overall climate strategy.

Further Information

Page: CC3. Targets and Initiatives

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?

No

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

Enerplus has set a corporate goal to develop a greenhouse gas emissions strategy this year, utilizing a comprehensive approach to reduce emissions across the company, with a focus on methane. This strategy will outline requirements, marginal abatement costs, and provide a structure for yearly targets in its operations and a level of detail enabling best possible accuracy for project selection for reduction of both GHG emissions and methane emissions from all phases of operations, including targeting even stronger fugitive leak reductions.

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?

No

CC3.3

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

CC3.3a

Please identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	11	
To be implemented*	1	1000
Implementation commenced*		
Implemented*	3	23007
Not to be implemented		

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
Process emissions reductions	Methane venting reduction by right sizing glycol	4300	Scope 1	Voluntary	14130		<1 year	6-10 years	Project received funding federally and was shared with

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
	dehydrator pumps.								Petroleum Technology Alliance of Canada members. Project emissions reductions were verified by a third party emissions quantification consultant.
Fugitive emissions reductions	inspection program for reducing methane emissions from operations in facilities and wellsites	12007	Scope 1	Voluntary Mandatory	39455		<1 year	<1 year	The Enerplus Fugitive Emissions Management Program follow industry best practices and/or regulatory requirements of all

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
									state, provincial and federal jurisdictions.
Energy efficiency: Processes	Consolidation of gas streams from two or more compressors into one compressor.	7000	Scope 1	Voluntary	22960		<1 year	3-5 years	Compressor consolidation where viable reduces fuel use and efficiency.

CC3.3c

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

Method	Comment
Employee engagement	The Safety and Social Responsibility team provides all employees with a channel to suggest energy efficiency and environmental improvement opportunities. Communication is performed by e-mail, intranet, presentations and lunch and learns. The development of financial, social and environmental payback tools, and the active engagement of public and private funding create the environment to facilitate a mindset of engagement towards emission reductions and rigor for tracking of financial paybacks.

Method	Comment
Financial optimization calculations	Employees from across many business units within Enerplus' are members of the Energy Performance Working Group. These members are always working to find projects that reduce emissions and provide an ROI for Enerplus.
Internal incentives/recognition programs	A sustainability screening tool and economics evaluator looks at projects that can reduce emissions and will consider sustainability attributes along with economics for project implementation . Energy Efficiency audits are also performed in order to find opportunities at all different sites and to provide a different perspective on how to identify opportunities.
Compliance with regulatory requirements/standards	Compliance with regulatory standards is vital to Enerplus and investments are made consistently in order to ensure and surpass regulatory standards for all the applicable provincial, state and federal regulations in place.
Marginal abatement cost curve	Payback on projects and careful consideration for cost of reductions versus carbon costs related to compliance, upcoming regulation cost risk, carbon credit and emissions related funding is carefully considered by the Energy Performance Working Group, and is a part of the Greenhouse Gas Reduction strategy in development.
Internal price of carbon	careful consideration for cost of reductions versus carbon costs related to compliance, upcoming regulation cost risk, carbon credit and emissions related funding is carefully considered by the Energy Performance Working Group, and is a part of the Greenhouse Gas Reduction strategy in development.

Further Information

Page: CC4. Communication

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 voluntary communications	Complete	whole report	Enerplus - Glycol Dehydration Pump Reduction Review (Mar 30, 2016).pdf	Project to reduce methane emissions from glycol dehydrator pumps. Study was funded by federal money and by the Petroleum Technology Alliance of Canada (PTAC), and study was shared among PTAC members as a easy guide to implement methane reductions supported by a third party glycol dehydrator modeling company. Study highlights are available publicly on the PTAC website/. Fuure projects will also be highlighted through our commitment to sharing knowledge and collaboration within industry and among stakeholders.
In mainstream reports (including an integrated report) in accordance with the CDSB Framework	Underway - previous year attached			Enerplus' first sustainability report is part of increased efforts to disclose our attention to emissions and energy performance. In the future, details on the development of our Corporate GHG reduction strategy will be disclosed once developed and approved through our sustainability reporting.

