

C0. Introduction

C0.1

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

Lundin Energy ("the Company") is a leading independent oil and gas exploration and production company in Europe, operating offshore on the Norwegian Continental Shelf. Our headquarters are in Stockholm, Sweden, and we also have corporate offices in Switzerland and the Netherlands. Lundin Energy develops oil and gas resources efficiently, responsibly and in a sustainable manner. It recognises the challenges related to climate change as set out by the United Nations Intergovernmental Panel on Climate Change and the role that forward-thinking oil and gas companies must play in addressing it. The Company acknowledges that the global response to climate change should include efforts to limit the temperature increase to 1.5 degrees as set out in the Paris Agreement. The Company further recognises that demand for hydrocarbons is expected to continue rising to meet the needs of a growing global population, with oil still comprising a significant portion of the energy mix in the future. Over this same time frame, to meet climate targets set out in the Paris Agreement, global annual greenhouse gas emissions will need to be halved. Producing hydrocarbons in the upstream oil and gas sector is estimated to contribute around 5% of the world's total footprint. To meet future energy demands and climate targets it is thus critical to decarbonise the production of oil and gas as much as possible. This is a core aim of Lundin Energy's strategy, with a formalised roadmap and Board-endorsed target for carbon neutrality across its operations by 2030. The Company's Decarbonisation Strategy will strengthen its position as one of the most sustainable oil companies, providing the best barrel in the world: Safe, responsible, low cost and low emissions.

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
Reporting year	January 1 2019	December 31 2019	No	<Not Applicable>

C0.3

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

- Netherlands
- Norway
- Sweden
- Switzerland

C0.4

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

USD

C0.5

**(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.**

Operational control

C-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**  
Please select

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	Lundin Energy's Board of Directors has an overall leadership/supervisory role in all Environmental, Social and Governmental (ESG) and Health and Safety (H&S) matters, including climate change. The ESG/H&S Committee consists of 3 Board members, and the CEO, COO and the VP Sustainability. The Committee assists the Board in providing updates on the Company's emissions performance and key climate change related risks and opportunities. Its responsibility is to oversee the Company's conduct and performance on all ESG/H&S matters, including climate change, and to inform and to make recommendations to the Board where action or improvement is needed, such as on goals and targets in the climate change strategy. It also makes decisions on how to proceed on climate risks and different strategy options. The Board receives quarterly ESG/H&S reports and bi-annual presentations where climate change risks and opportunities are addressed. Tasks for 2019 included among other things, monitoring climate change performance, assessing the current status of international climate initiatives and stakeholder expectations, reviewing the Company's strategy and response to climate change risks and review of the Decarbonisation Strategy.
Chief Executive Officer (CEO)	As leader of Lundin Energy, the CEO ultimately decides on the Company's climate change strategy. Part of this responsibility is delegated on a day to day basis to the VP Sustainability (see below), and the day to day operational implementation of the climate change strategy is delegated to the COO. The CEO communicates to Company staff and externally on Lundin Energy's climate commitment and Decarbonisation Strategy, and its efforts to be an industry leader in terms of low-carbon performance.
Chief Operating Officer (COO)	The COO has an operational responsibility to ensure that work processes, selection of equipment, products and plans of development integrate climate related considerations through the four operational phases, exploration, development, production and marketing. For example, the COO decides ultimately on different emission reduction opportunities to pursue in operations, from electrification to implementation of renewable energy projects.
Chief Sustainability Officer (CSO)	The VP Sustainability decides on and sets recommendations for the Company's climate change strategy and policy development, for review by the CEO, Board and ESG/H&S Committee. This involves keeping apprised of new developments in science, policy, and industry to promote climate action, tracking and analysing risks and opportunities related to climate change for its strategy and, together with country management, developing tailor made solutions to conform to LE's Environmental Policy, and to its target to become operationally carbon neutral by 2030 through its Decarbonisation Strategy. The VP Sustainability is also responsible for corporate climate change risks and opportunities, developing mitigation plans to manage these risks and opportunities, and disclosing climate change performance to external stakeholders aligned with standards such as CDP, GHG Protocol, GRI and the TCFD.

## C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	<ul style="list-style-type: none"> <li>Reviewing and guiding strategy</li> <li>Reviewing and guiding major plans of action</li> <li>Reviewing and guiding risk management policies</li> <li>Reviewing and guiding annual budgets</li> <li>Reviewing and guiding business plans</li> <li>Setting performance objectives</li> <li>Monitoring implementation and performance of objectives</li> <li>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</li> </ul>	<Not Applicable>	The Board of Directors' main role is to set the Company's strategy in consultation with senior management. Through the quarterly ESG/H&S reports and the bi-annual presentation of the VP Sustainability, it keeps updated both on developments in the sphere of climate change, whether policy issues (Paris Agreement, national and industry commitments) climate related court cases throughout the world, developments in climate science and NGO actions, but also how the Company's performance relates to that of its peers, the Company's emission reduction targets and what it does in order to further minimize its carbon footprint. Its strategic decisions thus are made with an understanding and assessment of climate change issues on Lundin Energy's business. The Board's oversight is in line with expectations of the TCFD. In the course of the year, the Company has furthered its understanding of TCFD expectations and has developed a timeline to deliver upon next steps, namely developing an approach to scenario analysis and conducting the analysis per se in preparation to responding to the TCFD framework within the Company's next annual reporting cycle in 2020. The Company has heightened its attention to climate change and its integration into its business model. In its yearly work cycle, the Board oversees all strategic issues in relation to Lundin Energy via dedicated sessions with Group management, detailed discussions of strategy issues and an in-depth analysis of the Company's business. As such, the work cycle, by nature, covers those governance mechanisms listed, helping the board oversee climate issues. 13 board meetings were held in 2019 with additional informal contact occurring between ordinary meetings as and when required. An example of its implication, covering mechanisms highlighted, is approving budget proposals which include expenditures related to achieving power from shore (electricity from renewables) for its Johan Sverdrup/Edvard Grieg field.

## 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)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Chief Operating Officer (COO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Chief Sustainability Officer (CSO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Other, please specify (Managing Director)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Environmental, Health, and Safety manager	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Sustainability committee	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly

## 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).

Formally the responsibility for managing climate change issues rests with the CEO of the Company who has clearly set out the Company's commitment to be a leader in the sector on climate change. The rationale for this is that as with other strategic issues, leadership on climate change needs to come from the top. The approach to decarbonisation is communicated both internally through our Code of Conduct and related policies and staff meetings, and externally, through corporate presentations, interviews and in meetings with shareholders.

The CEO is also part of the Board ESG/H&S Committee (aka Sustainability Committee). The other members of this Committee are the COO (details below), the VP Sustainability (details below), and three Board Members. The responsibility of the ESG/H&S Committee includes monitoring the performance of key climate change risks and opportunities that could impact Lundin Energy, on an ongoing basis, and provide updates to the Board on the same. This involves, among other tasks, reviewing climate change performance and emissions forecasts of Lundin Energy, changes to the external risk landscape, and discussing mitigation strategies such as responding to TCFD disclosures. The rationale for assigning these tasks to the Committee is to ensure that all climate change related risks and opportunities are elevated at Board level, enabling the selected Board members on the Committee to respond and approve strategies to mitigate risks and realize opportunities, as part of Lundin Energy's Decarbonisation Strategy.

On a day to day basis, the responsibility for managing climate change issues is delegated on an operational level to the COO who ensures that throughout the operational process energy efficiency and carbon reduction measures are assessed and implemented as feasible, and on a strategic level to the VP Sustainability (aka CSO). The rationale for this is because the COO is in charge of all operational matters including implementing measures to improve operational performance, while the VP Sustainability monitors external stakeholder expectations and recommends strategies to address climate change that meets these expectations.

Together with corporate management and country based Business Unit Directors, the VP Sustainability helps ensure that climate change strategy and policies are integrated into decision making. Climate change and energy efficiency are addressed in staff induction/on boarding processes, the Sustainability e-learning course, staff presentations and dedicated meetings with all heads of departments. These serve to ensure that all staff are informed of climate change issues and their responsibility to act in a way which promotes stewardship in this field. In addition, emissions performance is integrated in monthly and quarterly reporting from operations to corporate and from corporate to the Board, and a carbon price is used in forward business planning.

In Norway, the overarching responsibility for managing climate change issues sits with the Managing Director, who reports to the CEO on a strategic level and to the COO on an operational level. As per with the CEO, she delegates onto management, namely the HSEQ Director (aka Environmental, Health, Safety and Quality Manager) responsibility for ensuring that operational activities are in line with the Company's climate commitment. The HSEQ Director's role is to manage and maintain the management system for environmental processes and procedures, with authority and responsibility for ensuring the system's quality and accuracy, which is why the HSEQ directly is also in charge of operational climate change issues.

Climate risks and opportunities are a specific item in the Company's risk register and are reviewed on a quarterly basis by the risk owners and reported as risks after a peer review with local management. These risks are further reviewed and reported to the corporate level by the Corporate Risk and Insurance Director and to the Board ESG/H&S Committee (aka Sustainability Committee). As such, the Corporate Risk and Insurance Director holds responsibility for reviewing and collating all Company risks, including climate-related risks and opportunities.

As per above, the Board of Directors receives monthly and quarterly reports which address climate change whether through internal developments in this field, i.e. carbon emissions performance, or relevant external events impacting the management of climate change issues within the Company, such as for example the development and formal issue of the TCFD, climate related legislation (Paris Agreement, Norwegian Policy and National Commitments, etc.), industry initiatives (Norwegian Roadmap for 2030 and 2050, etc.) climate related legal cases or NGO campaigns, relevant scientific reports (e.g. IPCC), investor statements or positioning in relation to climate change, ESG rating questionnaires as well as projection of market demands for oil and gas (e.g. from the IEA).

