Climate Change 2017 Information Request
Husky Energy Inc.

Module: Introduction

Page: Introduction

CC0.1
Introduction
Please give a general description and introduction to your organization.

Husky Energy is a Canadian-based integrated energy company. It is based in Calgary, Alberta, Canada, and its common shares are publicly traded on the Toronto Stock Exchange under the symbol HSE. The Company operates in Canada, the United States and the Asia Pacific region with Upstream and Downstream business segments.

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
Fri 01 Jan 2016 - Sat 31 Dec 2016

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

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, companies in the electric utility sector, companies in the automobile and auto component manufacturing sector, companies in the oil and gas sector, companies in the information and communications technology sector (ICT) and companies in the food, beverage and tobacco sector (FBT) should complete supplementary questions in addition to the core questionnaire.

If you are in these sector groupings, the corresponding sector modules will not appear among the options of question CC0.6 but will automatically appear in the ORS 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 in CC0.6.

Further Information

Forward-Looking Statements and Information Certain statements in this document are forward-looking statements and information (collectively “forward-looking statements”), within the meaning of the applicable Canadian securities legislation, Section 21E of the United States Securities Exchange Act of 1934, as amended, and Section 27A of the United States Securities Act of 1933, as amended. The forward-looking statements contained in this document are forward-looking and not historical facts. Some of the forward-looking statements may be identified by statements that express, or involve discussions as to, expectations, beliefs, plans, objectives, assumptions or future events or performance (often, but not always, through the use of words or phrases such as “will likely result”, “are expected to”, “will continue”, “is anticipated”, “is targeting”, “estimated”, “intend”, “plan”, “projection”, “could”, “aim”, “vision”, “goals”, “objective”, “target”, “schedules” and “outlook”). In particular, forward-looking statements in this document include, but are not limited to, references to: the Company’s general strategic plans and growth strategies; the expectation that science based intensity targets for the Ram River Gas Plant and Tucker Thermal Project will not be set in the next two years; the number of emissions reduction projects expected to be implemented; the total estimated annual CO2e savings of the projects that have been implemented; estimated annual CO2e emissions savings, annual monetary savings, investment required, payback period and lifetime of emissions reduction initiatives implemented in the reporting year; the anticipated risks to the Company driven by changes in environmental, fuel/energy tax, product efficiency and climate change regulations, voluntary agreements, changes in physical climate parameters and changes in other climate-related developments, and the potential impact and magnitude of impact, timeframe, likelihood, estimated financial implications, management methods and cost of management associated with such risks; the anticipated opportunities for the Company driven by changes in climate change regulations, changes in physical climate parameters and changes in other climate-related developments and the potential impact and magnitude of impact, timeframe, likelihood, estimated financial implications, management methods and cost of management associated with such opportunities; anticipated strategies for complying with emissions trading schemes in which the Company participates or anticipates participating; and the Company’s expectation that it will recover additional oil resources in the Atlantic region over time. In addition, statements relating to “reserves” are deemed to be forward-looking statements as they involve the implied assessment based on certain estimates and assumptions that the reserves described can be profitably produced in the future. There are numerous uncertainties inherent in estimating quantities of reserves. The total amount or timing of actual future production may vary from reserve estimates. Although the Company believes that the expectations reflected by the forward-looking statements presented in this document are reasonable, the Company’s forward-looking statements have been based on assumptions and factors concerning future events that may prove to be inaccurate. Those assumptions and factors are based on information currently available to the Company about itself and the businesses in which it operates. Information used in developing forward-looking statements has been acquired from various sources, including third-party consultants, suppliers and regulators, among others. Because actual results or outcomes could differ materially from those expressed in any forward-looking statements, investors should not place undue reliance on any such forward-looking statements. By their nature, forward-looking statements involve numerous assumptions, inherent risks and uncertainties, both general and specific, which contribute to the possibility that the predicted outcomes will not occur. Some of these risks, uncertainties and other factors are similar to those faced by other oil and gas companies and some are unique to the Company. The Company’s Annual Information Form for the year ended December 31, 2016 and other documents filed with securities regulatory authorities (accessible through the SEDAR website www.sedar.com and the EDGAR website www.sec.gov) describe risks, material assumptions and other factors that could influence actual results and are incorporated herein by reference. New factors emerge from time to time and it is not possible for management to predict all of such factors and to assess in advance the impact of each such factor on the Company’s business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statement. The impact of any one factor on a particular forward-looking statement is not determinable with certainty as such factors are dependent upon other factors, and the Company's course of action would depend upon management’s assessment of the future considering all information available to it at the relevant time. Any forward-looking statement speaks only as of the date on which such statement is made and, except as required by applicable securities laws, the Company undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date on which such statement is made or to reflect the occurrence of unanticipated events. Disclosure of Oil and Gas Information Unless otherwise indicated: (i) reserves estimates in this document have been prepared by an internal panel of expert geoscientists and qualified reserves evaluators in accordance with the Canadian Oil and Gas Evaluation Handbook, have an effective date of December 31, 2016 and represent the Company's working interest share; (ii) projected and historical production volumes provided represent the Company’s working interest share before royalties; and (iii) historical production volumes provided are for the year ended December 31, 2016. The Company uses the term "barrels of oil equivalent" (or "boe"), which is consistent with other oil and gas companies’ disclosures, and is calculated on an energy equivalence basis applicable at the burner tip whereby one barrel of crude oil is equivalent to six thousand cubic feet of natural gas. The term boe is used to express the sum of the total company products in one unit that can be used for comparisons. Readers are cautioned

that the term boe may be misleading, particularly if used in isolation. This measure is used for consistency with other oil and gas companies and does not represent value equivalency at the wellhead. Husky does not currently consider CO2 injected for the purposes of enhanced oil recovery, as described in the responses to the questions in section 4 of the Oil and Gas Sector Module, as sequestered emissions. Note to U.S. Readers The Company reports its reserves and resources information in accordance with Canadian practices and specifically in accordance with National Instrument 51-101 Standards of Disclosure for Oil and Gas Activities, adopted by the Canadian Securities Administrators. Because the Company is permitted to prepare its reserves and resources information in accordance with Canadian disclosure requirements, it may use certain terms in that disclosure that U.S. oil and gas companies generally do not include or may be prohibited from including in their filings with the SEC.

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 Health Safety and Environment Committee of the Board of Directors.

The Health Safety and Environment Committee of the Board of Directors has the following mandate:

A. PURPOSE

The Health, Safety and Environment Committee (the “Committee”) is a committee of the Board of Directors (the “Board”) of Husky Energy Inc. (the “Corporation”). The Committee’s primary function is to assist the Board in carrying out its responsibilities by reviewing, reporting and making recommendations to the Board on the Corporation’s policies, management systems and programs with respect to health, safety and environment (“HS&E”).

While the Committee has the responsibilities and powers set forth in this mandate, the role of the Committee is oversight. The members of the Committee are not full time employees of the Corporation and may or may not be experts in the health, safety and environment, and, in any event, do not serve in such capacity. Consequently, it is not duty of the Committee to plan or conduct health, safety and environment initiatives, health, safety and environment audit program or the like, or to determine that the Corporation is in compliance with such health, safety and environment initiatives, health, safety and environment audit programs or the like, or that the Corporation’s health, safety and environment policies, management system and programs are complete, accurate or are in compliance with applicable legal and regulatory requirements. Management will continue to have the responsibility to conduct investigations and to assure compliance with applicable laws and regulations and the Corporation’s health, safety and environment policies and programs.

B. COMPOSITION

The Committee will consist of not less than three directors all of whom will be independent of management.

Members of the Committee will be appointed annually at a meeting of the Board, on the recommendation of the Corporate Governance Committee to the Co-Chairs, and will be listed in the annual report to shareholders.

Committee members may be removed or replaced at any time by the Board, and shall, in any event, cease to be a member of the Committee upon ceasing to be a member of the Board. Where a vacancy occurs at any time in the membership of the Committee, it may be filled by the Board.

The Committee Chair will be appointed by the Board, on the recommendation of the Corporate Governance Committee to the Co-Chairs.

C. MEETINGS

The Committee will meet at least semi-annually on dates determined by the Chair or at the call of the Chair or any other Committee member, and as many additional times as the Committee deems necessary.

Committee members will strive to be present at all meetings either in person, by telephone or other communications facilities as permit all persons participating in the meeting to hear each other.

A majority of Committee members, present in person, by telephone, or by other permissible communication facilities shall constitute a quorum.

The Committee will appoint a secretary who need not be a member of the Committee or a director of the Corporation. The secretary will keep minutes of the meetings of the Committee. Minutes will be sent to all Committee members, in a timely manner.

D. AUTHORITY

The Committee has the authority to engage and set the compensation of independent counsel and other advisors, at the Corporation's expense, as it determines necessary to carry out its duties.

E. SPECIFIC DUTIES & RESPONSIBILITES

The Committee will have the oversight responsibilities and specific duties as described below.

1. Review, on a periodic basis, the Corporation's HS&E policy, management systems and programs and any significant policy contraventions.

2. Review, on a periodic basis, the Corporation's HS&E audit program and significant findings resulting from the program.

3. Review, on a periodic basis, compliance with governmental orders, conduct of litigation and other proceedings relating to HS&E matters.

