



Welcome to your CDP Climate Change Questionnaire 2019

C0. Introduction

C0.1

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

Parex Resources Inc. (“Parex” or the “Company”) is a Calgary based international oil and gas company engaged in crude oil exploration, development and production in Colombia. The Company holds, through its foreign subsidiaries, interests in several onshore exploration and production blocks in the Lower Magdalena, Middle Magdalena and Llanos Basins of Colombia, where all reserves and production are located. Established in 2009, Parex’ common shares trade on the Toronto Stock Exchange (“TSX”) under the symbol PXT.

The Company’s strategy is to leverage South American and Western Canadian experience and capability in South America to create shareholder value. Parex targets jurisdictions that have stable fiscal regimes coupled with oil-prone hydrocarbon-rich basins in under-explored areas. The Company applies proven technology used in the Western Canada Sedimentary Basin in basins with large oil-in-place potential. Parex focuses on short cycle time from discovery to bring new reserves on-stream and uses a portfolio approach to manage surface, subsurface and commercial risks.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Row 1	January 1, 2018	December 31, 2018	Yes	1 year



C0.3

(C0.3) Select the countries/regions for which you will be supplying data.

- Canada
- Colombia

C0.4

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

- USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

- Operational control

C-OG0.7

(C-OG0.7) Which part of the oil and gas value chain and other areas does your organization operate in?

Row 1

Oil and gas value chain

Upstream

Other divisions



C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual(s)	Please explain
Board-level committee	Parex' Board of Directors has the responsibility to ensure that Management identifies the principal risks of the Company and undertakes steps to implement appropriate systems to monitor and manage these risks with a view to the long-term viability of the corporation and its assets, that it conducts an annual review of the associated risks. The Board delegates to committees the responsibility to review and assess the identification and management of Enterprise Risk Management pertaining to the applicable committees. The Board has assigned the Health, Safety and Environment and Reserves Committee the role of assisting the Board in fulfilling its oversight responsibility related to health, safety and environmental ("HSE") practices and compliance with the applicable regulations.

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain



<p>Sporadic - as important matters arise</p>	<p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p>	<p>The Health, Safety and Environment and Reserves Committee assists the Board of Directors in fulfilling its oversight responsibility related to health, safety and environmental (“HSE”) practices and compliance with the applicable regulations.</p> <p>The Committee reviews and monitors, among other things, the adequacy of the Company's HSE policies and plans, including their content, implementation and performance, the adequacy of the resources dedicated by Parex' management to the training and supervision of employees, consultants and contractors, and the adequacy of procedures for reporting HS&E information associated with oil and gas exploration and production activities. The Health, Safety and Environment and Reserves Committee will also review and monitor (i) any legal issues related to HSE matters; (ii) any reports and recommendations issued by management or any external advisors or consultants relating to HSE issues and compliance together with management's response thereto; and (iii) any reports and recommendations issued by Management or any external environmental consultant or contractor relating to environmental issues and compliance; together with Management's response thereto. The Health, Safety & Environment and Reserves Committee reviews and assesses the identification of enterprise risk management matters pertaining to the committee. The Health, Safety and Environment and Reserves Committee reports to the Board of Directors following each meeting of the Health, Safety and Environment and Reserves Committee.</p>
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C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Operating Officer (COO)	<p>Other, please specify</p> <p>The COO has the responsibility for assessing and managing HSE matters, which include climate-related risks and opportunities</p>	Quarterly



¹The COO has the responsibility for assessing and managing HS&E matters, which may include climate-related risks and opportunities.

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

Parex' management is responsible for reviewing the Company's HSE strategies and policies, including the Company's emergency response plan. Management reports to the Board of Directors through the Health, Safety & Environment and Reserves Committee of the Board of Directors on a quarterly basis with respect to HSE matters, including: (i) compliance with all applicable laws, regulations and policies with respect to HSE; (ii) on emerging trends, issues and regulations that are relevant to the Company; (iii) the findings of any significant report by regulatory agencies, external health, safety and environmental consultants or auditors concerning performance in HSE; (iv) any necessary corrective measures taken to address issues and risks with regards to the Company's performance in the areas of HSE that have been identified by Management, external auditors or by regulatory agencies; (v) the results of any review with management, outside accountants, external consultants and legal advisors of the implications of major corporate undertakings such as the acquisition or expansion of facilities or ongoing drilling and testing operations, or decommissioning of facilities; and (vi) all incidents and near misses with respect to the Company's operations, including corrective actions taken as a result thereof.

On behalf of Management , the Chief Operating Officer ("COO") is the key Management contact and liaison with the Board's HSE and Reserves Committee; the COO provides regular updates on operations, reserves and environmental, health and safety performance and issues. He is a member of the Parex' executive team and directly reports to the CEO. The COO is the head of operations with the responsibility to implement, oversee and drive accountability for work culture, processes and systems that effectively, and in the best interests of Parex' business plans and activities, deal with political and security risk, regulatory issues, community relations and sustainability demands as well as operational, engineering and commercial requirements and challenges. He is responsible for (a) the identification of the principal operational risks of the business; (b) ensuring the implementation of appropriate systems to manage risks; (c) managing environmental issues, including climate-related issues; and (d) reporting quarterly to the Board's HSE and Reserves Committee on HSE performance and issues during the operational and enterprise risk management quarterly updates. The COO ensures that operations are conducted in accordance with all legal and regulatory requirements, including those related to HSE.

C1.3

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

Yes

C1.3a

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

Who is entitled to benefit from these incentives?

Corporate executive team

Types of incentives

Monetary reward

Activity incentivized

Other, please specify

Increase ESG corporate performance scores

Comment

The corporation's annual incentive plan is based on a balanced scorecard and applies to all employees. For the CEO and the executive team, the target incentive bonus is 90% and 60% of base salary respectively. For all non-executive employees, the annual incentive is approximately 15% or higher of base salary.

Included in the annual scorecard is a requirement to increase ESG corporate performance scores by 10% in 2019 over 2018 results.

Who is entitled to benefit from these incentives?



Chief Financial Officer (CFO)

Types of incentives

Monetary reward

Activity incentivized

Other, please specify

Increase ESG corporate performance scores

Comment

The corporation's annual incentive plan is based on a balanced scorecard and applies to all employees. For the CEO and the executive team, the target incentive bonus is 90% and 60% of base salary respectively. For all non-executive employees, the annual incentive is approximately 15% or higher of base salary.

Included in the annual scorecard is a requirement to increase ESG corporate performance scores by 10% in 2019 over 2018 results.

Who is entitled to benefit from these incentives?