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
Carbon taxes	The British Columbia tax on natural gas and oil production and fuels purchased to support this production, is a current and ongoing liability of our B.C. operations as the tax rates rise annually. While we do not currently have a significant amount of	Increased operational cost	1 to 3 years	Direct	Likely	Low-medium	Enerplus has paid a significant amount in carbon taxes in British Columbia. In 2014, we paid approximately \$813,008 in carbon taxes and we expect this figure to increase slightly over time with the same facility portfolio	Enerplus has paid a significant amount in carbon taxes in British Columbia. In 2014, we paid approximately \$813,008 in carbon taxes and we expect this figure to increase slightly over time with the same facility portfolio	The cost associated with these actions is dependent on the specific initiative chosen but could range from a small equipment optimization project (e.g., \$50,000) to a larger scale project such as

Risk driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>production relative to our portfolio in B.C., we do have plans for growth in the province and the carbon tax is a consideration of the operational costs associated with new plays. The government of British Columbia is moving towards a cap and trade system although this has been delayed. The allocation of emission</p>						<p>in BC as the tax rates increase . There is also the possibility of new taxes being implemented in other jurisdictions we operate in, or reaching emissions thresholds in locations such as Alberta.</p>	<p>in BC as the tax rates increase .</p>	<p>the electrification of a particular field (e.g., millions of dollars).</p>

Risk driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	allowances below actual emissions and the need to purchase offsets or credits is a risk to Enerplus' and this would increase operational and capital costs (e.g., retrofitting equipment).								
Cap and trade schemes	The government of British Columbia is moving towards a cap and trade system although this has been delayed. The	Increased capital cost	1 to 3 years	Direct	Likely	Low-medium	It is unknown what the financial implication of the BC Cap and Trade system will be as the government has not yet	To manage this risk, Enerplus' currently participates with CAPP on the Climate Change Working Group and provides	There is reporting and verification costs associated with the BC GHG regulations but no costs specific to the Cap and

Risk driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	allocation of emission allowances below actual emissions and the need to purchase offsets or credits is a risk to Enerplus' and this would increase operational and capital costs (e.g., retrofitting equipment).						released information regarding emission allowances and compliance mechanisms	written and verbal feedback on developments towards the BC Cap and Trade model	Trade system at this time
Emission reporting obligations	As emission reporting obligations become more complex and detailed, Enerplus' may be required	Increased operational cost	1 to 3 years	Direct	Virtualy certain	Medium	As emission reporting obligations become more complex, Enerplus will need to increase	Depending on the type of data and the level of detail required, this cost may be significant but it remains	Depending on the type of data and the level of detail required, this cost may be significant but it

Risk driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>to spend more resources and operational expenses in the collection of GHG data (including metering and measuring), and analytical data used in calculations. This may significantly increase the administrative burden to Enerplus and this risk is considered in the alignment of staff and systems</p>						<p>staff resources and may need to increase the accuracy of data collection technologies. Depending on the type of data and the level of detail required, this cost may be significant but it remains unknown until there is regulatory certainty in particular jurisdictions in which we operate.</p>	<p>unknown until there is regulatory certainty in particular jurisdictions in which we operate.</p>	<p>remains unknown until there is regulatory certainty in particular jurisdictions in which we operate.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	management.								
General environmental regulations, including planning	This is driven by international agreements (COP Paris) Targeted reduction of Methane emissions by 45% in Both US and Canadian operations, increased requirements for Fugitive emission inspections, and mandated retrofits of high venting field gas driven instrumentation and pumps a possible nationwide	Increased capital cost	1 to 3 years	Direct	Virtually certain	High	Higher upfront capital costs, and retrofit costs for existing facilities. These may be significant, but will be mitigated by increased efficiency due to gas vented now being sold and applicable carbon credit refunds	A complete evaluation of current and future regulations, our operations and strategic plans under the Enerplus GHG Strategy. Part of this is an economic evaluation of best opportunities to achieve reduction, collaboration with industry peers and use of funding	Costs are yet to be determined as regulations are finalized, but will be strategized for energy efficiency and methane reduction, carbon offset and funding to make economics favorable as much as possible. many opportunities have potential to provide

Risk driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	e carbon tax in Canada, and the AB Climate Leadership Plan.							and carbon credit protocols where available. GHG risks and opportunities being a central discussion point through the strategy and reaching the company as a whole so we are effective and leverage regulations for growth and sustainability.	positive economics over longer time periods.