4. Review, on a periodic basis, actions and initiatives undertaken to mitigate HS&E risk and/or HS&E matters having the potential to affect the Corporation's activities, plans, strategies or reputation. In addition, the Committee oversees the Corporation's risk management framework and related processes in relation to HS&E matters.

5. Conduct a periodic review of the Corporation's environmental remediation program.

6. Monitor, on a periodic basis, the relationship with regulatory authorities and others outside the Corporation (including joint venture partners, neighbouring property owners, stakeholders and shareholders) on HS&E issues.

7. Act in an advisory capacity to the Board.

8. Carry out such other responsibilities as the Board may, from time to time, set forth.

9. Advise and report to the Co-Chairs of the Board and the Board, relative to the duties and responsibilities set out above, from time to time, set in such detail as is responsibly appropriate.

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
All employees	Monetary reward	Efficiency project	
Other: Individuals nominated for HSE awards for major sustainability accomplishments.	Recognition (non-monetary)	Other: Recognition for specific projects that address climate change and other environmental issues through the CEO's Corporate Responsibility awards.	

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
Six-monthly or more frequently	Board or individual/sub-set of the Board or committee appointed by the Board	Global Operations	> 6 years	Husky's enterprise risk matrix is reviewed on a regular basis by vice presidents and managers at all levels of the Company and on a quarterly basis by the Executive Health, Safety and Environment Committee, which is composed of senior management. Updates are provided to the Audit Committee of the Board of Directors on a quarterly basis, the Health, Safety and Environment Committee of the Board of Directors three times per year, and to the Board of Directors annually. At the asset level, the asset managers, environmental coordinators and other appropriate individuals are informed or consulted.

CC2.1b
Please describe how your risk and opportunity identification processes are applied at both company and asset level

Husky uses a comprehensive greenhouse gas (GHG) management framework to identify and respond to climate change risks and opportunities. The Carbon Management Critical Competency Network (CMCC) is a cornerstone of this framework and convenes representatives from across Husky to share knowledge and develop guidance on carbon and climate issues.

Process scope:

Husky's GHG management framework manages reporting, regulatory compliance, emission forecasting and emission reduction strategies. It includes:
- Emission management system
- Inventories and quantification
- Reporting and verification
- Forecasting

- Reduction strategies
- Regulatory advocacy and policy development
- Financial impact assessment
- Corporate governance

The CMCC also provides corporate guidance and recommendations around the growing financial risks and value of carbon.

Company-level assessment:

By estimating its current and projected future emissions and understanding forthcoming regulations that may impact its business, the Company determines the areas of its operations that may face future compliance obligations or additional costs from regulation. Husky's enterprise risk management program supports decision-making via comprehensive and systematic identification and assessment of risks that could materially impact the results of the Company. It builds risk management and mitigation into strategic planning and operational processes for its business units through the adoption of standards and best practices. Husky has developed an enterprise risk matrix to identify risks to its people, the environment, its assets and its reputation, and to systematically mitigate these risks to an acceptable level.

Asset level assessment:

Husky applies its GHG management framework through the lifecycle of projects and uses general hazard assessment procedures to evaluate opportunities and risks at an asset level. The results of assessments are then incorporated into other asset planning processes.

CC2.1c
How do you prioritize the risks and opportunities identified?

Husky quantifies risks and opportunities and determines materiality based on standard economic models integrated with other aspects of an asset or business. Prioritization is determined based on quantified impact assessment. Impact categories considered include Health and Safety, Financial, Reputation, and Environmental.

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) Description of Internal Process for strategic GHG management:

Husky uses a GHG management framework to guide the process of integrating climate change into its business strategy. Elements of the GHG management framework that inform corporate business strategy include:

a. GHG Inventory and Quantification – Internal processes have been developed to collect and validate data for each Company business unit. Calculation methodologies follow federal, provincial and/or state guidelines for quantifying and reporting emissions using Husky's Environmental Performance Reporting System (EPRS). The Corporate Responsibility business unit ("Corporate Responsibility") communicates information requests and calculation results to business units annually.

b. GHG Reporting and Verification – Facilities with regulatory reporting and compliance obligations require more detailed communications plans. Corporate Responsibility, along with third-party verifiers as required, develop schedules for meetings, site visits and data validation requests. Results of third-party verification exercises are shared with the facilities to ensure continued awareness of data quality and to streamline reporting processes. Internal Audits are used to ensure completeness and accuracy of the GHG estimation and reporting systems. Facility managers approve GHG reports prior to their submission to regulatory agencies.

c. Emissions Reduction Strategy – Facilities with established emission reduction targets are evaluated in conjunction with annual reporting. Opportunities for reductions are proposed and evaluated for feasibility. Any efficiency projects implemented during the previous year are evaluated for effectiveness. Emission forecasts based on projected production provide economic support that may be used to influence future facility design specifications or justify funding for projects to reduce emissions.

d. Regulatory Policy System – Corporate Responsibility is actively involved in organizations such as the Canadian Association of Petroleum Producers (CAPP), Canadian Fuels Association (CFA), Plains CO2 Reduction (PCOR) Partnership, International Emissions Trading Association (IETA), IPIECA and Petroleum Technology Alliance of Canada (PTAC) to collaborate with industry peers to address issues related to climate change. Issues affecting Husky's business units are communicated through appropriate means.

ii, iii) Examples and description of aspects of climate change that influence business strategy:

During times of policy change, additional resources are strategically allocated as needed to proactively address regulatory compliance and uncertainty.

As part of its efforts to address regulatory change and stakeholder expectations in relation to climate change, Husky strives to reduce facility emissions through improving energy efficiency, minimizing fugitive emissions and mitigating flaring and venting. Emission reduction and energy efficiency opportunities are evaluated at the facility level. These projects enable Husky to manage emissions reduction obligations and aid in meeting facility intensity targets described in question CC3. Husky pursues offsets as a means to reduce emissions at facilities where GHG reductions are not regulated.

iv) Examples of how short term strategy has been influenced by climate change:

The most important outcomes of short term strategy (current) that have been influenced by climate change include:

• increased resources allocated to evaluating energy efficiency and emissions reduction measures (e.g. enhanced oil recovery, carbon capture, reducing tank vent emissions, reducing methane through high bleed to low bleed pneumatic conversion, reducing well pad venting through industry clustering),

• fuel consumption reduction through ongoing work to optimize the thermal efficiency of stationary combustion equipment (i.e. boilers and heaters),

• maximization of gasoline and diesel product blending with renewable fuels to reduce emissions generated from transportation fuel combustion,

• decreased Scope 2 GHG emissions associated with purchased electricity due to the installation of variable frequency drivers to reduce electrical usage,

• continued efforts to minimize impact to the environment from Husky's water management activities, and manage risks or impacts to its assets and operations from water events such as flooding and drought,

• severe weather and climate-related hazardous operations planning (especially in offshore facilities), and

• monitoring of planning for current and emerging regulatory obligations and issues.

v) Examples of how long term strategy has been influenced by climate change:

An integrated and balanced approach on emissions management throughout the lifecycle of facilities provides a basis for long-term emissions management. Facility production and emissions forecasts have been created based on current and future projects. The potential environmental compliance costs presented in the emissions forecasts may be used to influence future facility design specifications and corporate design standards or justify funding for projects to reduce emissions. Husky's Carbon Management Critical Competency Network (CMCC) is in part driven by long-term climate change issues surrounding carbon markets and costs of mitigation. The most important outcomes of long term strategy (5+ year time horizon) that have been influenced by climate change include:

• technology development for carbon capture,
• advancement of low emission extraction technologies,
• pursuance of opportunities to reduce the carbon intensity of produced transportation fuels, and
• adoption of risk mitigation plans for increasing number and severity of weather and climate-related events that impact production.

vi) Examples of how climate change strategy is delivering strategic advantage:

Husky incorporates technology and research advancements to reduce emissions, and encourages innovative approaches to minimize emissions, such as carbon capture, injecting carbon dioxide (CO_2) for enhanced oil recovery and evaluating technologies to reduce methane venting in cold heavy oil production. These projects reduce GHG emissions and may be used to gain emission reduction credits in certain provincial jurisdictions.

vii) Example of the most substantial business decision made related to climate change:

The most substantial business decision that Husky has made related to climate change continues to be investment in its CO_2 Enhanced Oil Recovery program. Husky's CO_2 EOR program utilizes CO_2 emissions captured at the Lloydminster Ethanol Plant, and the Lashburn thermal project. This program lowers emissions intensity in the Company's heavy oil business through carbon capture, while enhancing oil production, and creates opportunities for marketing lower carbon intensity products.

CC2.2c
Does your company use an internal price on carbon?

Yes

CC2.2d
Please provide details and examples of how your company uses an internal price on carbon

Husky uses an internal price on carbon to evaluate projects in jurisdictions where there is a regulatory compliance obligation for GHG emissions or where there is a reasonable expectation that additional material compliance obligations will be implemented in the near to mid-term. The Company considers both the cost and value of GHGs; for example, Husky places a value on CO_2 as a means to enhance heavy oil production.