Chief Operating Officer (COO)

Types of incentives

Monetary reward

Activity incentivized

Other, please specify

Increase ESG corporate performance scores as

Comment

The corporation's annual incentive plan is based on a balanced scorecard and applies to all employees. For the CEO and the executive team, the target incentive bonus is 90% and 60% of base salary respectively. For all non-executive employees, the annual incentive is approximately 15% or higher of base salary.



Included in the annual scorecard is a requirement to increase ESG corporate performance scores by 10% in 2019 over 2018 results.

Who is entitled to benefit from these incentives?

Management group

Types of incentives

Monetary reward

Activity incentivized

Other, please specify

Increase ESG corporate performance scores

Comment

The corporation's annual incentive plan is based on a balanced scorecard and applies to all employees. For the CEO and the executive team, the target incentive bonus is 90% and 60% of base salary respectively. For all non-executive employees, the annual incentive is approximately 15% or higher of base salary.

Included in the annual scorecard is a requirement to increase ESG corporate performance scores by 10% in 2019 over 2018 results.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Monetary reward

Activity incentivized

Other, please specify



Increase ESG corporate performance scores

Comment

The corporation’s annual incentive plan is based on a balanced scorecard and applies to all employees. For the CEO and the executive team, the target incentive bonus is 90% and 60% of base salary respectively. For all non-executive employees, the annual incentive is approximately 15% or higher of base salary.

Included in the annual scorecard is a requirement to increase ESG corporate performance scores by 10% in 2019 over 2018 results.

C2. Risks and opportunities

C2.1

(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

	From (years)	To (years)	Comment
Short-term	0	2	
Medium-term	2	4	
Long-term	4	10	

C2.2

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

There are no documented processes for identifying, assessing, and managing climate-related issues



C2.2e

(C2.2e) Why does your organization not have a process in place for identifying, assessing, and managing climate-related risks and opportunities, and do you plan to introduce such a process in the future?

	Primary reason	Please explain
Row 1	We are planning to introduce a risk identification, assessment, and management process in the next two years	<p>There is no formal process in place for identifying, assessing, and managing climate-related risks. However, Parex' Enterprise Risks Management ("ERM") process as well as the Annual Information Form identify a number of risks, some of which are climate-related. On a bi-annual basis, Management updates the ERM risk register and reassesses the risk scores and mitigation strategies. Management reports to the Board's committees the risks for which the committees have oversight; the committees in turn review the tops risks and submit them to the Board of Directors for a full review. For the top 4 risks, which include potential HS&E events, Management outlines responses and action plans. At the annual Strategy Session, the Board reviews the business plan and risks & opportunities as part of the capital plans and social license ability. Further ongoing business considerations drive Parex to review the Company's field operations to minimize emissions and maximize efficiency.</p> <p>In 2018, we undertook a baseline study of the Company's 2017 GHG emissions as the first step in assessing the potential impact of climate change on Parex' operations. With our second GHG emissions inventory in 2019, we have started to evaluate the potential climate-related risks and opportunities within the Company's portfolio and plan, subsequently, to identify the risks and opportunities to introduce through the ERM process over the next two years.</p>

C2.3

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

No



C2.3b

(C2.3b) Why do you not consider your organization to be exposed to climate-related risks with the potential to have a substantive financial or strategic impact on your business?

	Primary reason	Please explain
Row 1	Evaluation in process	Having established a baseline study of our GHG emissions last year, we continue to assess Parex' carbon footprint in order to establish a strong base from which to evaluate the Company's exposure (physical, financial, regulatory, etc.).

C2.4

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

No

C2.4b

(C2.4b) Why do you not consider your organization to have climate-related opportunities?

	Primary reason	Please explain
Row 1	Evaluation in progress	Parex is in the process of identifying the key sources of climate-related opportunities and developing strategies to mitigate potential financial and/or strategic impacts. For example, in May 2019 we completed a 42-km flowline connecting our largest asset, Block Llanos 34, to the regional pipeline. This project is forecasted to displace ~730 oil transport trucks per month, reduce GHG emissions by ~40%, and improve the health and safety of the communities. The Company initiated the construction of the gas plant in the Capachos field in order to reduce flaring to a minimum (target is 85% reduction); this project will be completed in 2019, the set-up of Aguas Blancas gas plant with the same goal of Capachos gas plant

C3. Business Strategy

C3.1

(C3.1) Are climate-related issues integrated into your business strategy?

No

C3.1f

(C3.1f) Why are climate-related issues not integrated into your business objectives and strategy?

Climate-related issues, although relevant, are not formally integrated into Parex' business objectives and strategy because the Company is at the early stages of understanding the threats and opportunities related to climate issues in our business environment. However, the Company strictly complies with applicable laws in relation to the environment. Parex continues to work on understanding and formally identifying climate-related issues that could impact the Company's operations. In 2018, we commissioned a baseline study of our GHG emissions as an important first step in understanding the Company's climate-related risks and opportunities. In 2019, we completed the second GHG emissions inventory, which together with the initial study will form the basis for evaluating Parex' carbon footprint. As climate-related issues with potential impact on Parex are identified, those deemed critical to Parex' long-term financial and operational viability will be integrated into the Company's business strategy. For example, we continue to analyze the environmental and business impact of introducing increased natural gas production into our energy production mix and how the natural gas distribution and sale locally may displace other higher carbon intensity sources (wood, deforestation, coal, oil). We are also reusing materials from abandoned locations to make new and build flow lines to reduce diesel consumption from oil truck transportation.

C4. Targets and performance

C4.1

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

No target



C4.1c

(C4.1c) Explain why you do not have emissions target and forecast how your emissions will change over the next five years.

	Primary reason	Five-year forecast	Please explain
Row 1	Important but not an immediate business priority	Our near-term objective is to create reliable baselines, such that we can build a forward plan.	<p>Parex' near-term objective is to reduce transportation emissions on a per unit basis. The strategy is to decrease oil transportation trucking by implementing (accessing) flowlines/pipelines and by increasing oil production in regions located closer to export hubs. We also plan to focus on reducing the amount of carbon flaring and fugitive emissions through the construction of gas plants in fields with high gas production.</p> <p>Other projects include the use of solar panels in some fields replacing the use of diesel or gas as fuel.</p>

C4.2

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

C-OG4.2a

(C-OG4.2a) If you do not have a methane-specific emissions reduction target for your oil and gas activities or do not incorporate methane into your target(s) reported in C4.2 please explain why not and forecast how your methane emissions will change over the next five years.