## C1.3

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

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	

## C1.3a

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

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Corporate executive team	Monetary reward	Emissions reduction target Company performance against a climate-related sustainability index	The yearly variable remuneration for Group management is assessed against annual performance targets that reflect the key drivers for value creation. These annual performance targets include delivery against specific ESG/H&S and sustainability targets, including environmental performance, carbon performance and ESG ratings. Corporate executive team members (including the CEO) have part of their variable remuneration linked to achievement of the Company's carbon targets for the year. The performance target structure and specific targets are reviewed annually by the Compensation Committee to ensure it aligns with the strategic direction.
Executive officer	Monetary reward	Emissions reduction target	In Norway, the Managing Director, as well as the HSEQ Director and Business Unit Directors also have part of their variable pay linked to achievement of the Company's carbon targets.
Chief Sustainability Officer (CSO)	Monetary reward	Emissions reduction target Company performance against a climate-related sustainability index	The level of variable remuneration for the VP Sustainability depends upon the fulfilment of the Company's overall Sustainability objectives and achievement of the carbon targets for year. In addition, the VP Sustainability, as the person directly assigned a day to day responsibility for climate change issues within the executive team, has additional specific climate change related targets, including management of climate risks, creation and embedding of the Decarbonisation Strategy, reporting externally and to the Board on climate change performance and issues, and CDP score result. These targets are linked to variable remuneration.
Management group	Non-monetary reward	Emissions reduction target	The Company's Sustainability Assessment Review and Audit questionnaire was modified in 2016 to include a specific reference to climate change under the section on environment. Thus while conducting the Review / Audit, the Managing Director (and relevant heads of departments such as operational and HSE Directors) are required to report on actions taken in relation to climate change. Overall assessment of sustainability performance includes a determination of the extent to which climate change issues are understood, communicated and actioned upon throughout the value chain.
Procurement manager	Non-monetary reward	Environmental criteria included in purchases	The head of the procurement department in Norway, where all major contracts are awarded, as part of his duties, organizes tenders, evaluates and awards contracts to service and supplier companies. Environmental criteria have been included into evaluations of tenderers for main contracts, which, if awarded the contract, must sign the Contractor Declaration, which restates Lundin Energy's recognition of climate change as a global challenge and support for the CDP and includes the following commitment, which contractors agree to: "We will work to achieve energy efficiency and minimize harmful discharge, emissions, and waste production in a life-cycle perspective."

## C2. Risks and opportunities

### C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

### C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	3	Industry practice.
Medium-term	3	10	Industry practice.
Long-term	10	30	Industry practice.

### C2.1b

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

Lundin Energy uses a five by five risk matrix to classify the impact based on a range of indicators. The highest risk area in the risk matrix would be considered substantive. The Company defines substantive financial impact as:

- >50 MUSD net to the operating company
- Impact due to significant changes in capital markets
- Increased investment and/or financing required due to the risk
- The highest risk in terms of severity and impact would be considered substantive

For strategic risks, other indicators such as a medium-term effect on share price or a high continued attention by a majority of stakeholders at international level would be strategically substantive, as would a long-term limitation to access new licenses. Climate-related and sustainability risks are addressed as strategic for the Company.

The quantitative indicators used by the Company to measure and define impact include:

- Potential net impact in MUSD to the operating company due to the risks
- Investment and/or financing required to mitigate risks

## C2.2

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### (C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

#### Value chain stage(s) covered

Direct operations  
Upstream  
Downstream

#### Risk management process

Integrated into multi-disciplinary company-wide risk management process

#### Frequency of assessment

More than once a year

#### Time horizon(s) covered

Short-term  
Medium-term  
Long-term

#### Description of process

Our Risk and Opportunity Management Process: Lundin Energy's activities are located in Norway, a country with a robust regulatory framework covering key issues for oil and gas operations, such as health, safety, security, environment, human rights and anti-corruption. Risks and opportunities are nevertheless continuously considered in a broader context with emerging trends and associated risks identified by internal and external sources. Lundin Energy's risk and opportunity management process is driven by the Board to encourage foresight, pro-activeness and informed decision making. As outlined in the Company's Risk Management Policy, effective management of risk contributes towards the achievement of Lundin Energy's strategic and operational objectives. Key material sustainability issues are reviewed from an operating context locally but are also considered in a broader context at the Corporate level. Emerging trends are identified from internal and external sources and presented to senior management and the ESG/HSE Board Committee for review and consideration on a bi-annual basis. The Company follows a Three Lines of Defence approach where a) local management has the day-to-day responsibility for risk and opportunity identification, implementing the systems to control risks and opportunities and monitoring their impact; b) Senior management is responsible for ensuring effective processes and for reviewing the mitigation efforts; and c) Internal and External Audit tests the effectiveness of the controls used to mitigate risk and realize opportunities. This process involves local operational accountability and clear responsibility for the continuous identification of risks and opportunities at all levels, as well as ensuring effective reporting. Local risk and opportunity reviews are carried out with management on a quarterly basis in order to raise internal awareness and constantly monitor to mitigate risk and realize opportunities. Lundin Energy's risk and opportunity universe falls into three areas: Strategic, operational and financial risks, which include risks to the Company's reputation or the affect that external risks could have on the business. Climate-related risks and opportunities are addressed as strategic for the Company. A standardised 5x5 risk management methodology is used to perform quantitative and qualitative assessments to prioritise control activities and enable the Company to deal effectively with potential opportunities and threats, based on a set of financial, strategic and reputation criteria (as described in section 2.1b). The highest risk or opportunity area would be considered substantive. Case studies: An example of a transition risk identification process is Lundin Energy's analysis of exposure of increased carbon costs. The analysis is based on sensitivity between an expected increase in EU ETS costs and financial impact of increased carbon cost in the current portfolio per year. Significant increase in national CO2 taxes and/or EU-ETS quota prices could potentially affect Lundin Energy since we operate solely within this market. In addition, further acquisition or field development projects would impact this number and will be part of future risk or opportunity evaluations. An example of a physical climate risk trend is how changes in ice edge distribution in the Barents Sea could affect Lundin Energy's exploration activities. In line with the risk assessments, Lundin Energy took measures consistent with the Petroleum Safety Administration to protect personnel working offshore from potential strong ice winds. For drilling rig engagement, the tender was revised to include a mandatory winterised rig specially designed for operations in cold climates. The Leiv Eiriksson, a semi-submersible drilling facility was used safely by Lundin Energy for the Company's exploration activities offshore Norway in the Southern Barents Sea.

## C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Current climate regulation risks could impact Lundin Energy's operations and exploration. The Company's financial metrics may be impacted due to changes in the carbon tax system and framework conditions. Lundin Energy's operations are located in Norway, a country with ambitious emission reduction targets and high carbon prices. Significant increases in national carbon taxes and/or EU-ETS quota prices could affect Lundin Energy's financials, with all its operations concentrated solely within this market. The Norwegian government aims to follow the global response to climate change, including efforts to limit the temperature increase to a 1.5 degree scenario and to reach a global greenhouse gas emissions peak, as set out in the Paris Agreement. Lundin Energy Norway includes increasing carbon cost as a risk and continues to budget for carbon taxes with sensitivity analysis carried out on investment and development concept evaluations. Our industry-leading low carbon intensity means that our exposure to carbon costs is minimal.
Emerging regulation	Relevant, always included	Emerging regulations could potentially impact Lundin Energy's business model of organic growth. Lundin Energy's focus on increasing exploration licenses and potential new projects could be affected by changes to framework conditions. The Company could face reduced access to new acreage and altered development of proven resources in light of poor reputation on climate actions, and/or policy and legal restrictions. Access to new acreage and the development of new discoveries are vital to our business model, which focuses on organic growth through exploration, development and production of oil resources. Lundin Energy's position as an ESG leader, with an ambitious Decarbonisation Strategy, means that we are likely to mitigate such risks better than others in the sector.
Technology	Relevant, always included	The Company could face higher costs of decarbonisation (e.g. electrification) for future exploration and production activities related to implementation of technology development and R&D investment. Norwegian authorities and key stakeholders have staked out ambitious emission reduction targets for the Norwegian Oil and Gas Industry. Emissions shall be cut by 40 percent by 2030 and be near zero in 2050. Through its Decarbonisation Strategy, Lundin Energy has established a goal for carbon neutrality by 2030, hereby implying that all emerging fields and developments need be near carbon neutral, or include carbon offsetting mechanisms. However, the cost of electrification depends upon numerous factors, namely potential geographic, technical and infrastructure barriers. Depending upon the asset, CAPEX and OPEX profiles may increase the cost of production.
Legal	Relevant, always included	Legal climate-related disputes could impact Lundin Energy's exploration in the Barents Sea or other costal and sensitive areas. The Company could face legal challenges with claims to recompense climate-related damage, illness and negative effects, all of which are already taking place in the global arena today. In Norway, NGOs (Bellona case) have filed climate related lawsuits relating to the sea-ice edge which are being evaluated by the Supreme Court. Other similar lawsuits have been ruled in favour of the complainant in other regions of the world. Although increasing legal challenges are considered unlikely to affect Lundin Energy, they may indeed become more time-consuming, costly, with the potential of causing reputational harm in the future.
Market	Relevant, always included	Market climate-related risks could impact Lundin Energy's in the longer term through lower oil demand and prices. Different energy mix scenarios predict increases or decreases in fossil fuel demand through to 2040, based on global growth, political stability, market conditions, technology development, etc. This could have a resulting impact on the market price for crude oil and gas, and potential investor appetite in oil companies. Scenarios range significantly, from a predicted 15-32% reduction in oil demand by 2040 in a "2 degree" scenario, versus a 4-23% increase in oil demand in a "current policies" scenario. Lundin Energy remains well-positioned as delivering oil and gas resources at a very low carbon footprint, and our Decarbonisation Strategy puts us at a strong competitive advantage in our sector, if demand for oil and gas changes in the longer term.
Reputation	Relevant, always included	Reputational climate-related risks could impact Lundin Energy's exploration and operations as an increasing number of lenders embed ESG into their lending criteria (e.g. Sustainability-Linked Loans) as well as factoring ESG into the risk profile of companies. Some lenders such as BlackRock are stopping financing for certain fossil-fuel based investments (namely coal and arctic exploration). A lack of proved progress on climate action may increase costs of capital (through higher interest rates), and/or limit our potential access to capital in the medium term. In the longer term, Lundin Energy's market capitalisation could be affected in light of changing investor reputation, as they could consider the Company to become a higher risk investment, given our sector focus. Additional scrutiny from external stakeholders and non-Lundin Energy targeted NGO actions may lead to sectoral repercussions damaging perceptions of oil and gas, ultimately affecting Lundin Energy's reputation. Due to Lundin Energy's reputation as a leader on climate change, a proportion of this risk can be mitigated through our Decarbonisation Strategy and continued dialogue with investors and lenders.
Acute physical	Relevant, always included	Acute physical climate-related risks could impact Lundin Energy's operations and supply chain. Within acute physical risks we consider the risk of changing weather, including an increased frequency and intensity of extreme weather related events (e.g. storms, hurricanes) which could cause damage to our assets or increased cost. Most fields developed today are engineered to tolerate 100-year storms or equivalent, and should therefore be capable of handling more extreme weather conditions than currently planned for. It is however considered possible that such events may damage infrastructure and cause reduced production, increased costs, implying costly modifications or operational restrictions. This has already occurred within the marine industry where an unexpected wave height hit a drilling rig highlighting lessons to learn for future design scenarios.
Chronic physical	Relevant, always included	Chronic physical climate-related risks could impact Lundin Energy's operations and supply chain. Chronic physical risks factor a changing climate, and with that, a rise in sea level. Changes in weather patterns could impact operation and development areas (OPEX, prioritised development areas). Changes in sea level, temperature, ice occurrences, ocean currents and maritime/fishing routes could affect Lundin Energy's assets and operations in Norway and exploration in the Barents Sea. The Company may need to modify its installation structures and develop new evacuation/emergency response solutions. Safety risk and operating costs may increase as a result. In extreme cases, operations may come to a halt (if the measures are not available for such weather conditions) and certain areas may not allow drilling altogether for a period of time. Changes in ice edge distribution in the Barents Sea, where Lundin Energy has exploration activities, and/or fish spawning areas along the Norwegian coastline are examples of such areas. In the long term perspective the probability of this risk is reduced as technology and solutions will be developed to meet the challenges confronted.