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
Carbon tax	Support	Husky continues to directly engage with provincial and federal government agencies through pro-active outreach, as well as through input to industry associations representing broad industry consensus.	Husky supports efforts to price carbon in a way that is equitable for all GHG emitters and preserves industry competitiveness.
Regulation of methane emissions	Support	Husky continues to directly engage with provincial and federal government agencies through proactive outreach, as well as through input to industry associations representing broad industry consensus.	Husky supports incentives for early action on methane emission reductions that give industry the flexibility to manage reductions efficiently.
Other:	Support with major exceptions	Husky continues to directly engage with provincial and federal government agencies through pro-active outreach, as well as through input to industry associations representing broad industry consensus.	Husky supports efforts to reduce the carbon intensity of transportation fuels provided such efforts do not place excessive burden on existing refining operations.

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?
Canadian Association of Petroleum Producers (CAPP)	Consistent	CAPP's climate change policy principles as shown at http://www.capp.ca/responsible-development/air-and-climate/climate-change Balance Balanced "3E" policy should deliver Economic growth, Environmental protection, and a secure and reliable Energy supply. Efficiency Policy should be designed to drive efficient actions required to achieve emission objectives. Technology Policy should stimulate investment in the technologies necessary for significant reductions in GHG emissions in Canada. Predictability and Stability Predictable policy built on stable principles should support long term capital investments in the upstream oil and gas sector and create jobs for Canadians. Competitiveness Policy should maintain competitiveness of Canadian industry, ensure compatibility with major trading and economic partners (particularly with the U.S., Canada's largest trading partner), and compliance should be achievable within the context of growing production. Distributional Fairness Policy should distribute cost burden equitably among sectors and jurisdictions across the economy. Harmonization Policy should be harmonized across jurisdictions within Canada, to an extent that is reasonable and practical. Administrative Simplicity Policy should be simple and minimize the administrative burden on industry to the greatest extent possible.	Husky participates in working groups within CAPP to inform the industry association's position relative to climate change policy in Canada.
Canadian Fuels Association (CFA)	Consistent	CFA's policy position is presented at http://www.canadianfuels.ca/Industry-Policy/#Climate: Climate Change / GHG Emission Reduction To address the risks of climate change, reducing GHG emissions has become an important global issue. Under the auspices of the Paris Agreement, virtually every country has committed to reduce their GHG emissions. For Canada, our collective efforts to achieve a sustainable, lower carbon future must be founded on three key actions: • Explore, define and evaluate GHG emission-reduction pathways in collaboration with all stakeholders before targets are set. • Recognize Canada's productivity and competitiveness as core considerations in the development and implementation of a national GHG-reduction strategy. • Ensure that sound evidence and cost-benefit analyses drive decision-making and are transparently shared with citizens. Climate policy has far reaching implications for citizens, business and society in general. Canadian Fuels Association and its members support policy approaches that minimize the overall cost to society of reducing climate risks. Broad-based carbon pricing mechanisms that are transparent, uniform and predictable are useful tools to send clear price signals across the economy that can effectively and efficiently reduce Canada's carbon footprint. Please see "Further information" for more detail.	Husky participates in working groups within CFA to inform the industry association's position relative to climate change policy in Canada.

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?

Key individuals in the business units and supporting service groups collaborate to align Husky's position. The Company's climate change strategy is clearly communicated to policy makers either directly or through participation in industry association working groups within the jurisdictions where the Company operates. In 2016, Husky continued to support consistency in policy advocacy through the Company's Carbon Management Critical Competency and activity within the GHG management framework. Husky's Government Relations department works with the Carbon Management Critical Competency Network and Company representatives involved in policy engagement to ensure that policy advocacy activities are aligned.

Further Information

Further to question. CC2.3c, the CFA policy position also includes the following in regards to Industrial and Transportation Emissions (it is included here due to the character limit in the main body): Industrial Facility Emissions – Refineries Refining is an energy intensive and trade exposed sector. Maintaining Canadian refining industry competitiveness is a key principle to underpin any GHG emissions reduction policy. Policies must maintain a level playing field between jurisdictions, between sectors and within sectors. This is best accomplished with a national approach, rather than the current federal/provincial patchwork, and one that is aligned with approaches implemented by our major trading partners. Emission expectations for Canadian refineries should be determined with reference to an established global benchmark. Transportation Emissions Transportation is a significant component of GHG emissions globally and in Canada. Transportation is also vital to a strong economy and a progressive quality of life. Successfully reducing transport emissions is a complex and challenging task. The goal must be a sustainable transportation system that balances Canadians' environmental, economic and social aspirations. Carbon pricing mechanisms can play an important role. Beyond that, achieving the aspirations of the Paris Agreement will require Canadians and our governments to make smart decisions about where we live and work, and how we get around.

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?

Intensity target

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	2.7%	15%	Metric tonnes CO2e per unit of production	2010	0.1982	2016	No, and we do not anticipate setting one in the next 2 years	This is an external target set by regulators for the Ram River Gas Plant. Husky met this target in 2016.
Int2	Scope 1	5.9%	15%	Metric tonnes CO2e per unit of production	2011	0.9668	2016	No, and we do not anticipate setting one in the next 2 years	It is an external target set by regulators for the Tucker Thermal Project. Husky met this target in 2016.

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	14			Decrease due to declining production and intensity target reductions. The target outlined in ID# Int1 of Q3.1b and Q3.1c is an external target set by regulators and covers Scope 1 emissions only.
Int2	Increase	18			A rolling baseline target is used, so the average of 2011, 2012 and 2013 production was used to calculate baseline absolute emissions. The target outlined in ID# Int2 of Q3.1b and Q3.1c is an external target set by regulators and covers Scope 1 emissions only.

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	100%	100%	Husky is participating in the Alberta Climate Change Emissions Management Fund to meet this target.
Int2	100%	100%	Husky achieved this target through on-site steam optimization efforts.

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

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
Group of products	Gasoline and diesel blends with renewable fuels	Avoided emissions	Other: Natural Resources Canada's GHGenius model		Less than or equal to 10%	Scope 1 GHG emissions from transportation fuel combustion were avoided by blending renewable alternatives to gasoline (ethanol) and renewable alternatives to diesel (Hydrogenation-Derived Renewable Diesel [HDRD] and biodiesel) into gasoline and diesel, respectively. Where possible, Husky blends up to 10% ethanol into all grades of gasoline. In 2016, this equated to an average 9.4% ethanol blend, which exceeded federal and provincial requirements at the point of blending (Canada Federal - 5%, BC - 5%, AB - 5%, SK - 7.5%, MB - 8.5%, ON - 5%). In 2016 the blending of ethanol into gasoline resulted in a reduction of 61,000 metric tonnes of CO2 relative to the 2007 baseline. (2007 is the Government of Canada baseline year that takes into account all industry emissions and the fuel offering of that year; it is integrated into the GHG model assumptions.) The most up-to-date version of National Resources Canada's (NRCan) GHGenius model was used to calculate the carbon intensities of Husky's fuel blends. The B.C. Renewable and Low Carbon Fuel Requirements Regulation's Emissions Calculation was used to determine emissions reductions. Emissions Reduction (tonnes) = (CI class x EER fuel - CI fuel) x EC fuel / 1,000,000, where CI class = the prescribed carbon intensity limit for the compliance period for the class of fuel of which the fuel is a part; EER fuel = the prescribed energy effectiveness ratio for that fuel in that class of fuel; CI fuel = the carbon intensity of the fuel (via GHGenius); EC fuel = the energy content of the fuel calculated in accordance with the regulations. Husky is not considering generating Certified Emission Reductions (CERs) or Emission Reduction Units (ERUs) within the framework of Clean Development Mechanism (CDM) or Joint Implementation (JI) of the United Nations Framework Convention on Climate Change (UNFCCC) at this time.
Product	Ethanol	Low carbon product	Other: Natural Resources Canada's GHGenius model	0%	Less than or equal to 10%	Husky has 22 currently approved carbon intensities registered with the B.C. Ministry of Energy and Mines using the GHGenius model to calculate carbon intensities.

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	5	
To be implemented*	0	
Implementation commenced*	0	
Implemented*	2	311000
Not to be implemented	0	

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
Other	Installation of compressors at heavy oil wellsites that will capture otherwise vented produced gas	311000	Scope 1	Mandatory	2025000	1673000	<1 year	3-5 years	
Low carbon energy installation	Fuel gas switching from diesel to natural gas for well completions	2	Scope 1	Voluntary					

CC3.3c
What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	
Dedicated budget for energy efficiency	
Employee engagement	
Financial optimization calculations	
Internal price on carbon	
Internal incentives/recognition programs	
Partnering with governments on technology development	

Further Information

The emissions reduction initiatives described in question CC3.3 have not been claimed as offsets under an established carbon trading scheme and have not been verified by a third party.