Parex does not have specific methane reduction goals; however, the conservation of energy and maximization of resources has led the Company in the past to optimize power generation fuels and reduce methane emissions (specifically through flaring). For 2019, the Company has set specific projects to accomplish: i) in the 2018, the Company initiated the construction of the gas plant in the Capachos field in order to reduce flaring to a minimum (target is 85% reduction); this project will be completed in 2019, ii) the set-up of Aguas Blancas gas plant with the same goal of Capachos gas plant, iii) the construction of a pipeline in order to decrease oil transportation trucking and by increasing oil production in regions located closer to



export hubs, IV) the set-up of additional solar panels in other fields in order to avoid carbon emission (no fuels will be used) and V) installation of a medium voltage line in Bacano field to avoid diesel as fuel for power generation as well as VI) the installation of a medium voltage line and the construction of a flowline between Capachos and Andina. Also, VII) Parex will do an implementation related to gas trucking changing the fuel of the trailers from diesel to gas.

C4.3

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

Yes

C4.3a

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

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	1	0
To be implemented*	3	22,100
Implementation commenced*	3	56,605
Implemented*	4	3,403
Not to be implemented	0	0

C4.3b

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

Initiative type

Low-carbon energy installation

Description of initiative

Natural Gas

🗨 Natural Gas - Use gas as fuel instead of diesel in the trailers for gas trucking.

Estimated annual CO2e savings (metric tonnes CO2e)

0

Scope

Scope 3

Voluntary/Mandatory

Voluntary

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

0

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

0

Payback period

No payback

Estimated lifetime of the initiative

6-10 years

Comment

Replacing the fuel from diesel to gas, emission of CO2 will be reduced. Savings will be quantified.

Initiative type

Process emissions reductions

Description of initiative

New equipment

🗨️ New Equipment - installation of a medium voltage line in Bacano field to avoid diesel as fuel to power generation

Estimated annual CO2e savings (metric tonnes CO2e)

3,100

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

898,000

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

500,000

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

No use of diesel as fuel

Initiative type

Process emissions reductions

Description of initiative

New equipment

☞ New Equipment – Construction of a Gas Plant in Aguas Blancas to reduce flaring to a minimum

Estimated annual CO2e savings (metric tonnes CO2e)

19,000

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

194,887

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

3,677,000

Payback period

1-3 years

Estimated lifetime of the initiative

16-20 years

Comment

Gas production to be used in the generation and/or liquids recovery. Saving ~85% of flares.

Initiative type

Process emissions reductions

Description of initiative

New equipment

🗨️ New Equipment – Construction of a Gas Plant in Capachos to reduce flaring to a minimum

Estimated annual CO2e savings (metric tonnes CO2e)

1,603

Scope

Scope 3

Voluntary/Mandatory

Voluntary

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

48,000,000

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

18,700,000

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

Emissions reduced by ~ 40% as a result of less oil trucking from block Llanos 34. Construction began in 2018 and was completed in 2019.

Initiative type

Process emissions reductions

Description of initiative

New equipment

🗨️ New Equipment – Construction of a Gas Plant in Capachos to reduce flaring to a minimum

Estimated annual CO2e savings (metric tonnes CO2e)

55,000

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

322,548

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

11,000,000

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

Gas production to be used in the generation and/or liquids recovery. Saving ~85% of flares.

Initiative type

Low-carbon energy purchase

Description of initiative

Solar PV

☞ Solar PV - Set up solar panels in Parex's fields in order to avoid carbon emission

Estimated annual CO2e savings (metric tonnes CO2e)

1.64

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

0

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

135,000

Payback period

No payback

Estimated lifetime of the initiative

21-30 years

Comment

The cost of investment is the annual cost of renting solar panels

Initiative type

Process emissions reductions

Description of initiative

New equipment

🗨 New Equipment - Set up of a Gaspipe Line Llanos 32 - Llanos 34

Estimated annual CO2e savings (metric tonnes CO2e)

276.93

Scope

Scope 3

Voluntary/Mandatory

Voluntary

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

3,100,000

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

2,700,000

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

Initiative type

Fugitive emissions reductions

Description of initiative

Oil/natural gas methane leak capture/prevention

🗨 Natural gas methane leak capture / prevention - Installation of new equipment in Llanos 32 Gas Plant

Estimated annual CO2e savings (metric tonnes CO2e)

3,105.28

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

0

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

150,000

Payback period

<1 year

Estimated lifetime of the initiative

3-5 years

Comment

Natural gas methane leak capture / prevention - Installation of new equipment in Llanos 32 Gas Plant

Initiative type

Process emissions reductions

Description of initiative

New equipment

🗨️ New Equipment - Installation of a flowline and a medium voltage line from Andina to Capachos to reduce the flaring (connection to Gas Plant). Estimated annual CO₂e and monetary savings are included in the gas plant calculations.

Estimated annual CO₂e savings (metric tonnes CO₂e)

4,380

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

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

3,450,000

Payback period

Estimated lifetime of the initiative

6-10 years

Comment

New Equipment - Installation of a flowline and a medium voltage line from Andina to Capachos to reduce the flaring (connection to Gas Plant). Estimated annual CO2e and monetary savings are included in the gas plant calculations.

Initiative type

Process emissions reductions

Description of initiative

New equipment

Changes in operations – The road maintenance to Cocoa platform was executed using reused material reducing the trucking of such material.

Estimated annual CO2e savings (metric tonnes CO2e)

7.38

Scope

Scope 3

Voluntary/Mandatory

Voluntary

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

38,700

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

0

Payback period

No payback

Estimated lifetime of the initiative

<1 year

Comment

The company also reuses material from abandoned locations to make new, for this reason an investment is not made.

Initiative type

Process emissions reductions

Description of initiative

New equipment

🗨️ New Equipment - Installation of a flowline from Bacano Oeste to Bacano to avoid the use of oil trucking

Estimated annual CO2e savings (metric tonnes CO2e)

13.46

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

503,000

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

970,000

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

Reduction of a 100% of emissions from diesel used as fuel.

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	Due to emissions reduction activities are relevant to the Company, Parex focuses on minimizing flares and taking advantage of gas as a source of energy through construction of Gas Plants. Therefore, regulatory requirements are complimented with some capital investments.
Dedicated budget for other emissions reduction activities	Besides, the Company has invested on different and new projects like the installation of a medium voltage line, the installation of a flowline and the use of solar panels in order to minimize CO2e emissions.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

No

C-OG4.6

(C-OG4.6) Describe your organization's efforts to reduce methane emissions from your activities.

The Company has implemented vapour recovery units in certain fields where gas is emitted into the atmosphere. These units are installed after the oil and water separation process in the Gun-barrel (tank included in the production process). The purpose of the units is to gather low pressure gas in order to obtain liquids by gas expansion, keeping this gas in condition to be used for power generation. For example, facilities at the Rumba and Las Maracas fields have vapour recovery units. This process reduces the gas emitted into the atmosphere to be used as a fuel in power generation.

We are also planning to implement a Vapor Recovery Unit at Capachos field in 2019.