**C2.3**

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

Yes

**C2.3a**

**(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.**

**Identifier**

Risk 1

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

Direct operations

**Risk type & Primary climate-related risk driver**

Current regulation	Carbon pricing mechanisms
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**Primary potential financial impact**

Increased direct costs

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

Financial goals (margins, dividends) may be potentially challenged if there are changes to the carbon tax system and framework conditions. Lundin Energy's operations are located in Norway, a country with ambitious emission reduction targets and high carbon prices. An increase in national carbon taxes and/or EU-ETS quota prices could impact Lundin Energy, as we operate solely within this market. Policy changes away from the current trends could result from the current global response to climate change, including efforts to limit the temperature increase to 1.5 degrees and to reach a global peak of greenhouse gas emissions as set out in the Paris Agreement. However, our industry-leading low-carbon profile (aiming for <2 kg CO2/boe by 2023) means that our exposure to carbon costs is minimal. Nevertheless, Lundin Energy Norway includes

increasing carbon cost as a risk and continues to budget for carbon taxes with sensitivity analysis done on investment and development concept evaluations.

**Time horizon**

Long-term

**Likelihood**

Unlikely

**Magnitude of impact**

Medium-low

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

1000000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

Approach used to calculate financial impact: - The direct impact of the risk will be an increase of the cost of EUAs paid per tonne of CO2. - In order to estimate the impact, given our current portfolio and emissions, we have evaluated a number of scenarios for the evolution of European CO2 EUA prices. - The impact of the risk in this case is the cost difference for the emissions from our current portfolio between the expected CO2 EUA prices scenario and the high increase scenario. - Future potential additions to the current portfolio have the potential to increase the CO2 emissions and therefore the impact of the risk. Figures and assumptions used in the calculation: - Current portfolio represents emissions of 50,000 tonnes CO2 for own operations and an additional 10,000 tonnes CO2 for drilling rigs per year (after electrification of the Edward Grieg and Johan Sverdrup fields). - Expected base scenario for CO2 prices is at 36 EUR per ton in 2030. - High case scenario for CO2 prices is at 52 EUR per ton in 2030. - 16 EUR x 60,000 tonnes CO2 = 1,000,000 USD per year.

**Cost of response to risk**

100000

**Description of response and explanation of cost calculation**

Lundin Energy's response to this risk is: - Funding R&D projects that aim at reducing GHG emissions and improving low emission technologies. - Perform stress tests on our portfolio to evaluate the effects of taxes increase and evaluate relevant mitigations to reduce emissions further. - Communicate the continued need for existing and new oil and gas producing fields to meet the future energy demand and ensure those are a viable part of the future energy mix. Case study: - Lundin Energy has built a carbon cost assumption into our forward business planning, with sensitivities, to model the percentage of future operating costs from carbon costs. This analysis is updated on an ongoing basis, helping us to manage carbon costs and mitigate them. Cost of response to risk: - Lundin Energy actively participate in stakeholder management, and apply business intelligence to provide a basis for informed decision making and portfolio management. - This includes studies and access to industry databases and analyses. The cost of studies and access to industry databases and analyses is approximately 100,000 USD per year.

**Comment**

The cost of mitigation estimate included here is for business analysis. Mitigation costs that include R&D investment and stakeholder management have been included in other risks to avoid double counting.

**Identifier**

Risk 2

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

Downstream

**Risk type & Primary climate-related risk driver**

Market	Changing customer behavior
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**Primary potential financial impact**

Decreased revenues due to reduced demand for products and services

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

Market climate-related risks could impact Lundin Energy in the longer term through lower oil demand and prices. Different energy mix scenarios predict increases or decreases in fossil fuel demand through to 2040, based on global growth, political stability, market conditions, and technology development. This risk is related to the potential for reduced future demand for oil due to shift to alternative energy sources through the energy transition. Different climate change scenarios (e.g. from the IEA) predict increases or decreases in fossil fuel demand through to 2040, based on predicted climate policies and their impacts. Predicted scenarios range significantly depending on the source, e.g. 15-32% reduction in oil demand by 2040 in a 2 degree scenario vs. a 4-23% increase in oil demand in a current policies scenario. Under such scenarios, the IEA has provided a long term oil price outlook, which could impact profitability and also have potential knock-on effects on reserves valuation under a lower oil price scenario. For Lundin Energy specifically, scenarios such as the IEA's Sustainable Development Scenario are unlikely to have a significant effect on our overall resilience, because of our low operating costs (\$4.03 per barrel in 2019) and commitment to carbon neutrality. We expect that we will continue to provide oil and gas in a low-carbon future, and produce in a sustainable and responsible manner, giving us a competitive advantage.

**Time horizon**

Long-term

**Likelihood**

Likely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

300000000

**Potential financial impact figure – maximum (currency)**

700000000

**Explanation of financial impact figure**

Approach used to calculate financial impact: We have carried out a rough calculation of the potential revenue impact to Lundin Energy under two different oil price scenarios in 2040. The low-case scenario is based on the difference between the IEA's Sustainable Development Scenario (\$60/barrel in 2040) and our actual achieved oil price in 2019 (\$64.21/barrel), and the high-case scenario is based on the difference between the IEA's Sustainable Development Scenario and a higher oil price of \$70/barrel in 2040. Figures and assumptions used in the calculation: - Our long-term production guidance is minimum 200,000 boepd, as communicated in our Capital Markets Day report in January 2020. - Low-case scenario assumes a potential revenue impact of \$4.21/barrel (the difference between the IEA's SDS price of \$60/barrel in 2040 vs. our achieved price in 2019 of \$64.21/barrel). - High-case scenario assumes a potential revenue impact of \$10/barrel (the difference between the IEA's SDS price of \$60/barrel in 2040 vs. a higher oil price scenario of \$70/barrel). - The resulting range in revenue impact is therefore between 300 million USD and 700 million USD in 2040, rounded to the nearest 100 million USD, under these above price scenarios.

**Cost of response to risk**

250000

**Description of response and explanation of cost calculation**

Lundin Energy's response to this risk is to: - Pursue efforts to differentiate our oil and gas products to maintain a competitive advantage in the market (for example, through low-carbon certification and/or engagement with wider industry). - Continually monitor and update our climate scenario modelling each year as new data and scenarios are published, in line with the guidelines from the TCFD. Case study: - Lundin Energy has been actively exploring opportunities to differentiate our barrels in the market, for example through low-carbon certification. A life cycle analysis has been conducted on one of our fields, and we hope to use this information to demonstrate transparency to the market on our low emissions profile. Cost of response to risk: - Lundin Energy anticipates costs of up to 200,000 USD/year for low-carbon certification based on current market prices for such services. - Lundin Energy anticipates costs of up to 50,000 USD/year to update our climate scenario modelling, based on previous costs paid for such services.

**Comment****Identifier**

Risk 3

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

Direct operations

**Risk type & Primary climate-related risk driver**

Reputation	Stigmatization of sector
------------	--------------------------

**Primary potential financial impact**

Decreased access to capital

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

An increasing number of the Company's lenders are factoring in ESG into lending criteria, such as through sustainability-linked loans, as well as factoring ESG into risk profile of companies. As such practices become increasingly commonplace, the Company may be expected to factor ESG metrics such as CO2 performance into financing contracts. For the Company specifically, we utilise liquidity facilities with various lenders, who are becoming increasingly aware of sustainability risks and building these risks into lending decisions. If we were to tie carbon performance to our existing credit facilities or new facilities in the future, improvements in our carbon emissions could trigger a partial cut in the overall interest rate payable. Conversely, an increase in our carbon emissions (for example if we were not able to electrify our assets in the future) could trigger a change in the interest rate in the opposite direction, increasing our debt repayments and ultimately, access to capital.