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	Underway - previous year attached	Pages 26-28	https://www.cdp.net/sites/2017/75/8675/Climate Change 2017/Shared Documents/Attachments/CC4.1/Husky-Community-Report-2015.pdf	
In mainstream reports (including an integrated report) but have not used the CDSB Framework	Complete	Page 45	https://www.cdp.net/sites/2017/75/8675/Climate Change 2017/Shared Documents/Attachments/CC4.1/HSE_AnnualReport2016.pdf	
In other regulatory filings	Complete	Page 69-73; Page 80	https://www.cdp.net/sites/2017/75/8675/Climate Change 2017/Shared Documents/Attachments/CC4.1/AnnualInfoForm-2016.pdf	

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
Uncertainty surrounding new regulation	Risk Description: Husky is exposed to developing climate change regulations in Alberta, Saskatchewan, British Columbia, Manitoba, Newfoundland and Labrador, federally in Canada and the U.S., and in Asia. In November	Increased operational cost	Up to 1 year	Direct	Virtually certain	Medium	Presently, Husky makes carbon-related payments in B.C. and Alberta. The Company's	Husky manages its exposure to uncertainty in new regulation through strategic investments	Husky's initial pilot for CO2 capture from once-through steam generator flue gas at its Lashburn,

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	2016, the federal government announced it would initiate consultations to develop a Clean Fuel Standard to reduce 30 million metric tonnes of GHG emissions by 2030. Please see "Further Information" for more discussion of the Standard. In December 2016, the federal government announced its Pan-Canadian Framework on Clean Growth and Climate Change. Along with previously announced measures (e.g. the Clean Fuel Standard), under the proposed approach, Canada's annual GHG emissions will be cut by 30% or more below 2005 levels by 2030 in order for the country to meet its commitments under the Paris Agreement. Please see "Further Information" for a more detailed discussion of the Pan Canadian Framework. It is not clear how the Pan-Canadian Framework will be structured and what impacts it will have on Husky's operations. Climate change regulations may become more onerous over time as different levels of government implement policies to further reduce GHG emissions. Although the impact of emerging regulations is uncertain, they may have a material adverse effect on the Company's financial condition and results of operations through increased capital and operating costs and erosion of demand for refined products. In 2016, carbon pricing applied only to Husky's Ram River Gas Plant, Tucker Thermal Project, and operations in B.C. Please see the "Further Information" section for a more detailed description of these risks.						current financial exposure to fees associated with carbon emissions is $7 million, which is approximately 0.05% of Husky's 2016 gross revenue before royalties and marketing and other income. The Company expects payments to increase with pending changes to GHG regulations in various jurisdictions, however there is some uncertainty as to the degree and pace at which increases will be incurred.	that focus on positive return on investment (ROI), reduced operating costs and lower emissions intensity. Husky participates in direct and joint industry engagement with policy makers to stay abreast of emerging trends in regulation and advocate for regulatory certainty. For example, Husky is an active participant on the Alberta Energy Regulator's Methane Reduction Oversight Committee and subcommittees. Husky continues to monitor the international and domestic efforts to address climate change, including developments through the UN Conference of Parties process and emerging regulations in the jurisdictions in which the Company operates.	Sask. test facility began operation in 2015, capturing up to 30 tonnes a day of CO2e. The project cost approximately $20 million, with $6 million provided through external grants. Relevant energy efficiency projects that help mitigate GHG regulatory exposure are estimated at $1,673,000 for this reporting year. Activities related to policy intelligence and advocacy are part of operating costs and are not tracked separately.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	Effects of Regulatory Uncertainty: The regulatory uncertainty discussed above creates difficulties in assessing the impact of climate change regulations on the Company, specifically in how and when emissions will be constrained, monitored and measured, the cost of carbon and ultimately the Company's liability from climate change regulations. The variety of current and future regulations across multiple jurisdictions, and the associated uncertainty in these frameworks, creates further difficulties in predicting the timing of regulations, targets, or costs. These variables ultimately create challenges in understanding the long term impacts of climate change regulations on the Company and evaluating their associated risks.							Although the impact of emerging regulations is uncertain, they may have a material impact on the Company's finances and operations. Performance improvement may be achieved through technology. Husky invests in technology and participates in industry knowledge sharing initiatives that will help it develop operational improvements.	

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
Snow and ice	Risk Description: Husky operates in some of the harshest environments in the world, including in the offshore Atlantic region at the White Rose field. Climate change is expected to increase severe weather	Reduction/disruption in production capacity	Up to 1 year	Direct	Very likely	Low	The potential consequences of a severe weather or ice related event to Husky's offshore operations include possible	Husky is managing physical risk through engineering for 1:100 year weather events. Husky's Atlantic	The cost of the Company's ice monitoring and management activities was approximately $1.6 million in 2016.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	conditions, including winds, flooding, and variable temperatures, which are contributing to the melting of northern ice and increased iceberg activity. The Company has in place a number of policies to protect people, equipment, and the environment in the event of extreme weather conditions and adverse ice conditions. Risk Effects: Icebergs and pack ice off the coast of Newfoundland may affect Husky's offshore facilities causing damage to equipment and possible production disruptions, spills, asset damage and human impacts. (There was no downtime experienced for either the SeaRose FPSO or the Henry Goodrich related to risk mitigation due to ice during the 2016 season.)						production disruptions, spills, asset damage and human impacts. While this is mitigated through the methods described below, financial implications of a severe event could be greater than $10 million.	business unit has a robust ice management program that uses a range of resources, including a dedicated ice surveillance aircraft, and works with government agencies including Environment Canada, the Coast Guard and Canadian Ice Service. Regular ice surveillance flights usually commence in February, and continue until the threat has abated. In addition, Atlantic Region operators employ a series of supply and support vessels to actively manage ice and icebergs. This fleet has grown over time partly in response to changing ice conditions. Husky maintains a series of ad-hoc relationships	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								with contractors, allowing the quick mobilization of additional resources as required. In 2016, a total of 103 icebergs were tracked; of those, 25 required management (a total of 37 management operations). There was no downtime experienced for either the SeaRose FPSO or the Henry Goodrich related to risk mitigation due to ice during the 2016 season.	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in precipitation extremes and droughts	Risk Description: Where Husky has operations in flood prone areas, extreme weather events can expose the Company to increased risk of disruption to operations. Risk Effects: Flooding and extreme weather has the potential to disrupt operations in the field as well as at Husky's head office in Calgary.	Reduction/disruption in production capacity	1 to 3 years	Direct	Unknown	Low-medium		Readiness for potential emergencies is strengthened through exercises, established processes and Emergency Response Plans (ERPs) designed to guide a consistent and effective response to any event which could affect employees, contractors, the community, the environment and/or the Company's assets and reputation. Additionally, Husky develops contingency plans and measures to mitigate the impacts should a business-interrupting event occur.	

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 behavior	Risk Description: Societal and consumer pressure to reduce GHG emissions from the transportation sector could affect the composition of the basket of fuels available to the consumer as well as improved vehicle performance, as noted in the Canadian Fuels Association's "Fuels for Life" report. Risk Effects: Increased demand for improved vehicle performance leading to increased fuel efficiency may reduce demand for gasoline and diesel at Husky's 481 (2016 average) retail locations in North America as described in the U.S. Energy Information Administration's 2017 Annual Energy Outlook.	Reduced demand for goods/services	>6 years	Direct	Likely	Low	If Husky were to experience a 2.8% annual decrease in fuel sales, corresponding to the EIA's largest estimated decline in energy demand for any mode of transport through 2050 in its 2017 Annual Energy Outlook, the scale of potential financial impacts to the Company are in the order of $3 million per year based on 2016 fuel sales. This figure is less than 0.1% of 2016 gross revenue. The Company has growth opportunities in enhanced oil production using CO2, and ethanol-blended fuels.	As regulations develop and markets for its products change, Husky will continue to manage the risk through the Carbon Management Critical Competency and its GHG management framework. Through these methods, Husky monitors emerging regulations, advises management and lead officers of any developments, and advocates the Company's position with the regulators. Additionally, Husky's Executive Health, Safety, and Environment Committee reviews and approves compliance and emission reduction strategies, establishes performance targets, and allocates resources as appropriate. Through the application of this framework and Husky's Corporate Risk Management program over time, the Company will seek to develop the appropriate response to changing markets as they materialize. This includes	Husky has integrated its Climate Change Management Framework into everyday business operations at a corporate-services level. There are no additional material costs to manage the risks described in this response at this time. If any of these risks are determined to be more pressing or impactful, a reassessment of management plans and costs will be performed.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								allocating resources as appropriate to growth opportunities in natural gas, enhanced oil production using CO2, and ethanol blended transportation fuels. As an example of a current action to address this risk, Husky is reducing emissions through increased renewable fuel blending. In 2016, the use of ethanol blended fuel helped prevent the emission of 61,000 tonnes of CO2e.	