COG4.7

(C-OG4.7) Does your organization conduct leak detection and repair (LDAR) or use other methods to find and fix fugitive methane emissions from oil and gas production activities?

Yes

C-OG4.7a

(C-OG4.7a) Describe the protocol through which methane leak detection and repair or other leak detection methods, are conducted for oil and gas production activities, including predominant frequency of inspections, estimates of assets covered, and methodologies employed.

At facilities where natural gas is handled, for treatment or for consumption, methane detectors are installed through the lines, these detectors are calibrated and inspected every six months.

Besides, at oil facilities, production staff conduct regular gas detection with portable equipment to detect possible leakage, these detectors also are calibrated and inspected every six months.

C-OG4.8

(C-OG4.8) If flaring is relevant to your oil and gas production activities, describe your organization's efforts to reduce flaring, including any flaring reduction targets.

For Parex flaring is relevant. Currently we are working on the construction of two Gas Plants in order to minimize flares. The objective is to take advantage of produced gas as an energy source in all fields where gas is produced and has the condition to be used as fuel (liquids recovery is considered in order to have the gas in optimal conditions to be used as fuel). These activities reduce the gas flared in the atmosphere. We have installed low pressure collection systems (operating at 5 psi) to allow the collection and use of gas for the generation of energy in the facilities of the different fields where Parex operates.

For 2019, Parex plans to install the following gas plants in order to minimize flares:

Capachos Gas Plant

Aguas Blancas Gas Plant

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start

January 1, 2018

Base year end



December 31, 2018

Base year emissions (metric tons CO2e)

125,352

Comment

- Gas Flares
- Fugitive Emissions (Vented Emissions of Atmospheric Tanks, Production Gas Emissions and Production Oil Emissions)
- Emissions due to Air Conditioning in Production Facilities
- Oil / Gas consumption for steam generation (own equipment).
- Fuel consumption for power generation (using rental power generators in Parex facilities)

Scope 2 (location-based)

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO2e)

95

Comment

- National Interconnected System for Office and Field.

Scope 2 (market-based)

Base year start

January 1, 2018

Base year end

December 31, 2018

Base year emissions (metric tons CO₂e)

0

Comment

No market-based scope 2 emissions

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

IPCC Guidelines for National Greenhouse Gas Inventories, 2006
ISO 14064-1

C6. Emissions data

C6.1

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

Reporting year

Gross global Scope 1 emissions (metric tons CO₂e)

125,352

Start date

January 1, 2018

End date

December 31, 2018



Comment

Direct Sources. Burning fuel (diesel, gas, crude) for power generation, Flared Gas, Refrigeration emissions, and fugitive emissions.

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)

80,781

Start date

January 1, 2017

End date

December 31, 2017

Comment

C6.2

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

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

Comment

The energy acquired by Parex is taken from the national interconnected system for Kona facility and Bogota offices and the Canadian power grid system for the Calgary office.



C6.3

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

Reporting year

Scope 2, location-based

95

Start date

January 1, 2018

End date

December 31, 2018

Comment

The energy acquired by Parex is taken from the national interconnected system for Kona facility and Bogota offices and the Canadian power grid for the Calgary office.

Past year 1

Scope 2, location-based

102.52

Start date

January 1, 2017

End date

December 31, 2017

Comment

C6.4

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

No

C6.5

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

Purchased goods and services

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

42

Emissions calculation methodology

GHG emissions from use of paper products were calculated using an emission factor (EF) of 1.05 tCO₂e per ton of paper. This is the EF value reported for the pulp and paper manufacturing industry harvesting from managed timberlands (Silva et al, 2015).

GHG emissions from cooling and air-conditioning systems were estimated based on global warming potentials (GWP) for each gas reported in IPCC guidelines representing the factors by which the amount of gas leak is multiplied to obtain CO₂e values.

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

0.11

Explanation

Parex' focus is to reduce transportation emissions on a per unit basis. The strategy is to reduce oil trucking by implementing flowlines/pipelines. The Company focuses on managing emissions at facilities that are within its operational control.

Capital goods

Evaluation status

Not evaluated

Explanation

Parex' focus is to reduce transportation emissions on a per-unit basis. The strategy is to reduce oil trucking by implementing flowlines/pipelines. The Company focuses on managing emissions at facilities that are within its operational control.

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

Evaluation status

Relevant, calculated

Metric tonnes CO2e

24,108

Emissions calculation methodology

The operational methodology was used. Emissions calculation includes information from seismic, drilling, civil work, workovers and facilities activities. Also, included is the data from rig mobilization/field mobilization. Fuel consumption and fugitives are included as well.

GHG emissions associated with fuel burning were calculated based on emission factors for CO₂, density and caloric values provided by FECOC (Emission Factors for Colombian Fuels) (2016). Emission factors for methane and nitrous oxide were based on IPCC (2006) data for each type of fuel. International metric system and metrology unit standards from Colombia's Industry and Tourism Superintendence were used for unit conversion.

Fugitives emissions were estimated using IPCC (2006) emission factors.

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

65.02

Explanation

Parex' focus is to reduce transportation emissions on a per unit basis. The strategy is to reduce oil trucking by implementing flowlines/pipelines. The Company focuses on managing emissions at facilities that are within its operational control.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

10,800

Emissions calculation methodology

The operational methodology was used. Emissions calculation includes information from trucking of Oil and Gas. Fuel consumption and fugitives are included as well.

GHG emissions associated with fuel burning were calculated based on emission factors for CO₂, density and caloric values provided by FECOC (Emission Factors for Colombian Fuels) (2016). Emission factors for methane and nitrous oxide were based on IPCC (2006) data for each type of fuel. International metric system and metrology unit standards from Colombia's Industry and Tourism Superintendence were used for unit conversion.

Fugitives emissions were estimated using IPCC (2006) emission factors.

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

29.13

Explanation

Parex' focus is to reduce transportation emissions on a per unit basis. The strategy is to reduce oil trucking by implementing flowlines/pipelines. The Company focuses on managing emissions at facilities that are within its operational control.

Waste generated in operations

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

371

Emissions calculation methodology

In the process of estimating GHG emissions by treatment of solid waste of organic origin, emission factors were used for methane (4 g of CH₄ / Kg of treated organic waste) and nitrous oxide (0.3 g of N₂O / Kg of organic waste) reported by the IPCC (2006).