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
Change in mean (average) temperature	In some of the areas in which we operate, we depend on cold conditions to allow for vehicular access to our sites via ice roads. Increasing temperatures can reduce the length of time in frozen conditions which will limit winter access to some of our sites	Increased operational cost	Up to 1 year	Direct	About as likely as not	Low	It is unknown what the financial implication of the changes in mean temperature will be on our operations as both the weather and activity level of the particular field will change on a daily basis. However, it is expected that operational costs would increase significantly	To manage this risk, Enerplus may be required to manage a more constrained schedule for service, drilling and completions activities on applicable sites. Additionally, Enerplus may have to provide increased use of other methods of transport to the sites including	There are no costs associated with this risk at this time.

Risk driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							ntly as we access the sites differently and within a more constrained access schedule.	, for example, the use of helicopters.	
Change in precipitation extremes and droughts	Extreme weather conditions such as flooding and drought from extreme changes in precipitation is a risk to Enerplus' operations. Flood conditions prevent access to our sites for normal operation	Increased operational cost	Up to 1 year	Direct	Likely	Low	It is unknown what the financial implication of the changes in precipitation extremes and droughts will be on our operations as both the weather and activity level of the	To manage this risk, Enerplus' will have to manage a more constrained schedule for service, drilling and completions activities on sites if applicable. Additionally, Enerplus	There are no costs associated with this risk at this time.

Risk driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>or drilling and completion activities. Additionally, droughts can lead to conditions conducive to wildfires and this is a significant health and safety risk for our operations.</p>						<p>particular field will change on a daily basis.</p>	<p>has diligently updated Emergency Response Plans and is continually training corporate and field staff on emergency response procedures</p>	

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
Changing consumer behaviour	Increasing costs related to the mitigation or adaptation of climate change could impact consumer demand for petroleum products. This is a risk to Enerplus as we may need to adapt our natural gas and oil relative ratio production amounts to reflect	Reduced demand for goods/services	Up to 1 year	Direct	Likely	Low-medium	It is unknown what the financial implication of the changes in consumer behaviour will be as it relates to climate change and petroleum product demand.	To manage this risk, Enerplus has formed an internal Energy Performance Working Group that is committed to generating viable Energy Performance initiatives as well as increasing communication both internally and externally to our stakeholders.	There are no costs associated with this risk at this time.

Risk driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	changing consumer demand.								
Reputation	There is general investor concern around GHGs and the oil and natural gas industry as contributors to the global climate change issue. Enerplus has several programs and initiatives in place to manage GHG data and	Reduced stock price (market valuation)	Up to 1 year	Direct	Likely	Low-medium	It is unknown what the financial implication of reputational risk related to climate change is.	To manage this risk, Enerplus has formed an internal Energy Performance Working Group that is committed to generating viable Energy Performance initiatives as well as increasing communication both internally and externally to our	There are no costs associated with this risk at this time.

Risk driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	sources as well as to reduce GHG emissions intensity, but general investor concern in this area remains a source of climate change related risk for Enerplus.							stakeholders.	

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 methods	Cost of management
Emission reporting obligations	Emission reporting obligations have increased in the number and complexity over the last several years. This has prompted Enerplus' to invest more time and funds in a comprehensive data management system. This action has enabled increased internal awareness of climate	Other: Increased data quality and internal stakeholder engagement	Up to 1 year	Direct	Virtually certain	Medium-high	Financial benefits derived from opportunities related to emission reporting obligations are not explicit and we are unable to estimate at this time. However, due to the various reporting requirements and the level of engagement necessary to	Enerplus continues to ensure a high level of quality assurance and checks with regard to emissions data management. This allows for regular engagement with internal employees regarding regulatory changes and preparedness. In addition, as stated above,	Not including internal staff time, maintaining the emissions database and producing emission reports costs approximately \$85,000 annually.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	change regulations and risks as well as transparency in data management and calculations.						complete these reports, there has been a large amount of interest from various employees to participate in the internal energy performance working group where data generated from these obligations analysed and opportunities for improvement are identified.	there has been a large amount of interest from various employees in participating in the energy performance working group to help drive improvement.	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Carbon taxes	Being taxed on purchased fuels in BC has prompted Enerplus' to improve fuel gas management and to look at ways in which we can reduce purchased fuel amounts or business vehicle travel. One such example is investigating the feasibility of co-generation of electricity on site. We have	Reduced operational costs	Up to 1 year	Direct	Virtually certain	Low-medium	The financial benefit of generating electricity on sites in BC with a micro-turbine as opposed to utilizing fuel gas has not been quantified at this time as market conditions have changed and this project is still under consideration. However, implementing the change	Enerplus continues to look for opportunities across all operations to improve energy performance especially in areas where carbon taxes are increasing operational costs. Through the energy performance working group, we now have a systemized approach to	There was a reduction in the cost of securing ½ ton trucks as opposed to ¾ ton trucks but this quantification isn't currently available

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	also replaced our truck fleet vehicles across the company to vehicles that consume less fuel.						of the fleet vehicles has saved a significant amount of fuel cost for our operations.	identify, evaluate, implement and track energy performance initiatives.	