Further Information

CC5.1a The Clean Fuel Standard will apply to fuels used in transportation, buildings and industries – including liquid fuels (e.g. gasoline, diesel, and heavy-fuel oil), gaseous fuels (e.g. natural gas and propane), as well as solid fuels (e.g. petroleum coke). A reduction in fuel carbon intensities will be required based on a life cycle analysis. Details of the Standard are yet to be determined. The Pan-Canadian Framework includes the following key components for industry: 1) establishing a national price on carbon 2) reducing methane emissions 3) improving industrial energy efficiency, and 4) investing in new technologies. The federal government has committed to ensuring that the provinces and territories have the flexibility to design their own policies and programs to meet the emission reduction targets as long as their pricing on carbon emissions starts at a minimum of $10 per tonne in 2018 and rises by $10 a year to reach $50 a tonne in 2022. British Columbia currently has a $30 per tonne carbon tax that is in place on fuel Husky uses and purchases in that jurisdiction, which affects all of the Company's operations in British Columbia. Additionally, British Columbia has a Renewable and Low Carbon Fuel Requirements Regulation in place that requires a reduction in the allowable carbon intensities of all transportation fuels, with penalties applied for intensities that do not meet targets. As a result of credits accumulated by the Company in prior years, it is anticipated that penalty payments will not begin to apply until the end of 2017. Beyond that, the cost of compliance with the regulation may become material. At Husky's Prince George Refinery in B.C., certain biodiesel blending options are not feasible operationally or economically. With the current biodiesel blending option, it is not economically feasible to increase the blending percentages. The B.C. government is currently conducting additional consultations on its Climate Leadership Plan. Future regulations may impact the Company's operations in British Columbia. Existing regulations in Alberta require facilities that emit more than 100,000 tonnes of CO2e in a year to reduce their emissions intensity by up to 20 percent below an established baseline emissions intensity by January 1, 2017. These regulations currently affect the Company's Ram River Gas Plant and Tucker Thermal Project. Husky's Sunrise Energy Project will not be impacted by the existing regulations before they expire in 2017. The Alberta Climate Leadership Plan will begin implementation in 2017, including the introduction of a carbon levy. Additional regulations under this plan are currently under development and will collectively cover all of the Company's assets in Alberta. The Saskatchewan government is not a signatory to the Pan-Canadian Framework. Manitoba released its Climate Change and Green Economy Action Plan in December 2015 and pledged to start a carbon cap-and-trade system aiming to cut GHG emissions from 2005 levels by one-third by 2030 and by one-half by 2050. Manitoba has stated it will cap GHG emissions for certain sectors and link its cap-and-trade system with others in North America. Details on the plan will follow public consultations, and its implementation may impact Husky's operations in Manitoba. Newfoundland and Labrador are signatories to the Pan-Canadian Framework but have not yet announced an approach for implementation. The Company's U.S. refining business may be materially impacted by implementation of the EPA's climate change rules or by future U.S. GHG legislation that applies

to the oil and gas industry and/or the consumption of petroleum products. Such legislation or regulations could require Husky's U.S. refining operations to significantly reduce emissions and/or purchase allowances, which may have a material impact on the Company's finances and operations.

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	Opportunity Description: Husky has a number CO2 sources whose emissions may be relatively inexpensive to capture. These sources include ethanol plants, hydrogen plants and sour gas sweetening plants. However, presently there is no widespread infrastructure in place to transport captured CO2 for other uses. Regulations will influence the construction and operation of CO2 capture and transport infrastructure. Husky is operating a pilot at Lashburn, Sask., capturing	Reduced operational costs	3 to 6 years	Direct	Likely	Medium	Husky is performing ongoing evaluations to assess the financial impact of this opportunity. Commodity prices of CO2 for EOR purposes can exceed $100 per tonne when delivered to remote sites. Based on 2016 injected volumes, this could correspond to a supply cost of greater than $10 million.	The opportunities described in this question are being managed through Husky's GHG management framework. Specifically, the opportunity to capture CO2 from various sources and inject it for EOR depends on these methods: 1. Emission Inventory: knowledge of where opportunities exist, specifically, where the best source of CO2 is for capture. It will also allow Husky to track emission	Husky's initial pilot for CO2 capture from once-through steam generator flue gas at its Lashburn, Sask. test facility began operation in 2015, capturing up to 30 tonnes a day of CO2e. The project cost approximately $20 million, with $6 million provided through external grants.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	up to 30 tonnes a day of CO2e from once-through steam generators for use at EOR candidate facilities. Multiple low emission technologies are under consideration for future application at thermal projects. Opportunity Effects: The CO2 sources available for carbon capture will allow Husky to respond to regulatory changes influencing carbon capture and storage and provide for reduced operating costs.							reductions. 2. Monitor Regulation and Advocate Policy: Husky monitors emerging regulations and advocates the Company's position with regulators. Husky continues to work with technology proponents and funding agencies at the provincial and federal levels to support innovation in CO2 capture and utilization. 3. Compliance and Emission Reduction Opportunities: Husky has and continues to develop a number of compliance options, including emission reductions through efficiency improvements and technology advancements, management of fugitive emissions, CO2 capture, carbon trading and offset credit generation. 4. Governance:	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								Husky's Executive Health, Safety, and Environment Committee reviews and approves compliance and emission reduction strategies as well as establishes performance targets. Husky is currently implementing a CO2 capture program for an EOR pilot from once-through steam generators to evaluate technological and economic feasibility of large scale technology adoption and opportunity exploitation.	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Fuel/energy taxes and regulations	Regulations such as low-carbon fuel standards for transportation fuels may drive the demand for renewable transportation fuels, including ethanol for blending with gasoline. Husky is Western Canada's largest producer of ethanol, operating two plants with a total annual capacity of 260 million litres, and is the region's largest distributor of ethanol for blending into gasoline. Husky captures CO2 at its Lloydminster Ethanol Plant in Saskatchewan. As a result, the ethanol produced at this facility has a low carbon intensity.	Increased demand for existing products/services	3 to 6 years	Direct	Likely	Unknown			
Fuel/energy taxes and regulations	Regulations may drive the use of energy efficient equipment and equipment and projects designed to reduce emissions	Reduced operational costs	1 to 3 years	Direct	Very likely	Unknown			

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Voluntary agreements	In 2016, Husky joined the SmartWay Transport Partnership. This collaboration is designed to help businesses reduce fuel costs while transporting goods in the cleanest, most efficient way possible. SmartWay works with freight carriers and shippers that are committed to benchmarking their operations, tracking their fuel consumption and improving their annual performance.	Reduced operational costs	1 to 3 years	Indirect (Supply chain)	Very likely	Unknown			
Product efficiency regulations and standards	Regulations may encourage research into the use of CO2 for enhanced oil recovery. Husky completed a project in 2012 which included capturing CO2, injecting it into heavy oil reservoirs, and then using the CO2 to assist with enhanced heavy oil recovery, and continues to investigate additional capture	Increased production capacity	1 to 3 years	Direct	Very likely	Unknown			

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	technologies. Husky is developing this recovery method, which has not yet been applied commercially in the thin, shallow, viscous formations typical of heavy oil. Specifically, the Company is developing knowledge and methods on how to capture CO2 from its Lloydminster Ethanol plant and other sources; and then purify, dehydrate and compress it before transporting it to heavy oil reservoirs located in proximity to the plant. The CO2 is injected into the reservoirs and used to enhance oil recovery. When the reservoirs are fully depleted, the CO2 can be stored in the reservoir.								

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Fuel/energy taxes and regulations	Regulations may drive the demand of low-carbon-based fuels. Husky maintains that natural gas offers a relatively inexpensive, practical, and clean source of energy.	Increased production capacity	3 to 6 years	Direct	Likely	Unknown			
Voluntary agreements	In 2016, Husky continued to use its FuelTrax Fuel Management and Monitoring system to conserve fuel and reduce air emissions from our Atlantic operations. FuelTrax records fuel consumption from Offshore Supply Vessels (OSVs) and is designed to measure diesel consumption per second. As a result, Husky expects to optimize OSVs efficiency and reduce fuel consumption and emissions by 3% from current levels on transits between port and the offshore field.	Reduced operational costs	1 to 3 years	Direct	Very likely	Unknown			

CC6.1b
Please describe your 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
Snow and ice	Opportunity Description: Husky operates in some of the harshest environments in the world. These environments are subject to physical changes due to climate change including extreme weather conditions and iceberg activity that could adversely affect in onshore and offshore operations. For example, iceberg activity off the coast of Newfoundland may affect offshore oil production facilities, including the SeaRose FPSO. The Company has developed a number of policies to protect people, equipment, and the environment in the event of extreme weather conditions Opportunity Effects: Husky's experience in harsh environments allows the Company to effectively manage iceberg activity.	Increased production capacity	Up to 1 year	Direct	Likely	Medium	Husky's proven ability to operate in the harsh offshore environment in the Atlantic region has contributed to an expectation that the Company will recover additional oil over time.	Husky's Atlantic business unit has a robust ice management program. The program uses a range of resources, including a dedicated ice surveillance aircraft, and works with government agencies including Environment Canada, the Coast Guard and Canadian Ice Service. Regular ice surveillance flights usually commence in February, and continue until the threat has abated. Atlantic region operators employ a series of supply and support vessels to actively manage ice and icebergs. These vessels are equipped with a variety of ice management	The cost of the Company's ice monitoring and management activities were approximately $1.6 million in 2016

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								tools including towing ropes, towing nets and water cannons. This fleet has grown over time partly in response to changing ice conditions. Husky maintains a series of ad-hoc relationships with contractors, allowing the quick mobilization of additional resources as required.	