**Time horizon**

Medium-term

**Likelihood**

Unlikely

**Magnitude of impact**

Medium-low

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

800000

**Potential financial impact figure – maximum (currency)**

7800000

**Explanation of financial impact figure**

Approach used to calculate financial impact: Typical sustainability-linked loans tie between 2 and 20 basis points to achievement of ESG or carbon metrics. The financial impact figure is calculated by multiplying this range in basis points to our financial liabilities as at end 2019, in order to estimate the likely value at stake from our debt, due to potential links with our carbon performance if future financing contracts include a carbon performance KPI. Figures and assumptions used in the calculation: - Our financial liabilities as reported in our 2019 Annual Report at end 2019 were 3,888 million USD. - Assumption used is a range in basis points for a sustainability linked loan of between 2 and 20, applied to the full amount of debt. - Value at stake is therefore quantified as 0.0002% and 0.002% of total debt at end 2019. - This equals a potential financial impact range of 0.8 - 7.8 million USD per year.

**Cost of response to risk**

101000

**Description of response and explanation of cost calculation**

Lundin Energy's response to this risk is to: - Aim to build in ESG criteria (e.g. carbon intensity) into our debt refinancing to benefit from lower interest rates in future discussions with lenders. - Continue to monitor debt markets and proactively engage lenders on our low-carbon credentials, for example through one-to-one meetings with lenders. - Purchase market intelligence reports on sustainable finance trends and data for the oil and gas industry, from third party data providers and sources. Case study: - Lundin Energy is engaging in dialogue with our key lenders to explore the possibility of using sustainability-linked loans in the future. We could potentially reduce our costs of capital through meeting our carbon metrics or other KPIs. Cost of response to risk: - We anticipate spending up to 1,000 USD per year on third party market intelligence mentioned above, to help us respond to this risk. - The additional cost of studies and access to industry databases and analyses is approximately 100,000 USD per year.

**Comment****Identifier**

Risk 4

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

Direct operations

**Risk type & Primary climate-related risk driver**

Emerging regulation	Other, please specify (Lack of access to acreage)
---------------------	---

**Primary potential financial impact**

Decreased revenues due to reduced production capacity

**Climate risk type mapped to traditional financial services industry risk classification**

&lt;Not Applicable&gt;

**Company-specific description**

Exploration is an integrated and necessary part of all petroleum activities and a production license giving access to acreage covers all phases of petroleum activity, not merely connected to exploration, development or the production phase. As of December 31, 2019 Lundin Energy holds 90 licenses in Norway for a total acreage of 33,857 square kilometres for oil exploration activities. The Company could face reduced access to new acreage and altered development of proven resources in light of poor reputation on climate actions, and/or policy and legal restrictions. Access to new licenses and acreage and the development of new discoveries are vital to our business model, which focuses on organic growth through exploration, development and production of oil resources. For example, reduced access to new exploration acreage on the Norwegian Continental Shelf, combined with a potential lack of approval for the development of proven resources, could result in an inability to grow the Company due to lack of exploration opportunities. Lundin Energy's position as an ESG leader, with an ambitious Decarbonisation Strategy, means that we are likely to mitigate such risks better than others in the sector.

**Time horizon**

Medium-term

**Likelihood**

Very unlikely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

&lt;Not Applicable&gt;

**Potential financial impact figure – minimum (currency)**

10000000

**Potential financial impact figure – maximum (currency)**

40000000

**Explanation of financial impact figure**

Approach used to calculate financial impact: - To calculate the risk, the Company uses an assumption of one commercial discovery of a mid-size field production over a ten year period. - Mid-size field assumed to potentially produce 100 million barrels of oil equivalent (million boe) for the Company share. Figures and assumptions used in the calculations: - 100 million boe estimated value of 1,000 to 4,000 million USD for a 10 year period. - On an annual basis this equates to approximately 10 to 40 million USD of value at stake (profit), depending on the market conditions and oil price.

**Cost of response to risk**

1500000

**Description of response and explanation of cost calculation**

Lundin Energy's response to this risk is to: - Communicate need for energy / new fields - Be an active explorer and be prudent to minimise damage to reputation. There is additional scrutiny from external stakeholders (e.g. NGOs), and current non-Lundin targeted NGO actions and potential lawsuits may damage the oil and gas sector and thus affect the Company's reputation. - Continually engage with external stakeholders, including the Norwegian authorities, to communicate the Company's Decarbonisation Strategy and excellent sustainability profile. Case study: In Norway, the authorities award licenses to the oil companies based on the quality of the companies' application and their past performance, including their ability to operate in an energy efficient matter. In 2019, Lundin Energy carried out detailed engineering work to conclude on the modifications needed to fully electrify the Edvard Grieg platform. In addition, the production operations were further optimized to further minimize the greenhouse gas emissions from the Edvard Grieg platform. This included IR measurements to identify and reduce any diffuse methane emissions. The Norwegian authorities recognize Lundin Norway's greenhouse gas reducing efforts by consistently awarding the Company a high number of licenses in the various application rounds. Cost of response to risk: - The cost of mitigation includes up to 5 man-years annually from our organisation, including top management, working on these responses described above. - This includes campaigns and preparation of communication material to support stakeholder engagement.

**Comment**

The cost estimate for mitigation is attributable to stakeholder management, see above.

**Identifier**

Risk 5

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

Direct operations

**Risk type & Primary climate-related risk driver**

Technology	Transitioning to lower emissions technology
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**Primary potential financial impact**

Increased capital expenditures

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

Norwegian authorities and key stakeholders have staked out ambitious emission reduction targets for the Norwegian Oil and Gas Industry. Higher costs of decarbonisation (e.g. electrification) for future E&P activities is considered a potential risk. Emissions reduction targets of cutting 40% by 2030, and be near zero in 2050 is challenging. Through its Decarbonisation Strategy, Lundin Energy has established a goal of being carbon neutral by 2030, implying that all emerging fields and developments need to be near carbon neutral or include ambitious carbon negative offsetting mechanisms. Electrification is a key component of the Decarbonisation Strategy. We are already in the process of electrifying one of our key assets, Edvard Grieg, and another major asset, Johan Sverdrup, is already electrified using power from shore. However the cost of electrification for potential future assets (e.g. in the Barents Sea) depends on many factors, including geographic, technical and infrastructure barriers. Depending on the asset, CAPEX and OPEX profiles may increase the cost of production.

**Time horizon**

Long-term

**Likelihood**

Unlikely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

100000000

**Potential financial impact figure – maximum (currency)**

200000000

**Explanation of financial impact figure**

Approach used to calculate financial impact: - Technologies such as wind and energy storage, green hydrogen, etc. may be available for isolated assets but electrification costs would likely be higher in this scenario. - The financial impact of this risk relates to increased CAPEX for full electrification. The cost of electrification depends on many factors, including potential geographic, technical and infrastructure barriers. - The impact also relates to decarbonisation techniques, and OPEX for assets that cannot be directly electrified. Note: Financial impact above is calculated here is total CAPEX potentially needed for a field. Figures and assumptions used in the calculation: - Higher costs of decarbonisation (e.g. electrification) for future oil exploration & production activities up to 200 million USD (example taken from Edvard Grieg field electrification). - Low case estimated to be half this value (100 million USD).

**Cost of response to risk**

5000000

**Description of response and explanation of cost calculation**

Lundin Energy's response to this risk includes actions to: - Communicate the need for energy/new fields. - Stress testing the full portfolio. - Business analysis and asset management with carbon costs/electrification costs to be factored into new business planning. - Continue to participate in research and development efforts to support the Decarbonisation Strategy. Case study: - in 2019 Lundin Energy quantified the costs of electrifying our main asset (Edvard Grieg) and the potential costs of additional renewable energy capacity that would be needed to ensure all the electricity we consumed would be from renewable power. This analysis has helped us estimate potential future costs of ensuring low-carbon organic growth, and is built into our forward business planning process. Cost of response to risk - The cost of mitigation would involve 3 million USD per year for stakeholder management, business analysis and asset management. - It is estimated that 2 million USD per year for research and development funding would be required based on current spend.

**Comment**

Other potential financial impacts may include: - Additional costs due to highly ambitious and costly emission reduction targets for the Norwegian Oil and Gas Industry. - Increased OPEX for assets that cannot be directly electrified (1-3 million USD / year from 2023 onwards).

**Identifier**

Risk 6

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

Direct operations

**Risk type & Primary climate-related risk driver**

Acute physical	Increased severity and frequency of extreme weather events such as cyclones and floods
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**Primary potential financial impact**

Increased capital expenditures

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

Within acute physical climate change risks we consider the risk of changing weather, including an increased frequency and intensity of extreme weather related events (e.g. storms, hurricanes) which could cause damage to our assets. Most production fields today such as Edvard Grieg and Johan Sverdrup are state-of-the-art and developed to tolerate 100-year storms or equivalent, and should therefore be able to handle extreme weather conditions. It is still considered possible that storms or other extreme events may damage infrastructure and cause reduced production, increased costs, costly modifications or operational restrictions. For example, at a competitor's drilling rig in Norway, the rig was within regulations but not appropriate for stronger than anticipated storms. The COSL Innovator was hit by a wave of up to 30 meters, which smashed 11 windows on the middle deck and six windows on the lowest deck. The Windows sat at approximately 20-25 meters over the ocean surface. The wave height was unexpected and a lesson to learn for future design scenarios.

**Time horizon**

Medium-term

**Likelihood**

Unlikely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

10000000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

Approach used to calculate financial impact: - Severe weather events and the increase of their frequency will challenge the design and safety margins of existing facilities and vessels. The impact will be the cost of material damage and need for repairs, or need for modification of existing facilities and vessels caused by new regulations, standards or risk level. - Performance of the facilities and vessels may also be reduced, due to increase of waiting on weather times, due to longer and more frequent periods of bad weather. Potential additional financial impacts: - Increased costs due to 5 - 10 % increased downtime (Waiting on Weather, WOW) resulting in circa 5-10 million USD in annual value at stake. Note that the financial impact quantified here does not take into account potential injuries related to such severe weather events. Figures and assumptions used in the calculation: - Assumption of up to one-month downtime (in a worst-case scenario) with stop of production to perform repairs or modifications to an installation. For the purposes of this calculation, we assume that this event could potentially happen once in a 10 year period, costing up to 100 million USD per event. This impact includes total cost of the repair including production downtime, damage to and subsequent repairs of production facilities. This equates to approximately 10 million USD on an annualised basis.