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
Change in temperature extremes	Increased intensity and frequency of weather related issues could disrupt global supply	Increased demand for existing products/services	Up to 1 year	Direct	About as likely as not	Medium	Enerplus continues to look for opportunities across all operations to improve energy performance especially	Given this macro-scale scenario, Enerplus does not currently manage this potential opportunity.	There are zero costs associated with this potential opportunity.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	sources and increase the value and demand of Enerplus' oil and gas production in U.S. and Canada.						<p>increase in areas where carbon taxes are increasing operational costs. Through the energy performance working group, we now have a systemized approach to identify, evaluate, implement and track energy performance initiatives.</p>		

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	Enerplus is committed to the responsible development of energy resources in a way that ensures the health and safety of our workers, respects the environment, and builds positive, long-term relationships in the community. Increased awareness, communication and engagement in GHG emissions management	Wider social benefits	Up to 1 year	Direct	Very likely	Medium-high	Enerplus cannot quantify the financial benefits from an enhanced reputation at this time however, it is recognized that the benefits from this opportunity may include enhanced employee engagement and retention, enhanced social license to operate, and value	To manage this opportunity, Enerplus is committed to continually improving both internal and external communication on all environmental initiatives including that of climate change. In order to increase disclosure, strengthen engagement of all stakeholders, and increase internal drivers for interdepartmental integration and forward thinking on sustainability	It is difficult to provide costs associated with these actions as this is mostly related to the time and dedication of many individual employees and teams at Enerplus, but can be estimated in the range of 100k in time building a structure around GHG and climate change communication and tools for enabling Enerplus to

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	ent and energy performance is received positively by our stakeholders and continues to improve Enerplus' social license to operate.						back to our shareholders.	y, Enerplus launched its first ever Sustainability Report in 2015	prepare for climate-related developments.

Further Information

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

Page: CC7. Emissions Methodology

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	Fri 01 Jan 2010 - Fri 31 Dec 2010	486275
Scope 2 (location-based)	Fri 01 Jan 2010 - Fri 31 Dec 2010	192847
Scope 2 (market-based)		

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

ISO 14064-1

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

CC7.3

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

Gas	Reference
CO2	IPCC Fifth Assessment Report (AR5 - 100 year)
CH4	IPCC Fifth Assessment Report (AR5 - 100 year)
N2O	IPCC Fifth Assessment Report (AR5 - 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
Electricity		metric tonnes CO2e per MWh	ISO 14064-1 standard for our sampling and inventory, as well as for emission factors and estimates
Natural gas		metric tonnes CO2e per m3	ISO 14064-1 standard for our sampling and inventory, as well as for emission factors and estimates
Propane		metric tonnes CO2e per m3	ISO 14064-1 standard for our sampling and inventory, as well as for emission factors and estimates
Diesel/Gas oil		metric tonnes CO2 per m3	ISO 14064-1 standard for our sampling and inventory, as well as for emission factors and estimates

Further Information

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

CC8.1

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

Operational control

CC8.2

Please provide your gross global Scope 1 emissions figures in metric tonnes CO₂e

696953

CC8.3

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

No

CC8.3a

Please provide your gross global Scope 2 emissions figures in metric tonnes CO₂e

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
199337		Electrical Use in facilities for operations

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

CC8.5

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%	Data Gaps Sampling	In addition to methodological uncertainty in calculating GHG emissions despite rigor in using the most up to date methodology per emissions category, a part of venting emissions remain a source of uncertainty as these volumes are often estimated from equipment specifications rather than metered flows and inventories can have some uncertainty. Also, emission factors may change due to the gathering of increasingly accurate scientific data. Significant changes to emission factors will change the overall CO2e footprint of Enerplus' operations and as such. Enerplus maintains a rigorous approach to its emissions inventory, possesses dedicated staff for assessing emissions and fulfills all regulatory requirements for its provincial, state and federal greenhouse gas emissions related reporting.
Scope 2 (location-based)	More than 2% but less than or equal to 5%	Metering/ Measurement Constraints	There can be some estimation required in Scope 2 emissions as the electrical consumption data may be metered at one location but consumed at several locations elsewhere. Additionally, there can be divisions necessary for non-operated and operated electrical consumption data on the same pad with one meter station.
Scope 2 (market-based)			