CC6.1c
Please describe your 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
Changing consumer behavior	Opportunity Description: Husky may have an opportunity to provide low-carbon fuels to meet new market demand. Certain markets are assigning premium value to low-carbon transportation fuels and coal is being phased out and replaced by natural gas as the fuel of choice for power generation. Husky is well positioned to benefit from these trends in consumer behaviour as it has growth	Increased demand for existing products/services	3 to 6 years	Indirect (Client)	Likely	Low-medium	The financial implications are difficult to measure at this time. However, these opportunities have the potential to inform Husky's investment decisions. For example, if consumer	Husky identifies and manages opportunities related to consumer behaviour through several mechanisms: The Company's enterprise risk matrix with mitigation	Husky has integrated its risk and opportunity identification processes into everyday business operations at a corporate services level. There are no additional material costs to identify and

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	opportunities in natural gas production and ethanol-blended gasoline. The Company's Lloydminster Ethanol Plant currently provides low carbon intensity ethanol to the B.C. market to support blending requirements to meet the province's Renewable and Low Carbon Fuels Requirements Regulation. Opportunity Effects: Increased consumer demand for low-carbon transportation fuels and natural gas could result in new revenue opportunities.						preference shifts to low-carbon fuels for transportation and natural gas for power generation, Husky may allocate greater resources to these growth areas.	strategies is reviewed by the Audit Committee quarterly and provided to the Board of Directors annually. Through the application of this risk matrix over time, the Company will be able to determine the appropriate response to changing markets as they develop. This includes allocating resources as appropriate to growth opportunities in natural gas, and ethanol-blended gasoline. For example, the Company's Lloydminster Ethanol Plant currently provides low carbon intensity ethanol to the B.C. market to support blending requirements to meet the province's Renewable and Low Carbon Fuels Requirements	manage the opportunities described in this response at this time. If any of these opportunities are determined to warrant further study, a formal project sanctioning process would follow with the appropriate decision gates as needed. Costs would be refined at each of these gates.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								Regulation. Husky also has a formal opportunity identification and evaluation process that is managed through its corporate Project Management Office that is able to identify additional opportunities from changes in consumer behaviour as they arise.	

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	Sat 01 Jan 2011 - Sat 31 Dec 2011	10320000
Scope 2 (location-based)	Sat 01 Jan 2011 - Sat 31 Dec 2011	2310000
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

Please select the published methodologies that you use
Canadian Association of Petroleum Producers, Calculating Greenhouse Gas Emissions, 2003
IPIECA's Petroleum Industry Guidelines for reporting GHG emissions, 2003
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
Other
US EPA Climate Leaders: Indirect Emissions from Purchases/Sales of Electricity and Steam
US EPA Climate Leaders: Direct Emissions from Stationary Combustion
US EPA Mandatory Greenhouse Gas Reporting Rule

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

Environment and Climate Change Canada: Technical Guidance on Reporting Greenhouse Gas Emissions - Facility Greenhouse Gas Emissions Reporting (December 2016)

Western Climate Initiative: Quantification Method 2013 Addendum to Canadian Harmonization Version (December 20, 2013);

Western Climate Initiative: Final Essential Requirements of Mandatory Reporting - 2011 Amendments for Harmonization of Reporting in Canadian Jurisdictions (December 21, 2011, as amended on February 10, 2012); and

Western Climate Initiative: Final Essential Requirements of Mandatory Reporting - 2010 Amended for Canadian Harmonization (December 17, 2010).

CC7.3
Please give the source for the global warming potentials you have used

Gas	Reference
CO2	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	IPCC Fourth Assessment Report (AR4 - 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

Further Information

Page: CC8. Emissions Data - (1 Jan 2016 - 31 Dec 2016)

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

11242000

CC8.3
Please describe your approach to reporting Scope 2 emissions

Scope 2, location-based	Scope 2, market-based	Comment
We are reporting a Scope 2, location-based figure	We have no operations where we are able to access electricity supplier emissions factors or residual emissions factors and are unable to report a Scope 2, market-based figure	

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
2128000		Husky does not currently purchase any electricity with source-specific emission factors. The jurisdictions where the Company has operations do not supply a residual mix grid emissions factor. Electricity emissions factors are taken from the 2016 Canadian National Inventory Report as submitted to the United Nations Framework Convention on Climate Change or supplied by grid operators where 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?

Yes

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
Drilling and Completions Emissions	Emissions are not relevant	Emissions are not relevant	Emissions are not relevant	Drilling and completions operations emissions are only estimated and reported in jurisdictions where mandated. During 2016, the Company's onshore drilling was focused primarily on the development of Heavy Oil, Oil Sands, and gas resource plays. Oil related drilling and completion activity in Western Canada was substantially curtailed throughout 2016 primarily due to limited capital investment in a low commodity price environment.

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
Emissions from Husky owned and operated vehicles that are operated outside of specific large-emitting facilities	Emissions are not relevant	No emissions from this source	No emissions from this source	Husky estimates that this is not a major emissions source at this time.
Emissions from Husky-owned transportation fuels retail sites, i.e. bulk plants, travel centres, cardlocks and retail stations	Emissions are not relevant	Emissions are not relevant	No emissions from this source	Husky estimates that retail sites emissions from building heating and electricity consumption are immaterial when compared to the Company's total Scope 1 and Scope 2 emissions.

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 5% but less than or equal to 10%	Metering/ Measurement Constraints	Fuel, flare and vent volumes are used to calculate GHG emissions from a very large number of small facilities. Engineering estimates are often used to estimate fuel consumption for small sources where it is impractical to install and service a meter. This adds to the uncertainty.
Scope 2 (location-based)	More than 5% but less than or equal to 10%	Assumptions Data Management	Scope 2 emissions are based on the invoiced energy purchases, and are believed to be accurate and auditable. Electricity Volumes are taken from aggregated invoices where possible. Some transmission and distribution losses may be included, which should be Scope 3 emissions
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	First year it has taken place	Limited assurance			ISAE3000	100
Annual process	Complete	Reasonable assurance	https://www.cdp.net/sites/2017/75/8675/Climate Change 2017/Shared Documents/Attachments/CC8.6a/BC LFO Assurance.pdf	6,7	ISO14064-3	1
Annual process	Complete	Reasonable assurance	https://www.cdp.net/sites/2017/75/8675/Climate Change 2017/Shared Documents/Attachments/CC8.6a/2016 Ram River Third Party Verification Report-11129206-RPT-4-2016 Final.pdf	32	ISO14064-3	3
Annual process	Complete	Reasonable assurance	https://www.cdp.net/sites/2017/75/8675/Climate Change 2017/Shared Documents/Attachments/CC8.6a/2016 Tucker Third Party Verification Report.pdf	32	ISO14064-3	6
Annual process	Complete	Reasonable assurance	https://www.cdp.net/sites/2017/75/8675/Climate Change 2017/Shared Documents/Attachments/CC8.6a/2016 PGR Verification Statement_Stantec_19 May 2017.pdf	6	ISO14064-3	1

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	First year it has taken place	Limited assurance			ISAE3000	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
Progress against emissions reduction target	For facilities that are governed by the Alberta Specified Gas Emitters Regulation, verification work is in relation to a baseline year for the purposes of evaluating progress towards emissions reduction obligations.

CC8.9
Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

Yes

CC8.9a
Please provide the emissions from biologically sequestered carbon relevant to your organization in metric tonnes CO2

226000

Further Information

CC 8.6a and CC8.7a: Both ISAE3000 and ISAE 3410 are relevant to the audit of Husky's Scope 1 and 2 emissions initiated in 2016.

Page: CC9. Scope 1 Emissions Breakdown - (1 Jan 2016 - 31 Dec 2016)

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	10066000
United States of America	1176000

CC9.2
Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By facility
By GHG type
By activity

CC9.2b
Please break down your total gross global Scope 1 emissions by facility

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude
Lloydminster Upgrader	1226000	53.263	-109.9489
Lima Refinery	1176000	40.721323	-84.114139
Sunrise Energy Project	1214000	57.2415	-111.0596
Tucker Thermal Project	661000	54.3427	-110.3287
Sea Rose FPSO	446000	46.7215	-48.1341
Bolney Lloyd Thermal Project	528000	53.527	-109.3568

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude
Ram River Gas Plant	307000	52.1463	-115.33
Pikes Peak South Lloyd Thermal Project	285000	53.21062	-109.36673
Pikes Peak Lloyd Thermal Project	198000	53.2796	-109.3719
Rush Lake Lloyd Thermal Project	243000	53.1135	-108.9955
Prince George Refinery	112000	53.9268	-122.7028
Paradise Hill Lloyd Thermal Project	126000	53.6023	-109.4479
Sandall Lloyd Thermal Project	115000	53.40071	-109.43703
Lloydminster Refinery	94000	53.2885	-110.0183
Minnedosa Ethanol Plant	75000	50.2543	-99.8498
Rainbow Lake Gas Plant	57000	58.45067	-119.2384
Vawn Lloyd Thermal Project	113000	53.11599	-108.64051
Edam East Lloyd Thermal Project	175000	53.15615	-108.92082
Sierra	51000	58.83210	-121.38514
All other Husky Operated Facilities	4039000		

CC9.2c
Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 emissions (metric tonnes CO2e)
CO2	8090000
CH4	3003000
N2O	149000

CC9.2d
Please break down your total gross global Scope 1 emissions by activity

Activity	Scope 1 emissions (metric tonnes CO2e)
Conventional Oil Production	3239000
Thermal Oil Production	3698000
Canadian Refining and Upgrading	1439000
Gas Production, Gathering, and Processing	1114000
U.S. Refining	1176000
Off Shore Oil Production	446000
Ethanol Production	112000
Drilling and Completions	20000

Further Information

Total Scope 1 emissions in CC9.2b, 9.2c and 9.2d vary from those reported in CC8.2 due to rounding. Drilling and Completions emissions include only emissions from offshore operations. Drilling and Completions emissions from onshore activities are excluded as explained in CC8.4a.

Page: CC10. Scope 2 Emissions Breakdown - (1 Jan 2016 - 31 Dec 2016)

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	1631000		3303000	
United States of America	498000		889000	

CC10.2
Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

By activity

CC10.2c
Please break down your total gross global Scope 2 emissions by activity

Activity	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)
Canadian Refining and Upgrading	525000	
Conventional Oil Production	296000	
U.S. Refining	498000	
Gas Production, Gathering, and Processing	310000	
Thermal Oil Production	373000	
Other Upstream Operations	4300	
Ethanol Production	122000	

Further Information

Total Scope 2 emissions in CC10.1a and CC10.2c vary from those reported in CC8.3a due to rounding.