**Cost of response to risk**

100000

**Description of response and explanation of cost calculation**

Lundin Energy's response to this risk is: - Monitor the evolution of weather patterns, the associated risks and evaluate the industry response. - Implement operational restrictions to maintain the safety levels of personnel, the environment and assets. - Repair and/or upgrade facilities and vessels to ensure robustness towards the new frequency and severity of weather events. Cost explanation: - Ongoing weather monitoring has an assumed cost of 100,000 USD per year. - Implementing operational restrictions will potentially have an impact of productive time, but those are extremely difficult to estimate due to the uncertainty of the changes in frequency and magnitude of those severe weather events.

**Comment**

Potential additional financial impacts: - Increased costs due to 5 - 10 % increased downtime (Waiting on Weather, WOW) resulting in circa 5-10 million USD in annual value at stake.

**Identifier**

Risk 7

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

Direct operations

**Risk type & Primary climate-related risk driver**

Reputation	Increased stakeholder concern or negative stakeholder feedback
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**Primary potential financial impact**

Decreased revenues due to reduced demand for products and services

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

Investors may see Lundin Energy as a higher risk investment given our carbon footprint and sector focus in oil and gas, potentially affecting market capitalisation in the longer term. Additional scrutiny from external stakeholders and current non-Lundin targeted NGO actions and potential lawsuits may damage the oil and gas sector, and thus indirectly affect Lundin Energy's reputation. Furthermore, some investors in the future may not be willing to invest in Lundin Energy due to reputational concerns on investing in fossil fuels. For Lundin Energy, we are managing this risk through our Decarbonisation Strategy, ensuring that we maintain top quartile ESG ratings and industry-leading carbon performance as well as low operating costs per barrel. Compared to our peers, we aim to maintain our reputation as a sustainable and responsible oil and gas producer, with low risk of stranded assets, thereby giving us a competitive advantage and being the investment of choice. We tend to outperform the benchmarks on our share price, which we believe is part due to our strong position explained above.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

&lt;Not Applicable&gt;

**Potential financial impact figure – minimum (currency)**

&lt;Not Applicable&gt;

**Potential financial impact figure – maximum (currency)**

&lt;Not Applicable&gt;

**Explanation of financial impact figure**

It is not possible to provide an exact financial impact figure for this risk, for the following reason: Market cap and share price fluctuate for many reasons, and it is not possible to isolate the specific impact from sustainability or climate change. However, research has shown that companies with strong carbon and ESG performance tend to outperform. Likewise, companies that experience a critical stakeholder issue (such as an oil spill) are very likely to see a share price impact. This type of impact may also apply in the case of lack of climate action or poor carbon emissions performance relative to peers. We believe that if unmitigated within the oil and gas industry, there is a longer term risk that our market cap and share price could be affected negatively if the industry does not act on climate change. Given that we have a strong Decarbonisation Strategy and target for carbon neutrality, we expect to mitigate this risk significantly.

**Cost of response to risk**

2100000

**Description of response and explanation of cost calculation**

Our response to this risk is to: - Continue focus on low emission and energy efficiency technology at Edvard Grieg. - Invest in industry collaboration related to low emission technologies, for example through the LowEmission Research Centre. - Complete ESG and carbon related disclosure reporting for example through the CDP, TCFD and for external ratings agencies like MSCI. - Continue active engagement of our shareholders through one-to-one meetings and roadshows Case study: Focus on investors is key to minimising risk. For example an investor, BlackRock, have publicly stated that they will be moving away from directly investing in arctic drilling projects and some insurers have stated that they no longer insure oil companies for certain liability insurance. Through regular investor engagement, Lundin Energy showcases how our decarbonisation strategy and low emissions profile can reduce long term risk for investors. Cost of response to risk: - The cost of mitigation includes 2 million USD/year for investments in R&D in 2019 to reduce greenhouse gas emissions, and 100,000 USD per year to manage ESG reporting each year. - This is an estimated total figure that includes costs for CDP Reporter Services, consultancy support for supporting external disclosure, and other third party costs, for example memberships to organisations such as the UN Global Compact.

**Comment****Identifier**

Risk 8

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

Direct operations

**Risk type & Primary climate-related risk driver**

Chronic physical	Changes in precipitation patterns and extreme variability in weather patterns
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**Primary potential financial impact**

Increased indirect (operating) costs

**Climate risk type mapped to traditional financial services industry risk classification**

&lt;Not Applicable&gt;

**Company-specific description**

Changes in global weather could affect the Company's exploration in the Barents Sea, where drilling rigs need to be specially designed for operations in cold climates. Chronic physical includes increased wave load, changes in sea level, temperature changes, changes in ice occurrences, or changes in ocean currents and maritime/fishing routes. Lundin Energy may thus need to modify installation structures and develop new evacuation and emergency response solutions. The safety risk and operating costs may increase. In extreme cases, operations may be stopped altogether (if the measures are not available to compensate for weather) and certain areas would not allow operations. In the long-term perspective the probability is reduced as technology and solutions are likely to be developed to meet faced challenges.

**Time horizon**

Long-term

**Likelihood**

Very likely

**Magnitude of impact**

Low

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

&lt;Not Applicable&gt;

**Potential financial impact figure – minimum (currency)**

&lt;Not Applicable&gt;

**Potential financial impact figure – maximum (currency)**

&lt;Not Applicable&gt;

**Explanation of financial impact figure**

Financial impacts would involve: - Increased costs in supply chain. - Increased operational costs.

**Cost of response to risk**

1000000

**Description of response and explanation of cost calculation**

Lundin Energy's response to this risk is: - Increased robustness to manage events including implementing operational restrictions to maintain the safety levels of personnel, the environment and assets. - Investing in new technology. Case study: - Changes in ice edge distribution in the Barents Sea, where we have exploration activities, and/or fish spawning areas along the Norwegian coastline are examples of such areas where the Company is concentrating its focus. Cost explanation: - The Company expect the cost of new technology to be estimated at 1 million USD.

**Comment**

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**Identifier**

Risk 9

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

Direct operations

**Risk type & Primary climate-related risk driver**

Legal	Exposure to litigation
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**Primary potential financial impact**

Other, please specify (Increased legal and reputational costs (decreasing share price value))

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

Climate related lawsuit(s) emerging on national or international arena could impact the Company finances and reputation. Legal challenges and claims to recompense climate related damage, illness and negative effects are already being observed around the world today. Lundin Energy may be affected specifically in Norway, where a climate related lawsuit relating to the sea-ice edge is currently being evaluated by the Supreme Court, as well as claims based on the oil and gas annual cash refund for exploration cost of companies in the exploration phase. In other jurisdictions, other similar lawsuits have been ruled in favour of the complainant to protect the environment and limit exposure to greenhouse gas emissions. Although considered unlikely to affect Lundin Energy at present, legal challenges may become more time-consuming, costly and may cause increased representational harm to the Company and wider industry in the future.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

Low

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

It is not possible to provide a financial impact figure for legal risks, due to the uncertainty of the risk and unknown impact on the Company specifically. In a qualitative sense, the financial impacts could be related to increased costs for legal counsel and punitive damages as well as reputational damage, which could also be felt through an impact on the share price and Lundin Energy's ESG Risk ratings.

**Cost of response to risk**

0

**Description of response and explanation of cost calculation**

Lundin Energy's response to this risk is to: - Closely monitor of climate-related cases in Norway. - Ensure continued dialogue/engagement with stakeholders in the Norwegian Government and Norwegian Oil and Gas Association. Case study: The Company conducts lessons-learned sessions and closely monitors legal challenges affecting Norway. Legal climate-related disputes could impact Lundin Energy's exploration in the Barents Sea or other costal and sensitive areas. The Company could face legal challenges with claims to recompense climate-related damage, illness and negative effects, all of which are already taking place in the global arena today. In Norway, NGOs (Bellona case) have filed climate related lawsuits relating to the sea-ice edge which are being evaluated by the Supreme Court. Other similar lawsuits have been ruled in favour of the complainant in other regions of the world. Cost of response to risk: - There is no cost to mitigate the risk as the above activities are already carried out regularly, as part of the normal business activity and stakeholder engagement approach.

**Comment**

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C2.4

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

Yes

C2.4a

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**(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.**

**Identifier**

Opp1

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Development and/or expansion of low emission goods and services

**Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

**Company-specific description**

Lundin Energy has an opportunity to strategically invest in new low-carbon and renewable energy sources as part of our Decarbonisation Strategy and goal to become carbon neutral. This enables us to both reduce our operational footprint, as well as generate good leveraged returns from new renewable energy projects. Lundin Energy's Decarbonisation Strategy includes a commitment to offset and replace 100% of the electricity we consume from shore by adding net new renewable energy capacity to the grid. To date, Lundin Energy has committed to invest in two renewable energy projects: The 132 MW Metsalaminkangas wind farm in central Finland, and the 77 MW Leikanger Hydropower Project in Norway.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

20000000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

Approach used to calculate financial impact: - The business case for the committed renewable energy projects (the Metsalaminkangas wind farm and the Leikanger Hydropower Project) takes into account project total net CAPEX of ca. 100 million USD and annual projected revenues from electricity sales, based on forward looking energy price projections. Figures and assumptions used in the calculation: - Estimated USD 20 million USD/year annualised net revenue possible from committed renewable energy projects. - Potential total net electricity generation capability of up to 300 GWh/year. - The underlying assumptions include projected electricity prices and value of Guarantees of Origin.