CC8.6

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

Third party verification or assurance process in place

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		BC GHG Reporting Verification Statement Scope 1 emissions are required to be verified by a third party in the province of British Columbia. Enerplus follows this process and standard where possible in its remaining corporate inventory and will fully follow this standard by 2017 as it proactively closes equipment inventory gaps within its smaller methane emitting equipment	ISO14064-3	20

CC8.7

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

No third party verification or assurance

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
Emissions reduction activities	Emissions within Enerplus' glycol dehydrator methane emissions reduction project were verified by a third party due to funding requirements

CC8.9

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

No

Further Information

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

CC9.1

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

Yes

CC9.1a

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

Country/Region	Scope 1 metric tonnes CO2e
Canada	287025
United States of America	409928

CC9.2

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

By business division

By facility

By GHG type

By activity

CC9.2a

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

Business division	Scope 1 emissions (metric tonnes CO2e)
British Columbia, Canada	41250

Business division	Scope 1 emissions (metric tonnes CO2e)
Alberta, Canada	168708
Saskatchewan, Canada	77067
Montana, USA	58388
North Dakota, USA	351539

CC9.2b

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

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude

CC9.2c

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

GHG type	Scope 1 emissions (metric tonnes CO2e)
CO2	564096
CH4	131588
N2O	1269

CC9.2d

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

Activity	Scope 1 emissions (metric tonnes CO2e)
Oil Production	498178
Natural Gas production and processing	198775

Further Information

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

CC10.1

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

Yes

CC10.1a

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

Country/Region	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Canada	186358		229191	
United States of America	12979		33670	

CC10.2

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

By business division

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)
Alberta	162037	
Saskatchewan	24321	
Montana	12877	
North Dakota	102	
British Columbia	0	

Further Information

Page: CC11. Energy

CC11.1

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

More than 10% but less than or equal to 15%

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

CC11.3a

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

Fuels	MWh
Natural gas	1329990
Diesel/Gas oil	147368
Propane	8465

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
	0	Enerplus is building a verifiable means to account for low generation before providing this figure.

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
2827229	262862	418745	0	0	Solar Panels are used to power facilities in BC, and many pumps throughout operations, however that metric is not currently tracked to a reportable level of accuracy, but is currently in inventory and methodology development for consistent reporting.

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	12	Decrease	23% reduction of overall emissions. Specific emissions reduction activities previously accounted projects (Right-sizing of glycol dehydrator pumps, compressor consolidations, Increased fugitive inspection totals) with addition of decrease in flaring due to increased pipeline capacity for associated gas volumes in U.S. operations,

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
			installation of Natural gas liquids processing skids (U.S.) and improved control of pilot gas for flare.
Divestment	8	Decrease	Sale of several assets that are in non core areas, improving overall production and emissions efficiency/
Acquisitions		No change	
Mergers		No change	
Change in output		Decrease	
Change in methodology		No change	
Change in boundary		No change	
Change in physical operating conditions		No change	
Unidentified	3	Decrease	Untracked fuel reduction activities, improvement of overall operational efficiency within on site equipment that cannot be easily specified. Corporate GHG reduction Strategy will ensure all reductions are specified to higher accuracy.
Other			

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
0.0009	metric tonnes CO2e	1027000000	Location-based	33	Increase	Significantly decreased revenue due to sharp decline in global commodity prices

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 or	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
0.0386	metric tonnes CO2e	barrel of oil equivalent (BOE)	23239145	Location-based	30	Decrease	Reduction of flaring volumes due to increased pipeline capacity, installation of natural gas liquids skids to reduce flaring in North Dakota, Divestments of non core assets in gas production areas that are lower in efficiency, compressor consolidations, fuel use improvements,

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator or	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
							dehydrator pump rightsizing, increased fugitive leak repair.

Further Information

Page: CC13. Emissions Trading

CC13.1

Do you participate in any emissions trading schemes?

No, but we anticipate doing so in the next 2 years

CC13.1b

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

Enerplus does plan on utilizing carbon credits on energy efficiency projects through its Greenhouse Gas Reduction Strategy. We plan on utilizing funding for energy efficiency projects, and utilizing carbon credit schemes where possible. Other purchasing schemes are also being evaluated and Enerplus intends on proactively utilizing carbon credit sales to benefit energy efficiency projects.