Page: CC11. Energy

CC11.1
What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

CC11.2
Please state how much heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year

Energy type	MWh
Heat	0
Steam	1831000
Cooling	0

CC11.3
Please state how much fuel in MWh your organization has consumed (for energy purposes) during the reporting year

37841000

CC11.3a
Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
Natural gas	30722000
Refinery gas	7020000
Diesel/Gas oil	73000
Other: Marine Gas Oil	24000
Propane	2000

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	Emissions factor (in units of metric tonnes CO2e per MWh)	Comment
No purchases or generation of low carbon electricity, heat, steam or cooling accounted with a low carbon emissions factor			

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
2362000	2362000	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	2	Decrease	In 2016 Husky installed compressors at heavy oil wellsites that capture otherwise vented produced gas. The Company anticipates savings of over 300,000 tonnes of CO2e per year as a result of this project. Husky's total combined S1 and S2 emissions in 2015 were 14,330,000 tonnes CO2e. Thus 300,000 / 14,330,000 * 100 = 2%.
Divestment	11	Decrease	In 2016 Husky divested a significant portion of its Western Canadian conventional assets. This resulted in a 1.6 million tCO2e decline in the Company's emissions from conventional and gas assets. Husky's total combined S1 and S2 emissions in 2015 were 14,330,000 tonnes CO2e. Thus 1,600,000 / 14,330,000 * 100 = 11%.
Acquisitions			
Mergers			
Change in output	7	Increase	Increased production at the Company's thermal facilities (Sunrise, Tucker, Edam East and Edam West, Rush Lake, Vawn) accounted for an increase of over 1.25 million tonnes CO2e in 2016. These increases were partially offset by a reduction at the Ram River gas plant due to a planned maintenance shut down, lower production in the Atlantic region, a planned maintenance shut down at Lima, and a significant reduction in flaring at the Lloydminster Upgrader. The net change was approximately 1.06 million tonne increase in CO2e. Husky's total combined S1 and S2 emissions in 2015 were 14,330,000 tonnes CO2e. Thus 1,060,000 / 14,330,000 * 100 = 7%.
Change in methodology	1	Decrease	A correction in metering and assignment, flaring volumes, and updated Scope 2 emission factors resulted in net reduction in emissions of 140,000 tonnes CO2e. Husky's total combined S1 and S2 emissions in 2015 were 14,330,000 tonnes CO2e. Thus 140,000 / 14,330,000 * 100 = 1%.
Change in boundary			
Change in physical operating conditions			
Unidentified			
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
0.00104	metric tonnes CO2e	12919000000	Location-based	18.2	Increase	There was a 11% decrease in the average price of West Texas Intermediate Crude from 2015 to 2016, with similar decreases for the other main commodities that impact Husky's revenues. While gross global combined S1 and S2 emissions declined in 2016 primarily due to a combination of emission reduction activities, changes in output, and divestment, the proportional change in revenue was greater.

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
0.05936	metric tonnes CO2e	barrel of oil equivalent (BOE)	225287000	Location-based	2.7	Decrease	Husky achieved significant emission reductions in 2016, particularly through reduced venting and flaring. Production from our thermal projects increased in 2016.

Further Information

The revenue figures used in CC12.2 are from Husky's 2016 Annual Report and reported on a net equity consolidation basis. Emissions are reported on an operational control consolidation basis. Sales volumes in barrels of oil equivalent used for the denominator of the intensity metric in CC12.3 include upstream and downstream sales volumes as reported in Husky's 2016 Annual Report and described in OG1.5.

Page: CC13. Emissions Trading

CC13.1
Do you participate in any emissions trading schemes?

Yes

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 CO2e	Details of ownership
Alberta Emissions Trading Regulation	Fri 01 Jan 2016 - Sat 31 Dec 2016	0	18000	0	Other: Facilities we operate an either own outright or jointly

CC13.1b

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

Husky seeks to reduce emissions at its facilities through improved energy and emissions management and offsets the balance of compliance obligations through the use of emissions performance credits, purchases of project based carbon offsets, and purchases of Climate Change Emissions Management Fund credits.

CC13.2
Has your organization originated any project-based carbon credits or purchased any within the reporting period?

Yes

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 CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits canceled	Purpose, e.g. compliance
Credit purchase	Energy efficiency: industry	Genalta Power Aggregated Waste Heat Recovery Project	Other: ISO 14064:3; ISO 14065	12194	12194	No	Compliance
Credit purchase	Energy efficiency: industry	AHS Energy Efficiency Aggregation Offset Project	Other: ISO 14064:3; ISO 14065	5806	5806	No	Compliance

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	Not relevant, explanation provided				This source of Scope 3 GHG emissions is not material when compared against the emissions related to the end-use combustion and / or oxidation of the products sold by Husky.
Capital goods	Not relevant, explanation provided				This source of Scope 3 GHG emissions is not material when compared against the emissions related to the end-use combustion and / or oxidation of the products sold by Husky.
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Not relevant, explanation provided				This source of Scope 3 GHG emissions is not material when compared against the emissions related to the end-use combustion and / or oxidation of the products sold by Husky.

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
Upstream transportation and distribution	Not relevant, explanation provided				This source of Scope 3 GHG emissions is not material when compared against the emissions related to the end-use combustion and / or oxidation of the products sold by Husky.
Waste generated in operations	Not relevant, explanation provided				This source of Scope 3 GHG emissions is not material when compared against the emissions related to the end-use combustion and / or oxidation of the products sold by Husky.
Business travel	Not relevant, explanation provided				This source of Scope 3 GHG emissions is not material when compared against the emissions related to the end-use combustion and / or oxidation of the products sold by Husky.
Employee commuting	Not relevant, explanation provided				This source of Scope 3 GHG emissions is not material when compared against the emissions related to the end-use combustion and / or oxidation of the products sold by Husky.
Upstream leased assets	Not relevant, explanation provided				This source of Scope 3 GHG emissions is not material when compared against the emissions related to the end-use combustion and / or oxidation of the products sold by Husky.
Downstream transportation and distribution	Not relevant, explanation provided				This source of Scope 3 GHG emissions is not material when compared against the emissions related to the end-use combustion and / or oxidation of the products sold by Husky.
Processing of sold products	Not relevant, explanation provided				This source of Scope 3 GHG emissions is not material when compared against the emissions related to the end-use combustion and / or oxidation of the products sold by Husky.
Use of sold products	Relevant, calculated	19219000	Emission factors are from EPA 40 CFR part 98 subpart MM regulation.	0.00%	Data is only provided where there is a regulatory requirement to disclose end use of sold product emissions. This includes only Husky's Downstream assets in the U.S.
End of life treatment of sold products	Not relevant, explanation provided				This source of Scope 3 GHG emissions is not material when compared against the emissions related to the end-use combustion and / or oxidation of the products sold by Husky.
Downstream leased assets	Not relevant, explanation provided				This source of Scope 3 GHG emissions is not material when compared against the emissions related to the end-use combustion and / or oxidation of the products sold by Husky.
Franchises	Not relevant, explanation provided				This source of Scope 3 GHG emissions is not material when compared against the emissions related to the end-use combustion and / or oxidation of the products sold by Husky.

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
Investments	Not relevant, explanation provided				This source of Scope 3 GHG emissions is not material when compared against the emissions related to the end-use combustion and / or oxidation of the products sold by Husky.
Other (upstream)					
Other (downstream)					

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
Use of sold products	Change in output	5.3	Increase	In 2016, throughput in Lima increased as the result of major planned maintenance and the restoration of operation of the isocracker unit.

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, other partners in the value chain

CC14.4a
Please give details of methods of engagement, your strategy for prioritizing engagements and measures of success

In 2016, Husky joined the SmartWay Transport Partnership. This collaboration is designed to help businesses reduce fuel costs while transporting goods in the cleanest, most efficient way possible. SmartWay works with freight carriers and shippers that are committed to benchmarking their operations, tracking their fuel consumption and improving their annual performance.

Husky engages with its JV partners on large projects through JV committees that discuss numerous issues, including GHG emissions. Specifically, Husky and BP collaborate on GHG issues related to BP-Husky Refining LLC and the Sunrise Energy Project. Husky prioritizes GHG engagement with value chain partners where there is a major risk posed by exposure to climate-related issues such as regulatory changes. Success is measured through financial indicators, including performance against carbon-related fee targets for facilities that fall under a regulatory scheme that includes a compliance cost for carbon emissions.

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

Type of engagement	Number of suppliers	% of total spend (direct and indirect)	Impact of engagement
Emissions reduction incentives	27	0%	In 2016, Husky joined the SmartWay Transport Partnership. This collaboration is designed to help businesses reduce fuel costs while transporting goods in the cleanest, most efficient way possible. SmartWay works with freight carriers and shippers that are committed to benchmarking their operations, tracking their fuel consumption and improving their annual performance.