**Cost to realize opportunity**

100000000

**Strategy to realize opportunity and explanation of cost calculation**

Lundin Energy's strategy to realise the opportunity: - Invest strategically in future renewable projects in order to match electricity consumption from shore, reduce carbon emissions, support Lundin Energy's carbon neutral goal and provide a natural hedge against electricity prices. Case study: - Lundin Energy has made two renewables investments that generate good leveraged returns - the Metsalaminkangas wind farm and the Leikanger Hydropower Project, both of which when constructed will power 60% equivalent of our electricity consumption from shore. Cost calculation: - The CAPEX figure of 100 million USD is the estimated total net capex for Lundin Energy for the two above-mentioned projects, after farm-down of 50% of the cost.

**Comment**

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**Identifier**

Opp2

**Where in the value chain does the opportunity occur?**

Downstream

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Other, please specify (Low-carbon certification of products)

**Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

**Company-specific description**

An increased focus on CO2 per barrel and carbon certification could provide competitive advantage for Lundin Energy with regards to the downstream market. In order to curb carbon emissions in line with the Paris Agreement, and as per the IEA "Sustainable Development" scenario for example, the dominance of coal in the energy mix needs to be reduced dramatically. In this scenario, oil and gas (especially the latter) will start to become a preferable choice. Given that Lundin Energy produces crude oil at one of the lowest carbon intensities in the global oil and gas industry, it could become a supplier of choice for those companies purchasing energy which have a commitment to reduce their own carbon footprint through the value chain. Specifically for Lundin Energy, obtaining third-party certification of our products could potentially enable premiumisation of our barrels for buyers. We could look to obtain certification either at the field level where we are the operator (e.g. Edvard Grieg) or across all our producing assets.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

10000000

**Potential financial impact figure – maximum (currency)**

20000000

**Explanation of financial impact figure**

Approach used to calculate financial impact: Revenue uplift on certified low-carbon products in the oil and gas upstream business is not yet proven. However, given the increased focus on supply chain decarbonisation of end users (e.g. refiners, consumers, etc.) it may be possible to command a small premium (between 0.5% and 1 % for example) on the price of our barrels, given our Decarbonisation Strategy and industry-leading carbon performance of 5.4 kg CO<sub>2</sub>/boe in 2019. Figures and assumptions used in the calculation: - Our revenues for 2019 were 2,159 million USD. - We have assumed a small premium possible for low-carbon certified barrels of 0.5-1%. - This equates to a revenue uplift of approx. 10-20 million USD.

**Cost to realize opportunity**

200000

**Strategy to realize opportunity and explanation of cost calculation**

Lundin Energy's strategy to realise the opportunity: - Discuss the certification opportunity with buyers and investors to determine potential appetite for premiumisation. Case study: - Lundin Energy has been actively exploring opportunities to differentiate our barrels in the market, for example through low-carbon certification. A life cycle analysis has been conducted on one of our fields, and we hope to use this information to demonstrate transparency to the market on our low emissions profile. Cost calculation: - The figure of 200,000 USD/year is an upper estimated figure from third party carbon certification agencies, in line with the current cost trends for carbon life cycle certification. This was obtained from various market research.

**Comment**

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**Identifier**

Opp3

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Resource efficiency

**Primary climate-related opportunity driver**

Use of more efficient production and distribution processes

**Primary potential financial impact**

Reduced direct costs

**Company-specific description**

As an operator on the Norwegian Continental Shelf, the participation in the EU-ETS scheme as well as the Norwegian CO<sub>2</sub>-tax regime, is compulsory. These measures make selected energy and emission reduction initiatives highly cost beneficial. As a response to these mechanisms, the Edvard Grieg Field on the Norwegian Continental Shelf has developed ambitious energy management plans, as well as a strict flaring strategy in order to reduce energy consumption, avoid excessive flaring and reduce emissions. Furthermore, with our suppliers, Lundin Energy has developed ambitious fuel and emission incentive plans towards rigs and supply vessels.

**Time horizon**

Short-term

**Likelihood**

Very likely

**Magnitude of impact**

Low

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

0

**Potential financial impact figure – maximum (currency)**

750000

**Explanation of financial impact figure**

Approach used to calculate financial impact: - Reduced cost of EU-ETS emission allowances, CO<sub>2</sub>-tax and increased gas sales. Figures and assumptions used in the calculation: - The Edvard Grieg Energy Management committee has ambitions of identifying and implementing emissions reductions equivalent to more than 1% of annual emissions. - Up to now, the average emissions reduction has been in the order of 1-5 %. Annual CO<sub>2</sub>-tax, and EU ETS quota costs are currently in the order of 15 million USD annually. 5% of this amount accounts for 750,000 USD per year. - The range in financial impact is from 0 to 750,000 USD per year, given that annual emission reduction opportunities vary each year.

**Cost to realize opportunity**

100000

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#### Strategy to realize opportunity and explanation of cost calculation

Lundin Energy's strategy to realise the opportunity: - Maintain efficient energy management processes in existing facilities. - Develop fuel and emission incentive plans for rigs and vessels. - Implement power and energy management software and systems, training and campaigns. - Continue flaring strategy. - Continue ambitious fuel and emission incentive plans towards rig and vessel contractors. Case study: - As part of the Edvard Grieg Field Energy Management and Flaring Strategy and measures to obtain annual flaring reductions, Lundin Energy implemented a flaring reduction initiative that reduced emissions by 2600 tCO<sub>2</sub> in 2019. - With our offshore special purpose vessel contractors, we put in place a requirement to maintain "eco-speed" during transit, optimized for fuel consumption. Going beyond the eco-speed requires a written confirmation. In addition, with the rigs contracted, we have initiated an incentive program. Lundin Energy seeks a credit against the day-rate for the amount of fuel supplied, and the Contractor has an incentive to save fuel and CO<sub>2</sub> emissions in order to minimize the credit. This is different from industry practice where traditionally fuel is reimbursed at cost regardless of volume. This measure is included in the contract with the West Bollsta rig in Norway. Cost calculation: - Implementing and of energy management processes, cost of maintaining power and energy management software and systems is estimated to cost 100,000 USD annually.

#### Comment

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#### Identifier

Opp4

#### Where in the value chain does the opportunity occur?

Direct operations

#### Opportunity type

Energy source

#### Primary climate-related opportunity driver

Use of lower-emission sources of energy

#### Primary potential financial impact

Reduced direct costs

#### Company-specific description

Lundin Energy's operations are located in Norway, a country with emission reduction targets above, or in line with, the EU climate policy. Lundin Energy's own operated assets on the Norwegian Continental Shelf, the Edvard Grieg platform, and our largest development project to date, the two phase development of the Johan Sverdrup field, both have integrated energy efficiency measures and will in 2022 be ready to receive power from shore through electrification. Electrification in particular creates a significant opportunity to not only improve our reputation by reducing carbon emissions significantly in our operations, but to enable cost savings from e.g. fuel consumed and carbon taxes paid.

#### Time horizon

Short-term

#### Likelihood

Very likely

#### Magnitude of impact

Medium

#### Are you able to provide a potential financial impact figure?

Yes, an estimated range

#### Potential financial impact figure (currency)

<Not Applicable>

#### Potential financial impact figure – minimum (currency)

10000000

#### Potential financial impact figure – maximum (currency)

15000000

#### Explanation of financial impact figure

Approach used to calculate financial impact: Full electrification of our Edvard Grieg asset includes a range of financial benefits, including but not limited to: - Carbon tax savings. - Fuel use savings. - Additional gas sales. - Lower operating and maintenance costs. - Improved production efficiency. Figures and assumptions used in the calculation: - Future carbon price forecasts (for both EUAs and Norway Carbon Tax costs) ranging from 20 USD/tonne CO<sub>2</sub> through to 100 USD/tonne CO<sub>2</sub>. - Carbon savings in the range of 3.6 million tonnes CO<sub>2</sub> from 2022 to end of field life. - Existing costs of fuel consumption. - Potential gas sales price (based on internal projections). - Assumptions on a percentage reduction in downtime. - 2% improvement in production efficiency.

#### Cost to realize opportunity

167000000

#### Strategy to realize opportunity and explanation of cost calculation

Lundin Energy's strategy to realise the opportunity: - Integrating energy source evaluation in the investment decision process. Case study: - Lundin Energy is modifying our Edvard Grieg asset to receive and use power from shore. This will enable us to realize the benefits outlined above, alongside reducing emissions significantly from the asset. Cost calculation: - The 167 million USD relates to the total approximate net CAPEX investment required to electrify Edvard Grieg.

#### Comment

Lundin Energy's main expenditure will occur in 2021-2022. There is a degree of uncertainty in the cost element.

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#### Identifier

Opp5

#### Where in the value chain does the opportunity occur?

Direct operations

#### Opportunity type

Resilience

#### Primary climate-related opportunity driver

Other, please specify (Better competitive positioning)

#### Primary potential financial impact

Other, please specify (Improvement in market capitalisation)

**Company-specific description**

Action on climate change, industry-leading carbon intensity and a strong ESG profile reduces our risk return ratio from an investor perspective. This can improve Lundin Energy's competitive positioning in the sector and attract more investment. An example of our actions to realise this competitive advantage is our industry-leading low carbon intensity (5.4 kgCO<sub>2</sub>/boe in 2019). Continued opportunities to decarbonise, for example through investment in electrification of our assets, to reach carbon neutrality, will further improve our competitive advantage in the future.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

This opportunity would likely impact our market capitalisation through increased long-term share price performance versus benchmark. In the past we have seen and continue to see our share price beat the benchmark, and we anticipate this to continue due to our commercial success as a company and our industry leading position on decarbonisation. However, it is not possible to quantify the impact that our Decarbonisation Strategy has or will have on our share price and market cap, due to the range of factors included, and complexity of analysis required.

**Cost to realize opportunity**

750000000

**Strategy to realize opportunity and explanation of cost calculation**

Lundin Energy's strategy to realise the opportunity: - Continued delivery on the Decarbonisation Strategy, with a ca. 750 million USD combined CAPEX investment/commitment on electrification and renewables. Cost calculation: - The CAPEX figure of ca. 750 million USD covers both our investments to electrify our assets and renewable energy projects.