CC13.2

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

No

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, not yet calculated				Enerplus provides its employees with glasses and mugs to promote waste reduction which relates to reduced emissions
Capital goods	Relevant, not yet calculated				Where possible, Enerplus purchases solar panels to operate infrastructure such as chemical injection pumps.
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Relevant, not yet calculated				Where possible, Enerplus purchases solar panels to operate infrastructure such as chemical injection pumps.
Upstream transportation and distribution	Relevant, not yet calculated				Difficult to obtain this data and not a big source due to the nature of our operations.
Waste generated in operations	Relevant, not yet calculated				Enerplus audited its corporate and field operations for waste generation and has implemented a pilot recycling program in its field and corporate offices in 2014, and has plans to expand the pilot in scale across different areas.

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
Business travel	Relevant, calculated	54	GHG Protocol's Corporate Value Chain Scope 3 Accounting and Reporting Standard	100%	Enerplus has a Journey Management Standard for employees. Employees are encouraged to reduce travel by utilizing technologies such as webcam meetings, lync meetings, webinars and other means of communications.
Employee commuting	Relevant, not yet calculated				Enerplus' corporate office is on the City train line and employees are strongly encouraged to take transit and every employee is subsidized for the dollar amount of a monthly pass. Enerplus also subsidizes secure bike parking. Employees also participates in the Calgary Corporate Challenge, and during the competition, competitors are challenged to not use vehicles to commute to work during the event.
Upstream leased assets	Relevant, calculated	2485	Emission factor of 0.01079 tonnes per square feet of	0%	Offices Spaces are leased in Calgary and Denver corporate offices and in field offices across

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
			office space occupied.		operating areas in the U.S. and Canada
Downstream transportation and distribution	Not relevant, explanation provided				This data would be extremely difficult to obtain and quantify.
Processing of sold products	Not relevant, explanation provided				This data would be extremely difficult to obtain and quantify. Additionally, the refinery operator would report the emissions associated with this activity.
Use of sold products	Not relevant, explanation provided				This data would be extremely difficult to obtain and quantify.
End of life treatment of sold products	Not relevant, explanation provided				This data would be extremely difficult to obtain and quantify. Enerplus proactively engages third parties to resell all scrap metals from equipment and storage tanks for recycling and repurposing
Downstream leased assets	Not relevant, explanation provided				We do not have downstream leased assets.

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
Franchises	Not relevant, explanation provided				We do not have franchises in our business
Investments	Not relevant, explanation provided				Although we have working interest in other companies, the operating company reports those emissions as emissions are a consequence of the activity of the company and due to regulatory reporting schemes in the US and Canada. These emissions are calculated and reported by the company which operates joint interest ventures.
Other (upstream)					
Other (downstream)	Not evaluated				

CC14.2

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

No third party verification or assurance

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
Upstream leased assets	Other:	98		We have decreased our use of office space by leasing smaller offices where possible in the field, and by restacking our corporate offices for reduced costs and impact.
Business travel	Other:	2	Decrease	Decreased travel due to increased use of technology in order to reduce costs

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)

No, we do not engage

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

No, however there are plans to structure this into the decision criteria for certain parts of our supply chain, namely equipment and main sources of emissions in our operations.

Further Information

Module: Sign Off

Page: CC15. Sign Off

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
Kym Fawcett	Manager, Safety and Social Responsibility	Environment/Sustainability manager

Further Information

Module: Oil & Gas

Page: OG0. Reference information

OG0.1

Please identify the significant petroleum industry components of your business within your reporting boundary (select all that apply)

Exploration, production & gas processing

Further Information

Page: OG1. Production & reserves by hydrocarbon type - (1 Jan 2015 - 31 Dec 2015)

OG1.1

Is your organization involved with oil & gas production or reserves?