For the elimination and treatment of wastewater, factors provided by the IPCC (2006) were used (Methane: 0.6 kg CH₄ / kg BOD, Nitrogen: 0.005 Kg N₂O-N / Kg N.) and averages of degradable organic matter - (Biochemical demand of Oxygen - BOD) (38.4 g / person / day) established for Colombia and reported in the national GHG inventory published by the IDEAM et al. (2015). A methane correction factor (MFC: 0.1) corresponding to systems not treated and eliminated in rivers, provided by the IPCC (2006)

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

1

Explanation

Parex' focus is to reduce transportation emissions on a per unit basis. The strategy is to reduce oil trucking by implementing flowlines/pipelines. The Company focuses on managing emissions at facilities that are within its operational control.

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO2e

1,757

Emissions calculation methodology

In the process for the estimation of GHG emissions from fuel combustion, factors of CO2 emissions, density and caloric values of the FECOC (2016) (emission factors of Colombian fuels) were used. Methane and nitrous oxide emission factors were taken from the IPCC (2006) for each type of fuel (gasoline, diesel and aviation fuel).

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

4.74

Explanation

Parex' focus is to reduce transportation emissions on a per unit basis. The strategy is to reduce oil trucking by implementing flowlines/pipelines. The Company focuses on managing emissions at facilities that are within its operational control.

Employee commuting

Evaluation status

Not evaluated

Explanation

Parex' focus is to reduce transportation emissions on a per-unit basis. The strategy is to reduce oil trucking by implementing flowlines/pipelines. The Company focuses on managing emissions at facilities that are within its operational control.

Upstream leased assets

Evaluation status

Not evaluated

Explanation

Parex' focus is to reduce transportation emissions on a per-unit basis. The strategy is to reduce oil trucking by implementing flowlines/pipelines. The Company focuses on managing emissions at facilities that are within its operational control.

Downstream transportation and distribution

Evaluation status

Not evaluated

Explanation

Parex' focus is to reduce transportation emissions on a per-unit basis. The strategy is to reduce oil trucking by implementing flowlines/pipelines. The Company focuses on managing emissions at facilities that are within its operational control.

Processing of sold products

Evaluation status

Not evaluated

Explanation

Parex' focus is to reduce transportation emissions on a per-unit basis. The strategy is to reduce oil trucking by implementing flowlines/pipelines. The Company focuses on managing emissions at facilities that are within its operational control.

Use of sold products

Evaluation status

Not evaluated

Explanation

Parex' focus is to reduce transportation emissions on a per-unit basis. The strategy is to reduce oil trucking by implementing flowlines/pipelines. The Company focuses on managing emissions at facilities that are within its operational control.

End of life treatment of sold products

Evaluation status

Not evaluated

Explanation

Parex' focus is to reduce transportation emissions on a per-unit basis. The strategy is to reduce oil trucking by implementing flowlines/pipelines. The Company focuses on managing emissions at facilities that are within its operational control.

Downstream leased assets

Evaluation status

Not evaluated

Explanation

Parex' focus is to reduce transportation emissions on a per unit basis. The strategy is to reduce oil trucking by implementing flowlines/pipelines. The Company focuses on managing emissions at facilities that are within its operational control.

Franchises

Evaluation status

Not evaluated

Explanation



Parex' focus is to reduce transportation emissions on a per unit basis. The strategy is to reduce oil trucking by implementing flowlines/pipelines. The Company focuses on managing emissions at facilities that are within its operational control.

Investments

Evaluation status

Not evaluated

Explanation

Parex' focus is to reduce transportation emissions on a per-unit basis. The strategy is to reduce oil trucking by implementing flowlines/pipelines. The Company focuses on managing emissions at facilities that are within its operational control.

Other (upstream)

Evaluation status

Not evaluated

Explanation

Other (downstream)

Evaluation status

Not evaluated

Explanation

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO₂e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.028

Metric numerator (Gross global combined Scope 1 and 2 emissions)

125,447

Metric denominator

barrel of oil equivalent (BOE)

Metric denominator: Unit total

4,537,531

Scope 2 figure used

Location-based

% change from previous year

43

Direction of change

Increased

Reason for change

GHG emissions increased due to higher gas production which was flared into the atmosphere.

Intensity figure

0.000135

Metric numerator (Gross global combined Scope 1 and 2 emissions)

125,447

Metric denominator

unit total revenue

Metric denominator: Unit total

931,979,417

Scope 2 figure used

Location-based

% change from previous year

10

Direction of change

Increased

Reason for change

GHG emissions increased due to higher gas production which was flared into the atmosphere.

Intensity figure

394.5

Metric numerator (Gross global combined Scope 1 and 2 emissions)

125,447

Metric denominator

full time equivalent (FTE) employee

Metric denominator: Unit total

318

Scope 2 figure used

Location-based

% change from previous year

56

Direction of change

Increased

Reason for change

GHG emissions increased due to higher gas production which was flared into the atmosphere.

C-OG6.12

(C-OG6.12) Provide the intensity figures for Scope 1 emissions (metric tons CO2e) per unit of hydrocarbon category.

Unit of hydrocarbon category (denominator)

Other, please specify

Oil - Gallons

Metric tons CO2e from hydrocarbon category per unit specified

0.01



% change from previous year

0

Direction of change

No change

Reason for change

Comment

0.01132 Ton CO2e/Gal Oil

Unit of hydrocarbon category (denominator)

Other, please specify

Natural Gas - Standard Cubic Feet (SCF)

Metric tons CO2e from hydrocarbon category per unit specified

0

% change from previous year

0

Direction of change

No change

Reason for change

Comment

0.00006 Ton CO2e/SCF

Unit of hydrocarbon category (denominator)

Other, please specify

Diesel - Gallons

Metric tons CO2e from hydrocarbon category per unit specified

0.01

% change from previous year

0

Direction of change

No change

Reason for change

Comment

0.01033 Ton CO2e/Gal Diesel

C-OG6.13

(C-OG6.13) Report your methane emissions as percentages of natural gas and hydrocarbon production or throughput.

Oil and gas business division

Upstream

Estimated total methane emitted expressed as % of natural gas production or throughput at given division

26.09



Estimated total methane emitted expressed as % of total hydrocarbon production or throughput at given division

3

Comment

The difference from last year is due to production increase

C7. Emissions breakdowns

C7.1

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

Yes

C7.1a

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

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	111,139	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	13,911	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	302	IPCC Fifth Assessment Report (AR5 – 100 year)

C-OG7.1b

(C-OG7.1b) Break down your total gross global Scope 1 emissions from oil and gas value chain production activities by greenhouse gas type.