**Comment**

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### C3. Business Strategy

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#### C3.1

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**(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?**

Yes, and we have developed a low-carbon transition plan

#### C3.1a

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**(C3.1a) Does your organization use climate-related scenario analysis to inform its strategy?**

Yes, qualitative and quantitative

#### C3.1b

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**(C3.1b) Provide details of your organization’s use of climate-related scenario analysis.**

Climate-related scenarios and models applied	Details
IEA Sustainable development scenario IEA NPS	Lundin Energy’s approach: Lundin Energy is extending our existing scenario analysis to include the IEA Sustainable Development Scenario (SDS) and Stated/New Policies Scenario (NPS), in line with the recommendations of the TCFD. We have identified these particular scenarios based on the fact that they are commonly used by our peers in the industry and therefore will help investors and other stakeholders compare our resilience on a like-for-like basis to other companies. When conducting business planning, our analytical method is to model output metrics including EBITDA, opex per barrel, Free Cash Flow and break-even oil prices, under a range of oil price scenarios. When conducting this scenario analysis, we are able to additionally assess the company’s resilience under these metrics, under the IEA SDS and NPS oil price scenarios, which tend to be on the higher end of the scenarios that we consider. Furthermore, we consider a range of carbon price scenario assumptions from external third parties such as the IEA on the EUA price, and the carbon tax from the Norwegian authorities, and build these into our forward business planning to assess impact of these carbon costs on the above-mentioned financial metrics. Our core analytical test is whether our breakeven oil price for the full portfolio is under the IEA’s long term oil price in the Sustainable Development Scenario. We conduct scenario analysis over a long-term time horizon, through to 2030-2040. This time frame is relevant to our organization because it is in line with the life of our producing assets and our carbon neutral goal for 2030. All our operated and non-operated assets in Norway are considered in the scenario analysis. Results: Lundin Energy’s results show that our breakeven oil price for our full operated and non-operated portfolio is well below the IEA SDS oil price scenario. This reflects our very low operating costs of US\$4.03 per barrel in 2019, and the fact that we can therefore maintain resilience under lower oil price scenarios. Our forward-looking business strategy considers our opex per barrel and breakeven oil price as we explore and develop new assets. We continually assess whether these metrics are in line with the IEA’s SDS oil price scenario through ongoing modelling of our cost base. Being one of the most efficient operators in the world, while we continue to benchmark our performance compared to oil price scenarios such as the IEA SDS, we find that we continue to be in a very strong position in terms of resilience to potentially lower future oil prices and increased carbon taxes. Case study: Lundin Energy conducted an analysis of carbon cost scenarios from future EUA and Norway Carbon Tax assumptions. The analysis showed how, through electrification of our core assets, we are able to reduce emissions, and ultimately the cost per barrel. This has influenced our business strategy to continue electrifying our key assets and focusing on other emission reduction projects such as energy efficiency and flaring reduction.

**C3.1d**

**(C3.1d) Describe where and how climate-related risks and opportunities have influenced your strategy.**

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Climate change is a material issue for the oil and gas sector. For Lundin Energy specifically, climate change impacts our business from a physical perspective, as well as a market and reputational perspective in terms of our products. Lundin Energy recognizes the need to decarbonise industry in order to meet the Paris Agreement objectives. At the same time, oil and gas will continue to play an important role in the energy mix over the next few decades, in line with the IEA’s Sustainable Development Scenario. In order to respond to climate risks and opportunities, Lundin Energy has formalised its Decarbonisation Strategy which sets a target for carbon neutrality by 2030. The strategy sets out our commitment to support and implement innovative ways to further reduce our exploration and production related carbon footprint to the lowest possible level, delivering the market with a cleaner barrel. The Decarbonisation Strategy strengthens Lundin Energy’s position as one of the most sustainable oil companies providing the best barrel in the world: safe, responsible, low cost and low emissions. At present, Lundin Energy produces its barrels at circa a quarter of the world average in terms of carbon intensity, with 5.4 kg of CO2 per barrel of oil equivalent (boe) in 2019. Our Decarbonisation Strategy will have a significant impact over the next 2-3 years, for example through electrification of our Edvard Grieg asset, which will bring our net carbon intensity down to <2 kg CO2 per boe by 2023. The decision to electrify this asset was approved by the Board in 2015, and this 500 million USD investment is just one example of a strategic decision made by the Company to integrate climate change risks into our forward strategy.
Supply chain and/or value chain	Yes	As we continue to decarbonise our direct operations, an increasing portion of our remaining residual emissions fall under our supply chain – such as tankers, vessels and other transport. These emissions pose a risk to the sector, and also need to be managed. Lundin Energy can influence our contractors and suppliers, helping them to decarbonise. Therefore, Lundin Energy’s carbon neutral goal for 2030 also includes these emissions, which are considered Scope 3 sources. For any such supply chain emissions that cannot be reduced by 2030, Lundin Energy will aim to offset these through natural carbon capture mechanisms. Our strategy is to work with our supply chain to engage, help decarbonise and influence through showcasing best practices. Lundin Energy’s Contractor Declaration is an example of our strategy in action. The Contractor Declaration is essential element in the Company’s approach to selection of contractors, suppliers and other business partners. The Declaration establishes contractors’ commitment to work in accordance with certain principles adhered to by Lundin Energy, namely principles concerning the environment. Any violation of the Code or policies therein is subject to an inquiry and appropriate remedial measures. Lundin Energy recognises the importance of contractors’ performance in matters related to sustainability, and the Declaration seeks to increase awareness of sustainability, including climate change, among its contractors. In particular, contractors must work to achieve energy efficiency and minimise harmful discharges, emissions and waste production from a life-cycle perspective.
Investment in R&D	Yes	Our long-term strategy includes R&D as a core pillar to supporting our effort to decarbonise our business. Our Environmental Strategy includes a target for 30% of our R&D budget to be allocated to the environment each year. The Company is taking part in climate related industry collaboration, namely through its contribution to the Roadmap for the Norwegian Continental Shelf (NCS) which seeks to achieve value creation and reduced greenhouse gas emissions on the NCS towards 2030 and 2050, as well as through supporting the Research Centre for a LowEmission Petroleum Industry on the NCS. The Company also funds and is on the board of the Norwegian Carbon Capture and Storage Research Centre (NCCS). Through its partnership with the Lundin Foundation, Lundin Energy also supports the growth of innovative start-ups tackling climate change, for example, by supporting the Norwegian company, Evoy, to scale up manufacture and use of electric marine propulsion systems.
Operations	Yes	Our operations currently comprise the majority of our carbon footprint and decarbonising our operations is core to the Company’s Decarbonisation Strategy. This minimizes risk by reducing operating costs, improving our reputation and strengthening our long-term competitive position in the sector. Examples of substantive decisions made to respond to climate change impacts in our operations includes the following: - As part of our phased Decarbonisation Strategy, our strategic approach will be achieved through electrification of our producing fields, thereby achieving a carbon intensity of < 2 kg CO2 per boe by 2023. - The Company will invest in renewable energy projects to match our net electricity consumption with new renewable energy generation. - The Company takes into account a carbon price to ensure that investment decisions and future business planning takes into account carbon cost projections. - The sourcing of high quality carbon offsets, such as natural carbon capture, help compensate for any residual emissions across the Company’s operations that cannot be fully eliminated within its operations, in order to achieve carbon neutrality by 2030.

**C3.1e**

**(C3.1e) Describe where and how climate-related risks and opportunities have influenced your financial planning.**

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Capital expenditures Access to capital Assets	The impact of climate change risks and opportunities are integrated into our financial planning. Our Asset Business Planning process, which is conducted three times each year, builds in assumptions around our direct costs and revenues that may be impacted by climate change. For example, this process includes future price projections of carbon costs (e.g. Norway carbon tax and EUA quota prices), in order for the Company to determine the direct cost (or potential savings) from different asset profiles. In practice, this enables the Company to quantify the impact on metrics such as Free Cash Flow and EBITDA from climate-related investments, such as energy efficiency, electrification, renewable energy or other initiatives. Our Asset Business Planning process covers a long-term time horizon, through to 2030 onwards, and enables the creation of dynamic scenarios which can help us stress-test our portfolio and financials against low and high case assumptions (such as low and high carbon prices, or low and high oil prices based on IEA scenarios). The outputs from the process enable us to communicate our commercial resilience and strength to the market under a reasonable range of scenarios, which is of core interest to our current and future potential investors.

**C3.1f**

**(C3.1f) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).**

**C4. Targets and performance**

**C4.1**

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

Both absolute and intensity targets

**C4.1a**

**(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.**

**Target reference number**

Abs 1

**Year target was set**

2019

**Target coverage**

Company-wide

**Scope(s) (or Scope 3 category)**

Scope 1+2 (location-based) +3 (upstream)

**Base year**

2019

**Covered emissions in base year (metric tons CO2e)**

217085

**Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)**

100

**Target year**

2030

**Targeted reduction from base year (%)**

100

**Covered emissions in target year (metric tons CO2e) [auto-calculated]**

0

**Covered emissions in reporting year (metric tons CO2e)**

217085

**% of target achieved [auto-calculated]**

0

**Target status in reporting year**

New

**Is this a science-based target?**

No, but we anticipate setting one in the next 2 years

**Please explain (including target coverage)**

Lundin Energy has set a target of carbon neutrality by 2030 on a net equity share basis, across Scope 1 and 2 emissions, and Scope 3 emissions related to our operations (travel and logistics, supply vessels and tankers). Our approach to reach this carbon neutral goal is through our Decarbonisation Strategy, which prioritizes absolute emission reductions through electrification and renewable energy investments, as well as greenhouse gas removals.