Yes

OG1.2

Please provide values for annual gross and net production by hydrocarbon type (in units of BOE) for the reporting year in the following table. The values required are aggregate values for the reporting organization

Product	Gross production (BOE)	Net production (BOE)	Production consolidation boundary
Conventional non-associated natural gas			Operational control and equity share
Associated natural gas			
Natural gas condensate	106500		
Light oil			
Medium oil			
Heavy oil			

OG1.3

Please provide values for reserves by hydrocarbon type (in units of BOE) for the reporting year. Please indicate if the figures are for reserves that are proved, probable or both proved and probable. The values required are aggregate values for the reporting organization

Product	Country/region	Reserves (BOE)	Date of assessment	Proved/Probable/Proved+Probable
Conventional non-associated natural gas Associated natural gas Natural gas condensate Light oil Medium oil Heavy oil	Canada	103477	Thu 31 Dec 2015	Proved+Probable
	United States of America	302341	Thu 31 Dec 2015	Proved+Probable

OG1.4

Please explain which listing requirements or other methodologies you have used to provide reserves data in OG1.3. If your organization cannot provide data due to legal restrictions on reporting reserves figures in certain countries, please explain this

Contingent resources have been evaluated in accordance with NI 51-101 OG1.5

OG1.5

Please provide the average breakeven cost of current production used in estimation of proven reserves

Hydrocarbon/project	Breakeven cost/BOE	Comment
WTI Oil	73.10	WTI in USD Forecast Prices are highly variable, and follow NSAI methodologies among many projects, at 2020 in both USD and CAD:
Oil-Edmonton Light	83.2	CAD
Natural Gas-AB AECO	3.95	CAD
Natural Gas-UD Henry Hub	3.90	USD
Oil-Alberta Heavy	59.5	CAD
SASK Cromer Medium	77.4	CAD

OG1.6

In your economic assessment of hydrocarbon reserves, resources or assets, do you conduct scenario analysis and/or portfolio stress testing consistent with a low-carbon energy transition?

No

OG1.6b

Please explain why you have not conducted any scenario analysis and/or portfolio stress testing consistent with a low-carbon energy transition

To be studied with reserves group in future.

Further Information

Page: OG2. Emissions by segment in the O&G value chain - (1 Jan 2015 - 31 Dec 2015)

OG2.1

Please indicate the consolidation basis (financial control, operational control, equity share) used to report the Scope 1 and Scope 2 emissions by segment in the O&G value chain. Further information can be provided in the text box in OG2.2

Segment	Consolidation basis for reporting Scope 1 emissions	Consolidation basis for reporting Scope 2 emissions
Exploration, production & gas processing	Operational Control	Operational Control

OG2.2

Please provide clarification for cases in which different consolidation bases have been used and the level/focus of disclosure. For example, a reporting organization whose business is solely in storage, transportation and distribution (STD) may use the text box to explain why only the STD row has been completed

OG2.3

Please provide masses of gross Scope 1 carbon dioxide and methane emissions in units of metric tonnes CO₂ and CH₄, respectively, for the organization's owned/controlled operations broken down by value chain segment

Segment	Gross Scope 1 carbon dioxide emissions (metric tonnes CO ₂)	Gross Scope 1 methane emissions (metric tonnes CH ₄)
Exploration, production & gas processing		

OG2.4

Please provide masses of gross Scope 2 GHG emissions in units of metric tonnes CO2e for the organization's owned/controlled operations broken down by value chain segment

Segment	Gross Scope 2 emissions (metric tonnes CO2e)	Comment
Exploration, production & gas processing		

Further Information

Page: OG3. Scope 1 emissions by emissions category - (1 Jan 2015 - 31 Dec 2015)

OG3.1

Please confirm the consolidation basis (financial control, operational control, equity share) used to report Scope 1 emissions by emissions category

Segment	Consolidation basis for reporting Scope 1 emissions by emissions category
Exploration, production & gas processing	Operational Control

OG3.2

Please provide clarification for cases in which different consolidation bases have been used to report by emissions categories (combustion, flaring, process emissions, vented emissions, fugitive emissions) in the various segments

OG3.3

Please provide masses of gross Scope 1 carbon dioxide and methane emissions released into the atmosphere in units of metric tonnes CO2 and CH4, respectively, for the whole organization broken down by emissions category

Emissions category	Gross Scope 1 carbon dioxide emissions (metric tonnes CO2)	Gross Scope 1 methane emissions (metric tonnes CH4)
Combustion		
Flaring		
Process emissions		
Vented emissions		

Emissions category	Gross Scope 1 carbon dioxide emissions (metric tonnes CO2)	Gross Scope 1 methane emissions (metric tonnes CH4)
Fugitive emissions		

OG3.4

Please describe your organization's efforts to reduce flaring, including any flaring reduction targets set and/or its involvement in voluntary flaring reduction programs, if flaring is relevant to your operations

Further Information

Page: OG4. Transfers & sequestration of CO2 emissions - (1 Jan 2015 - 31 Dec 2015)

OG4.1

Is your organization involved in the transfer or sequestration of CO2?