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
Robert Symonds	Chief Operating Officer	Chief Operating Officer (COO)

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
Storage, transportation & distribution
Specialty operations
Refining
Retail & marketing

Further Information

Page: OG1. Production, reserves and sales by hydrocarbon type - (1 Jan 2016 - 31 Dec 2016)

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	Comment
Associated natural gas Shale gas Tight gas	33817000		Equity share	
Natural gas condensate Natural gas liquids (NGL)	5110000		Equity share	
Light oil Medium oil Shale oil Tight oil	23032000		Equity share	
Heavy oil	19747000		Equity share	
Bitumen (oil sands)	35551000		Equity share	

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
Natural gas liquids (NGL) Light oil Medium oil	Canada	126000000	Sat 31 Dec 2016	Proved
Natural gas liquids (NGL) Light oil Medium oil	Rest of world	23000000	Sat 31 Dec 2016	Proved
Heavy oil	Canada	63000000	Sat 31 Dec 2016	Proved
Bitumen (oil sands)	Canada	648000000	Sat 31 Dec 2016	Proved
Conventional non-associated natural gas Associated natural gas Coalbed methane	Canada	253000000	Sat 31 Dec 2016	Proved
Conventional non-associated natural gas Associated natural gas	Rest of world	111000000	Sat 31 Dec 2016	Proved

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

Husky's oil and gas reserves are estimated in accordance with the standards contained in the COGEH, and the reserves data disclosed conforms with the requirements of National Instrument 51-101 “Standards of Disclosure for Oil and Gas Activities” (“NI 51-101”). All of Husky's oil and gas reserves are prepared by internal reserves evaluation staff using a formalized process for determining, approving and booking reserves. This process requires all reserves evaluations to be done on a consistent basis using established definitions and guidelines. Approval of individually significant reserves changes requires review by an internal panel of expert geoscientists and qualified reserves evaluators. The Audit Committee of the Board of Directors has examined Husky's procedures for assembling and reporting reserves data and other information associated with oil and gas activities and has reviewed that information with management. The Board of Directors has approved, on the recommendation of the Audit Committee, the content of Husky's disclosure of its reserves data and other oil and gas information. The reserves in OG1.3 are Husky’s gross reserves, which are the working interest share of reserves before deduction of royalties and without including any royalty interests.

OG1.5

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)	Comment
Conventional non-associated natural gas Associated natural gas Shale gas Tight gas	33817000	
Light oil Medium oil Shale oil Tight oil	23032000	
Natural gas condensate Natural gas liquids (NGL)	5110000	
Heavy oil	19747000	
Bitumen (oil sands)	35551000	
Synthetic oil	20148000	
Refined products	86720000	

OG1.6

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

Hydrocarbon/project	Breakeven cost/BOE	Comment

OG1.7

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?

Yes, other

OG1.7a

Please describe your scenario analysis and/or portfolio stress testing, the inputs used and the implications for your capital expenditure plans and investment decisions

Husky models project carbon costs conservatively based on current and emerging policies in any given jurisdiction where the Company operates, or is considering capital outlay. These costs are used to inform investment decisions for each project and also to understand regulatory risk exposure. Inputs include production forecasts, engineering estimates of emissions intensity, and carbon pricing models for each jurisdiction.

Further Information

The data in OG 1.2 are consolidated by net-equity share as reported in Husky's 2016 Annual Report. Husky reported Conventional Natural Gas for year end 2016 reserves as per the definition in NI 51-101. Associated and Non-Associated Gas are not defined terms within NI 51-101.

Page: OG2. Emissions by segment in the O&G value chain - (1 Jan 2016 - 31 Dec 2016)

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
Specialty operations	Operational Control	Operational Control
Refining	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

For the purposes of this CDP response, Husky defines the Refining Segment as including refining, upgrading and associated Downstream business operations. Specialty Operations includes ethanol production.

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 CO2)	Gross Scope 1 methane emissions (metric tonnes CH4)
Exploration, production & gas processing	5522000	118000
Refining	2457000	1900
Specialty operations	111000	0

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	984000	
Refining	1022000	
Specialty operations	122000	

Further Information

Page: OG3. Scope 1 emissions by emissions category - (1 Jan 2016 - 31 Dec 2016)

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
Specialty operations	Operational Control
Refining	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

For the purposes of this CDP response, Husky defines the Refining Segment as including refining, upgrading and associated Downstream business operations. Specialty Operations includes ethanol production.

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	6615000	4500
Flaring	603000	2300
Process emissions	632000	0
Vented emissions	240000	111000
Fugitive emissions	0	1800

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

Regulations in Alberta and Saskatchewan mandate both operational and economic evaluations that prioritize collection and conservation of produced gas over flaring. In addition, Husky engages in voluntary and collaborative efforts with government and industry organizations to reduce flaring through application of technology and sharing of knowledge and experience.

Further Information

Page: OG4. Transfers & sequestration of CO2 emissions - (1 Jan 2016 - 31 Dec 2016)

OG4.1
Is your organization involved in the transfer or sequestration of CO2?

Yes

OG4.2
Please indicate the consolidation basis (financial control, operational control, equity share) used to report transfers and sequestration of CO2 emissions

Activity	Consolidation basis
Transfers	Operational Control
Sequestration of CO2 emissions	Operational Control

OG4.3
Please provide clarification for cases in which different consolidation bases have been used (e.g. for a given activity, capture, injection or storage pathway)

OG4.4
Using the units of metric tonnes of CO2, please provide gross masses of CO2 transferred in and out of the reporting organization (as defined by the consolidation basis). Please note that questions of ownership of the CO2 are addressed in OG4.6

Transfer direction	CO2 transferred – Reporting year
CO2 transferred in	33700
CO2 transferred out	0

OG4.5
Please provide clarification on whether any oil reservoirs and/or sequestration system (geological or oceanic) have been included within the organizational boundary of the reporting organization. Provide details, including degrees to which reservoirs are shared with other entities

Husky injects CO2 into several reservoirs in the Lloydminster area of Saskatchewan for the purposes of enhanced oil recovery.

OG4.6
Please explain who (e.g. the reporting organization) owns the transferred emissions and what potential liabilities are attached. In the case of sequestered emissions, please clarify whether the reporting organization or one or more third parties owns the sequestered emissions and who has potential liability for them

OG4.7
Please provide masses in metric tonnes of gross CO2 captured for purposes of carbon capture and sequestration (CCS) during the reporting year according to capture pathway. For each pathway, please provide a breakdown of the percentage of the gross captured CO2 that was transferred into the reporting organization and the percentage that was transferred out of the organization (to be stored)

Capture pathway in CCS	Captured CO2 (metric tonnes CO2)	Percentage transferred in	Percentage transferred out
Separation of CO2 from industrial process gas streams	107000	31%	0%
Flue gas CO2 separation	1600	0%	0%

OG4.8
Please provide masses in metric tonnes of gross CO2 injected and stored for purposes of CCS during the reporting year according to injection and storage pathway

Injection and storage pathway	Injected CO2 (metric tonnes CO2)	Percentage of injected CO2 intended for long-term (>100 year) storage	Year in which injection began	Cumulative CO2 injected and stored (metric tonnes CO2)
CO2 used for enhanced oil recovery (EOR) or enhanced gas recovery (EGR)	109000	0%	2008	429000

OG4.9
Please provide details of risk management performed by the reporting organization and/or third party in relation to its CCS activities. This should cover pre-operational evaluation of the storage (e.g. site characterization), operational monitoring, closure monitoring, remediation for CO2 leakage, and results of third party verification

Further Information

Page: OG5. Emissions intensity - (1 Jan 2016 - 31 Dec 2016)

OG5.1
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

OG5.2
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

Husky does not disclose segment-level emission intensities.

Further Information

Page: OG6. Development strategy - (1 Jan 2016 - 31 Dec 2016)

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

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

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

Further Information

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

Husky meets or exceeds regulatory compliance requirements for monitoring and reporting to effectively address risk. Prescriptive programs are in place at Company facilities for leak detection and repair of fugitive emission sources. Alberta, Saskatchewan, and British Columbia regulations prioritize targeted facilities that are generally defined by licence type, size, throughput, or qualitative observations. Monitoring frequencies are generally flexible and variable with an annual baseline frequency. Methodologies used included infrared cameras, hand held gas detectors, soapy water investigations on point sources, toxic/organic vapour analyzers, photo ionization detector, ultrasound probe, or third-party evaluation or other justifiable and defendable methods.

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		
Engineering calculations	>75%	All
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

OG7.6
Does your organization participate in voluntary methane emissions reduction programs?

Yes

OG7.6a

Please describe your organization's participation in voluntary methane emissions reduction programs

Husky continues engagement with regulators in order to contribute to the development of voluntary and mandatory methane emission reduction programs to meet federal and provincial targets.

OG7.7

Did you have a methane-specific emissions reduction target that was active (ongoing or reached completion) in the reporting year and/or were methane emissions incorporated into targets reported in CC3?

Yes, methane emissions were incorporated into targets reported in CC3

OG7.7b

If methane emissions were incorporated into targets reported in CC3 (but not detailed as a separate target), please indicate which target ID(s) incorporate methane emissions, and specify the portion of those targets that is comprised of methane

Targets listed in CC3 are facility-wide and cover all component GHG emissions. Methane reduction opportunities are evaluated alongside other options to cost effectively meet the targets (Int1 and Int2) described in CC3. In 2016, actions targeting methane reductions specifically were not undertaken to meet either Int1 or Int2.

Further Information

CDP: [D][-,-][D2]