Emissions category

Combustion (excluding flaring)

Value chain

Upstream

Product

Oil

Gross Scope 1 CO2 emissions (metric tons CO2)

66,569

Gross Scope 1 methane emissions (metric tons CH4)

3

Total gross Scope 1 emissions (metric tons CO2e)

66,794

Comment

Emissions category

Flaring

Value chain

Upstream

Product

Gas

Gross Scope 1 CO2 emissions (metric tons CO2)



44,475

Gross Scope 1 methane emissions (metric tons CH4)

267

Total gross Scope 1 emissions (metric tons CO2e)

51,299

Comment

Emissions category

Venting

Value chain

Upstream

Product

Oil

Gross Scope 1 CO2 emissions (metric tons CO2)

86

Gross Scope 1 methane emissions (metric tons CH4)

247

Total gross Scope 1 emissions (metric tons CO2e)

6,255

Comment



Emissions category

Fugitives

Value chain

Upstream

Product

Oil

Gross Scope 1 CO2 emissions (metric tons CO2)

1

Gross Scope 1 methane emissions (metric tons CH4)

40

Total gross Scope 1 emissions (metric tons CO2e)

997

Comment

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Colombia	125,352



C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By facility

C7.3b

(C7.3b) Break down your total gross global Scope 1 emissions by business facility.

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Adalia	1,704	5.128743	-71.096349
Begonia	3,857	5.788395	-71.388412
Carmentea	673	4.572707	-72.61621
Kananaskis	229	4.519646	-72.609948
Kitaro/Akira	20,656	4.342331	-72.715742
Rumba	7,987	4.867884	-72.419899
Las Maracas	21,233	5.360982	-71.978596
LLA-32: Gas Plant	18,621	4.534299	-72.622292
Capachos	22,920	6.570293	-71.754997
Aguas Blancas	17,604	6.834932	-73.772107
Kona	933	5.609488	-71.864236
Andina	4,459	6.601167	-71.746827
Bacano Oeste	4,132	4.358598	-72.759871
Fortuna	48	8.160782	-73.58952
Coyote	296	6.88945	-73.666724

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization’s total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Comment
Oil and gas production activities (upstream)	125,352	100%
Oil and gas production activities (downstream)	0	

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons 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)
Colombia	57.78	0	497.02	347.32
Canada	37.61	0	266.44	0

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By facility

C7.6b

(C7.6b) Break down your total gross global Scope 2 emissions by business facility.

Facility	Scope 2 location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Kona	12.15	0



Tauramena office	1.17	0
Bogotá office	31.87	0
Yopal office	11.19	0
Tame office	1.39	0
Calgary office	37.61	0

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization’s total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Oil and gas production activities (upstream)	95	0	100% Oil and Gs operations
Oil and gas production activities (downstream)	0	0	

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0		0	
Other emissions reduction activities	0		0	
Divestment	0		0	
Acquisitions	47	Increased	100	Acquisition of a new block, Fortuna, in 2018
Mergers	0		0	
Change in output	44,524	Increased	55.11	Higher gas production in Capachos, Andina and Aguas Blancas fields.
Change in methodology	0		0	
Change in boundary	0		0	
Change in physical operating conditions	0		0	
Unidentified	0		0	
Other	7.62	Decreased	8	This decreased corresponds to scope 2 emissions reduction. Despite including the Calgary Office's consumption for the first time, less energy was consumed at Kona as a result of the field being shut down for most of the year.

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 15% but less than or equal to 20%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	303,755	303,755
Consumption of purchased or acquired electricity		763	0	763
Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		763	303,755	304,519

C8.2b

(C8.2b) Select the applications of your organization’s consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	No
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels (excluding feedstocks)

Crude Oil



Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

80,337

MWh fuel consumed for self-generation of electricity

80,337

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

258

Comment

Fuels (excluding feedstocks)

Other, please specify

Diesel Stationary

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

8,228

MWh fuel consumed for self-generation of electricity

8,228



MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

258

Comment

Fuels (excluding feedstocks)

Natural Gas

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

209,122

MWh fuel consumed for self-generation of electricity

209,122

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

258

Comment

Fuels (excluding feedstocks)

Other, please specify

Diesel Mobile

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

6,068

MWh fuel consumed for self-generation of electricity

6,068

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

258

Comment

C8.2d

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

Crude Oil

Emission factor

77.956

Unit

kg CO2 per GJ



Emission factor source

FECOC – Factor emissions of Colombian fuels – Colombia Ministry of Mines and Energy

Comment

Natural Gas

Emission factor

55.539

Unit

metric tons CO2 per GJ

Emission factor source

FECOC – Factor emissions of Colombian fuels – Colombia Ministry of Mines and Energy

Comment

Other

Emission factor

74.831

Unit

metric tons CO2 per GJ

Emission factor source

FECOC – Factor emissions of Colombian fuels – Colombia Ministry of Mines and Energy

Comment

Emission factor for diesel

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	297,687	297,687	0	0
Heat	0	0	0	0
Steam	258	258	0	0
Cooling	0	0	0	0

C8.2f

(C8.2f) Provide details on the electricity, heat, steam and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.

Basis for applying a low-carbon emission factor

Grid mix of renewable electricity

Low-carbon technology type



Hydropower

Region of consumption of low-carbon electricity, heat, steam or cooling

Latin America

MWh consumed associated with low-carbon electricity, heat, steam or cooling

533.5

Emission factor (in units of metric tons CO2e per MWh)

0.12

Comment

The energy generation matrix of the National Interconnected System is a mixed matrix where hydroelectric plants, thermoelectric plants, and other sources supply the system. This configuration allows us to consider it a low-carbon emission matrix. The energy mix is made up of 69.88% from hydropower, 29% from thermopower (natural gas, carbon, liquid fuels), and less than 1% from Eolic, solar, co-generation and other low-carbon technologies. 69.88% (or 533.50 Mwh) of the 763.45 in purchased electricity comes from hydropower, which we are reporting as low-carbon.

C9. Additional metrics

C9.1

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

Description

Energy usage

Metric value

16.66



Metric numerator

75,784,156.48

Metric denominator (intensity metric only)

4,548,869 barrels of oil equivalent

% change from previous year

-5

Direction of change

Decreased

Please explain

In 2017, electricity consumption per barrel of oil produced was 17.58

C-OG9.2a

(C-OG9.2a) Disclose your net liquid and gas hydrocarbon production (total of subsidiaries and equity-accounted entities).

	In-year net production	Comment
Crude oil and condensate, million barrels	15.98	Based on 2018 average daily production of 43,788 Bbl/d
Natural gas liquids, million barrels	0	No LNG operations
Oil sands, million barrels (includes bitumen and synthetic crude)	0	No oil sands operations
Natural gas, billion cubic feet	1.36	Based on 2018 average daily production of 3,720 mcf/d

C-OG9.2b

(C-OG9.2b) Explain which listing requirements or other methodologies you use to report reserves data. If your organization cannot provide data due to legal restrictions on reporting reserves figures in certain countries, please explain this.