No

Further Information

Page: OG5. Sales and emissions intensity - (1 Jan 2015 - 31 Dec 2015)

OG5.1

Please provide values for annual sales of hydrocarbon types (in units of BOE) for the reporting year in the following table. The values required are aggregate values for the reporting organization

Product	Sales (BOE)
Conventional non-associated natural gas	
Associated natural gas	
Natural gas liquids (NGL)	
Shale gas	
Light oil	106500
Medium oil	
Heavy oil	
Tight oil	
Other: Total	

OG5.2

Please provide estimated emissions intensities (Scope 1 + Scope 2) associated with current production and operations

Year ending	Segment	Hydrocarbon/product	Emissions intensity (metric tonnes CO2e per thousand BOE)	% change from previous year	Direction of change from previous year	Reason for change
2015	Exploration, production & gas processing	Conventional non-associated natural gas Associated natural gas Natural gas condensate Natural gas liquids (NGL) Light oil Medium oil Heavy oil Tight oil	.0386	30	Decrease	Reduction of flaring volumes due to increased pipeline capacity, installation of natural gas liquids skids to reduce flaring in North Dakota, Divestments of non-core assets in gas production areas that are lower in efficiency, compressor consolidations, fuel use improvements, and dehydrator pump rightsizing.

OG5.3

Please clarify how each of the emissions intensities has been derived and supply information on the methodology used where this differs from information already given in answer to the methodology questions in the main information request

Production denominator BOE associated with operational control. BOE in Annual Information Form (106500 BOE/day differs as it is calculated under our working interest in any production for Enerplus

Further Information

Page: OG6. Development strategy - (1 Jan 2015 - 31 Dec 2015)

OG6.1

For each relevant strategic development area, please provide financial information for the reporting year

Strategic development area	Describe how this relates to your business strategy	Sales generated	EBITDA	Net assets	CAPEX	OPEX	Comment
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OG6.2

Please describe your future capital expenditure plans for different strategic development areas

Strategic development area	CAPEX	Total return expected from CAPEX investments	Comment
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OG6.3

Please describe your current expenses in research and development (R&D) and future R&D expenditure plans for different strategic development areas

Strategic development area	R&D expenses – Reporting year	R&D expenses – Future plans	Comment
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Further Information

Information for Enerplus asset areas can be found in AIF to degree of public disclosure.

Page: OG7. Methane from the natural gas value chain

OG7.1

Please indicate the consolidation basis (financial control, operational control, equity share) used to prepare data to answer the questions in OG7

Segment	Consolidation basis
Exploration, production & gas processing	Operational Control

OG7.2

Please provide clarification for cases in which different consolidation bases have been used

OG7.3

Does your organization conduct leak detection and repair (LDAR), or use other methods to find and fix fugitive methane emissions?

Yes

OG7.3a

Please describe the protocol through which methane leak detection and repair, or other leak detection methods, are conducted, including predominant frequency of inspections, estimates of assets covered, and methodologies employed

In 2015, Enerplus completed 48 fugitive emissions infrared surveys at its Canadian facilities and 173 at its United States facilities and it follows a yearly inspection schedule for all applicable facilities under the CAPP BMP for fugitive emissions. Inspections are repaired immediately when economic or present a health and safety risk, and when there is a facility maintenance turnaround.

OG7.4

Please indicate the proportion of your organization’s methane emissions inventory estimated using the following methodologies (+/- 5%)

Methodology	Proportion of total methane emissions estimated with methodology	What area of your operations does this answer relate to?
Direct detection and measurement	5% to <10%	All
Engineering calculations		
Source-specific emission factors (IPCC Tier 3)		
IPCC Tier 1 and/or Tier 2 emission factors		

OG7.5

Please use the following table to report your methane emissions rate

Year ending	Segment	Estimate total methane emitted expressed as % of natural gas production or throughput at given segment	Estimate total methane emitted expressed as % of total hydrocarbon production or throughput at given segment
2015	Exploration, production & gas processing	4%	2.5%

OG7.6

Does your organization participate in voluntary methane emissions reduction programs?

No

OG7.7

Were methane emissions incorporated in targets reported in CC3?

No

OG7.7b

Please explain: (i) why you do not incorporate methane into your targets; and (ii) forecast how your methane emissions will change over the next five years

Further Information