Parex' reserves evaluation is prepared by GLJ Petroleum Consultants Ltd ("GLJ"), and done so in accordance with procedures and standards contained in the Canadian Oil and Gas Evaluation (COGE) Handbook. All reserves definitions used to prepare Parex' reserves are those contained in the Canadian Oil and Gas Evaluation (COGE) Handbook, as well as the Canadian Securities Administrators National Instrument 51-101 (NI 51-101). Additional information regarding the Company's reserves, for the year ending December 2018, are available in the Company's Annual Information Form dated March 6, 2018 at www.parexresources.com.

Note that 2P and 3P reserve values reported in C-OG9.2c or other sections of the CDP questionnaire are Parex' net working interest reserves before royalty.

C-OG9.2c

(C-OG9.2c) Disclose your estimated total net reserves and resource base (million boe), including the total associated with subsidiaries and equity-accounted entities.

	Estimated total net proved + probable reserves (2P) (million BOE)	Estimated total net proved + probable + possible reserves (3P) (million BOE)	Estimated net total resource base (million BOE)	Comment
Row 1	184.67	262.07	262.07	As at December 31, 2018

C-OG9.2d

(C-OG9.2d) Provide an indicative percentage split for 2P, 3P reserves, and total resource base by hydrocarbon categories.

	Net proved + probable reserves (2P) (%)	Net proved + probable + possible reserves (3P) (%)	Net total resource base (%)	Comment
Crude oil / condensate / Natural gas liquids	98	98	98	As at December 31, 2018
Natural gas	2	2	2	As at December 31, 2018

Oil sands (includes bitumen and synthetic crude)	0	0	0	No oil sands operations
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C-OG9.2e

(C-OG9.2e) Provide an indicative percentage split for production, 1P, 2P, 3P reserves, and total resource base by development types.

Development type

Onshore

In-year net production (%)

100

Net proved reserves (1P) (%)

100

Net proved + probable reserves (2P) (%)

100

Net proved + probable + possible reserves (3P) (%)

100

Net total resource base (%)

100

Comment

100% of Parex operations are onshore



C-CO9.6/C-EU9.6/C-OG9.6

(C-CO9.6/C-EU9.6/C-OG9.6) Disclose your investments in low-carbon research and development (R&D), equipment, products, and services.

C-OG9.7

(C-OG9.7) Disclose the breakeven price (US\$/BOE) required for cash neutrality during the reporting year, i.e. where cash flow from operations covers CAPEX and dividends paid/ share buybacks.

57.5

In 2018, US\$57.50/boe would have been the break even price required for cash neutrality

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 and/or Scope 2 emissions and attach the relevant statements.

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

-  Limited Assurance Report - Parex Resources IS18_220719 (002).pdf
-  Appendix 1. Limited Assurance Criteria Parex Resources IS18_220719 (002).pdf
-  Audit Letter_ Parex Resources July 2019.pdf
-  GHG Verification Report.pdf

Page/ section reference

Page 1/ Limited assurance object & appendix 1 (pg. 9-10). Through Parex limited assurance of the 2018 Sustainable Report, PwC verified GRI 305-1 corresponding to Scope 1 GHG emissions, as it can be seen in the respective assurance report attached hereto under the ISAE 300 methodology

Refer also to Page 8/C.ii of the GHG verification report and the audit letter from PWC

Relevant standard

ASAE3000

Proportion of reported emissions verified (%)

100

 GHG Verification Report.pdf

Scope

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Not applicable

Attach the statement

 Audit Letter_ Parex Resources July 2019.pdf

 GHG Verification Report.pdf

Page/ section reference

Page 8/c.iii (GHG verification report)

Relevant standard

Other, please specify

International Standard on Related Services - ISRS 4400

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope

Scope 3- all relevant categories

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Attach the statement

 Audit Letter_ Parex Resources July 2019.pdf

 GHG Verification Report.pdf

Page/section reference

Page 8/c.iv (GHG verification report) and see audit letter

Relevant standard

Other, please specify

International Standard on Related Services - ISRS 4400

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

No, we do not verify any other climate-related information reported in our CDP disclosure

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

No, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

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

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

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

No, we do not engage

C12.1d

(C12.1d) Why do you not engage with any elements of your value chain on climate-related issues, and what are your plans to do so in the future?

Over the last year, we have made some policy changes and taken several actions, which once implemented, will allow the Company to engage with the elements of its value chain on climate-related issues in the future. Parex updated our HSEQ Integral Policy to include climate change management as a commitment. Using the GHG inventory for 2017 as a baseline, Parex began to engage with third parties along its value chain to achieve collective impacts and joint mitigation efforts in managing climate-related issues. The first step was to start tracing all fuels sources in order to identify possible improvements and the sources with highest impact for the calculation of the carbon footprint. Going forward, the Company plans to include an additional evaluation metric within the contracting processes.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

Other

C12.3e

(C12.3e) Provide details of the other engagement activities that you undertake.

We support energy efficiency initiatives such as the substitution of high carbon density energy sources (wood, diesel, kerosene) for natural gas. Mainly of the Parex operations use gas fuel instead of diesel.

We have worked with public officials to reduce gas flaring and supply local markets with natural gas in households where we operated. We have replaced the use of diesel to generate energy for the use of solar panels. We have installed some solar panels in some field to provide its energy. For 2019, we are including new solar panels in other fields. Our Aguas Blancas project is one example.



C12.3f

(C12.3f) 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?

There are no established processes as Parex' climate change strategy is currently being formulated and is still under evaluation. Once the Company consolidates its knowledge and internal management of GHG emissions, we may establish processes to guide engagement with policy makers on climate-related matters.

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In voluntary sustainability report

Status

Underway – previous year attached

Attach the document

Page/Section reference

Content elements

Emissions figures

Comment

Note that the previous year's report was submitted in 2018. We expect to publish the 2018 sustainability report by the end of August 2019. All Parex' reports are available at <https://parexresources.com/corporate-responsibility/sustainability-report/>

C14. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

Advisory on Forward Looking Statements

Certain information regarding Parex set forth in this document contains forward-looking statements that involve substantial known and unknown risks and uncertainties. The use of any of the words "plan", "expect", "intend", "believe", "anticipate" or other similar words, or statements that certain events or conditions "may" or "will" occur are intended to identify forward-looking statements. Such statements represent Parex' internal beliefs concerning, among other things, future growth, results of operations, business prospects and opportunities, these statements are only predictions and actual events or results may differ materially. Although the Company's management believes that the expectations reflected in the forward-looking statements are reasonable, it cannot guarantee future results, performance or achievement since such expectations are inherently subject to significant business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause Parex' actual results to differ materially from those expressed or implied in any forward-looking statements made by, or on behalf of, Parex. In particular, forward-looking statements contained in this document include, but are not limited to, statement with respect to the Company's strategy, focus, approach to risks and targeted jurisdictions; the Company's plans to implement an externally verified inventory of emissions; the Company's plans to implement a baseline study of climate change impact, the construction of a gas facility to reduce flaring (including the targeted amount of such reduction), and the optimization of a gas compression facility, and the anticipated effect of such projects on the Company's emissions and flaring; statements with respect the Company's near-term objective to reduce GHG emissions from transportation, carbon flaring and other emissions; the prospect that Llanos 34 flowline would lower GHG emissions and health and safety; estimated emission reductions from projects at various stages of development; the Company's plan to use gas as cleaner energy source; expectations to minimize gas flaring; the evaluation of climate-related risks and opportunities; and the integration of climate-related issues into the Company's business strategy. Statements relating to "reserves" are forward-looking statements, as they involve the implied assessment, based on estimates and assumptions that the reserves described exist in the quantities predicted or estimated and can be profitably

produced in the future. These forward-looking statements are subject to numerous risks and uncertainties, including but not limited to, the impact of general economic conditions in Canada and Colombia; prolonged volatility in commodity prices; industry conditions including changes in laws and regulations including adoption of new environmental laws and regulations, and changes in how they are interpreted and enforced in Canada and Colombia; competition; the results of exploration and development drilling and related activities; obtaining required approvals of regulatory authorities in Canada and Colombia; risks associated with negotiating with foreign governments as well as country risk associated with conducting international activities; volatility in market prices for oil; fluctuations in foreign exchange or interest rates; environmental risks; changes in income tax laws or changes in tax laws and incentive programs relating to the oil industry; changes to pipeline capacity; ability to access sufficient capital from internal and external sources; failure of counterparties to perform under contracts; risk that Parex' evaluation of its existing portfolio of development and exploration opportunities is not consistent with its expectations; failure to meet expected production targets; and other factors, many of which are beyond the control of the Company. Readers are cautioned that the foregoing list of factors is not exhaustive. Additional information on these and other factors that could affect Parex' operations are included in reports on file with Canadian securities regulatory authorities and may be accessed through the SEDAR website (www.sedar.com).

Although the forward-looking statements contained in this document are based upon assumptions that Management believes to be reasonable, the Company cannot assure investors that actual results will be consistent with these forward-looking statements. With respect to forward-looking statements contained in this document, Parex has made assumptions regarding, among other things: current and anticipated commodity prices and royalty regimes; availability of skilled labour; timing and amount of capital expenditures; future exchange rates; the price of oil, including the anticipated Brent oil price; the impact of increasing competition; conditions in general economic and financial markets; availability of drilling and related equipment; effects of regulation by governmental agencies; receipt of partner, regulatory and community approvals; royalty rates; future operating costs; uninterrupted access to areas of Parex' operations and infrastructure; recoverability of reserves and future production rates; timing of drilling and completion of wells; on-stream timing of production from successful exploration wells; pipeline capacity; that Parex will have sufficient cash flow, debt or equity sources or other financial resources required to fund its capital and operating expenditures and requirements as needed; that Parex' conduct and results of operations will be consistent with its expectations; that Parex will have the ability to develop its oil and gas properties in the manner currently contemplated; that Parex' evaluation of its existing portfolio of development and exploration opportunities is consistent with its expectations; current or, where applicable, proposed industry conditions, laws and regulations will continue in effect or as anticipated as described herein; that the estimates of Parex' production and reserves volumes and the assumptions related thereto (including commodity prices and development costs) are accurate in all material respects; that Parex will be able to obtain contract extensions or fulfil the contractual obligations required to retain its rights to explore, develop and exploit any of its undeveloped properties; that the initiatives the Company is undertaking will result in the identification, evaluation and reduction of emissions; and other matters.

Parex' actual results, performance or achievement could differ materially from those expressed in, or implied by, these forward-looking statements and, accordingly, no assurance can be given that any of the events anticipated by the forward-looking statements will transpire or occur, or if any of them do,

what benefits Parex will derive. These forward-looking statements are made as of the date of this document and Parex disclaims any intent or obligation to update publicly any forward-looking statements, whether as a result of new information, future events or results or otherwise, other than as required by applicable securities laws.

GHG Emissions Information

GHG emissions and emissions savings estimates that are provided herein have been calculated with a third party's assistance, as is further described below. These measures do not have standardized meanings or standard methods of calculation and therefore such measures may not be comparable to similar measures used by other companies and should not be used to make comparisons. Parex quantifies and reports its greenhouse gas (GHG) emissions using the operational control approach. Its organizational boundary includes the Company's Calgary & Bogota offices and all operated oil & gas exploration and production facilities. Parex has elected to report scope 1, 2 and 3 GHG emissions. For the purposes of the Company's GHG emissions reporting:

- Scope 1 emissions are defined as direct emissions from GHG sources that it owns or controls;
- Scope 2 emissions are defined as indirect GHG emissions that result from Parex' consumption of energy in the form of purchased electricity from the Colombian national grid and Canadian power grid; and
- Scope 3 emissions are defined as Parex' indirect emissions other than those covered in Scope 2. They are from sources not owned or controlled by Parex, but which occur as a result of the Company's activities. Particularly, Parex' drilling and completion activities conducted by third parties are deemed to be Scope 3.

Parex used a third party to help quantify its GHG emissions. For the 2018 reporting year, Parex retained Conservación & Carbono S.A.S to evaluate GHG emissions from all operated facilities located in Colombia in accordance with IPCC (2006) Guidelines for National Greenhouse Gas Inventories and Colombia's Technical Standard ISO 14064-1 ("NTC ISO 14064-1"). Verification of Scope 1, 2 & 3 GHG emissions was conducted by PricewaterhouseCoopers in Colombia using the International Standard on Related Services-ISRS 4400. In addition, a limited third-party assurance of Scope 1 GHG emissions for Parex' 2018 Sustainability Report was conducted by PricewaterhouseCoopers in Colombia. This assurance was completed in accordance with the ISAE3000 standard

Oil & Gas Matters Advisory

Boe: The term "Boe" means a barrel of oil equivalent on the basis of 6 Mcf of natural gas to 1 barrel of oil ("**bbl**"). BOEs may be misleading, particularly if used in isolation. A boe conversion ratio of 6 Mcf: 1 bbl is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead. Given the value ratio based on the current price of crude oil as compared to natural gas is significantly different from the energy equivalency of 6:1, utilizing a conversion ratio at 6:1 may be misleading as an indication of value.

Reserves Advisory

See attachment



 FWD stmts.pdf

C14.1

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Chief Operating Officer	Chief Operating Officer (COO)

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	Public or Non-Public Submission	I am submitting to
I am submitting my response	Public	Investors

Please confirm below