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**C4.1b**

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**(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).**

**Target reference number**

Int 1

**Year target was set**

2017

**Target coverage**

Company-wide

**Scope(s) (or Scope 3 category)**

Scope 1+2 (location-based)

**Intensity metric**

Metric tons CO2e per barrel of oil equivalent (BOE)

**Base year**

2017

**Intensity figure in base year (metric tons CO2e per unit of activity)**

5.3

**% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure**

100

**Target year**

2023

**Targeted reduction from base year (%)**

62

**Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]**

2.014

**% change anticipated in absolute Scope 1+2 emissions**

42

**% change anticipated in absolute Scope 3 emissions**

0

**Intensity figure in reporting year (metric tons CO2e per unit of activity)**

5.1

**% of target achieved [auto-calculated]**

6.08642726719416

**Target status in reporting year**

Revised

**Is this a science-based target?**

No, but we anticipate setting one in the next 2 years

**Please explain (including target coverage)**

We have set a CO2 intensity target of 2 kg CO2/boe across Scope 1 and 2 emissions by 2023, on a net equity share basis across all operated and non-operated assets, including emissions from drilling. This target was revised down from 10 kg CO2/boe in 2019 to reflect our new Decarbonisation Strategy, and also reflects our switch to a net equity share basis instead of a 100% operated basis for our intensity target. The target was originally set in 2017, when our carbon intensity was 5.3 kg CO2/boe. In 2019, our performance was 5.1 kg CO2/boe. By 2023, we aim to reach our target of 2 kg CO2/boe, equivalent to an absolute reduction in emissions of over 40% across Scopes 1 and 2 over the 6 year target period (2017-2023).

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**C4.2**

**(C4.2) Did you have any other climate-related targets that were active in the reporting year?**

Target(s) to reduce methane emissions

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**C4.2b**

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**(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.**

**Target reference number**

Oth 1

**Year target was set**

2017

**Target coverage**

Company-wide

**Target type: absolute or intensity**

Intensity

**Target type: category & Metric (target numerator if reporting an intensity target)**

Methane reduction target	Total methane emissions in m3
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**Target denominator (intensity targets only)**

Other, please specify (Total gas put onto the market (m3))

**Base year**

2017

**Figure or percentage in base year**

0.01

**Target year**

2030

**Figure or percentage in target year**

0.2

**Figure or percentage in reporting year**

0.019

**% of target achieved [auto-calculated]**

4.73684210526316

**Target status in reporting year**

Underway

**Is this target part of an emissions target?**

This is a separate emissions target for methane intensity. We have set a long-term methane intensity target of 0.2%. Our performance in the reporting year was 0.019 %, and thus well under this target already.

**Is this target part of an overarching initiative?**

Other, please specify (Norwegian Oil and Gas Roadmap)

**Please explain (including target coverage)**

The Norwegian Oil and Gas Roadmap defines the need for methane reduction measures. The annual emissions from Lundin Energy Norway's activities are well below the national averages and within the annual target. Our methane emissions in the reporting year were 198.8 tonnes.

**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	0	0
To be implemented*	1	1937
Implementation commenced*	2	216381
Implemented*	3	2616
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 category & Initiative type**

Energy efficiency in production processes	Other, please specify (Flaring reduction)
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**Estimated annual CO2e savings (metric tonnes CO2e)**

2600

**Scope(s)**

Scope 1

**Voluntary/Mandatory**

Mandatory

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

150000

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

100000

**Payback period**

<1 year

**Estimated lifetime of the initiative**

21-30 years

**Comment**

Part of Edvard Grieg Field Energy Management and Flaring Strategy and measures to obtain annual flaring reductions. The estimated savings are only the commitments from the energy management committee, and are very conservative.

**Initiative category & Initiative type**

Fugitive emissions reductions	Oil/natural gas methane leak capture/prevention
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**Estimated annual CO2e savings (metric tonnes CO2e)**

10

**Scope(s)**

Scope 1

**Voluntary/Mandatory**

Voluntary

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

3000

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

6250

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

21-30 years

**Comment**

Part of Edvard Grieg field infrared monitoring and leak detection strategy to reduce fugitive methane emissions.

**Initiative category & Initiative type**

Low-carbon energy generation	Solar PV
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**Estimated annual CO2e savings (metric tonnes CO2e)**

6

**Scope(s)**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

6000

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

50000

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

We produce solar energy from a roof PV installation on our Corporate office in Switzerland.

C4.3c

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

Method	Comment
Internal incentives/recognition programs	Group management have a portion of variable pay linked to achievement of the Company's carbon targets. Furthermore, the Company audits the Sustainability management on a yearly basis in its operations. As climate change is one of the issues reported on, there is a recognition of activities which result in a positive impact on emission reductions.
Compliance with regulatory requirements/standards	Norway represents the majority of the Company's business. The regulatory regime is strict and there is a commitment in Norway to reduce emissions locally by 40% as per Paris commitment. The Company is in full compliance with the CO2 tax, NOx tax and the CO2 quota regime. In addition, through our participation in NOROG's Road Map initiative, we are committed to assist the government in fulfilling its 40% reduction commitment and have adopted a Decarbonisation Strategy which includes a goal of carbon neutrality by 2030.
Dedicated budget for energy efficiency	A dedicated energy management task force has been established for the Edvard Grieg platform. This task force follows up Lundin Energy's energy management policy, identifies energy reduction measures, and is mandated with a budget and authority for implementing identified measures.
Dedicated budget for other emissions reduction activities	Fugitive methane emissions are regularly measured annually on the Edvard Grieg platform. Furthermore, all drilling related NOx emissions are regularly measured and followed up. By 'regularly' we mean that all new rigs coming into operation for Lundin shall have regulatory approved NOx measurements performed. These are by Norwegian authorities considered valid until any changes are made to the engine configuration. Any such changes will trigger a new NOx measurement.

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.**

At Lundin Energy we have closed flare during normal operations thus virtually eliminating methane emissions during normal operations at Edvard Grieg. In addition we have taken a number of steps to reduce fugitive emissions, for example monitoring of fugitive emissions with an infrared camera on our Edvard Grieg platform as well as during formation testing, adopting processes for improved combustion efficiency during well testing and eliminating fugitive emissions as far as practicable.

C-OG4.7

**(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.**

We conduct an annual infrared inspection of the Edvard Grieg process facilities and when conducting extended well tests. The inspection is carried out by a third party contractor in order to ascertain the existence of methane leaks and means to address them. Insofar as Edvard Grieg is a new facility and has a thorough maintenance program in place, no material leaks were found. We continue to carry out regular infrared campaigns to detect fugitive flaring which indicate that results show such fugitive emissions are below industry level and considered not material.

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.**

Flaring (non-routine) is relevant to our operations insofar as it constitutes around 10-20 % of our total CO2 emissions. Flaring has been strictly regulated in Norway since the start of oil production in the seventies. Flaring is in general prohibited and is only allowed for safety reasons and in conjunction with start-up of activities. The Edvard Grieg platform has been designed with a closed flare system to minimise flaring and emissions. The platform has established a flaring strategy, describing relevant requirements and routines to minimize flaring. The main measures to reduce flaring and eliminate emissions are: Fine tuning of well start-ups, establishing criteria for reduced production during upsets in production or other situations (compressor trips, export line obstacles, gas injection problems, etc.) that may necessitate flaring.

Lundin Energy adopts a fugitive emissions and cold venting target that is in line with the set limits as per the national authority's requirements in Norway. This target is set at < 150 tonnes of methane, and in 2019 we met this target as we only emitted 118 tonnes methane. Reducing flaring is already covered in our carbon intensity of target <2 kg CO2/boe by 2023. In 2019 Lundin Energy stayed well below the permitted emission levels, flaring 54% of the permitted gas levels. The emissions were reduced by 8,000 tonnes CO2 compared to 2018, and reduced by more than 60,000 tonnes since the peak year (2016).

## C5. Emissions methodology

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### C5.1

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

##### Scope 1

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)**

331275

**Comment**

The data here shown is on a 100% operated basis

##### Scope 2 (location-based)

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)**

37

**Comment**

The data here shown is on a 100% operated basis. The data here shown here relates to our office-related emissions.

##### Scope 2 (market-based)

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)**

37

**Comment**

Our emissions factor for Scope 2 emissions for location and market based emissions is the currently same in the base year.

### C5.2

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

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

The Greenhouse Gas Protocol: Scope 2 Guidance

US EPA Center for Corporate Climate Leadership: Direct Emissions from Stationary Combustion Sources

US EPA Center for Corporate Climate Leadership: Direct Emissions from Mobile Combustion Sources

## C6. Emissions data

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### C6.1

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#### (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)**

299567

**Start date**

<Not Applicable>

**End date**

<Not Applicable>

**Comment**

Derived from the following CO2 emissions: 275,217 tonnes CO2 (Edvard Grieg field), 1,041 tonnes CO2 (Solveig field), 18,339 tonnes CO2 (Exploration drilling, incl. formation testing) and the following CH4 emissions: 197.8 tonnes (Edvard Grieg field) + 1.0 tonnes (Exploration Drilling).

## C6.2

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

#### Row 1

##### Scope 2, location-based

We are reporting a Scope 2, location-based figure

##### Scope 2, market-based

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

##### Comment

The Company reports Scope 2 emissions using the location-based method as we are not able to access supplier emission factors or the residual emissions factors for our office electricity consumption.

## C6.3

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

#### Reporting year

##### Scope 2, location-based

35.3

##### Scope 2, market-based (if applicable)

<Not Applicable>

##### Start date

<Not Applicable>

##### End date

<Not Applicable>

##### Comment

The Office electricity consumption in 2019 was 1,866,397 kWh. The annual location-based emission factor was 18.9 g CO2/kWh. The office electricity in Switzerland is sourced from in-house solar panels installed on the office roof, and is complemented by green certified, locally sourced electricity (local ecological hydropower).

## C6.4

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### (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 gross global Scope 3 emissions, disclosing and explaining any exclusions.

#### Purchased goods and services

##### Evaluation status

Not relevant, explanation provided

##### Metric tonnes CO2e

<Not Applicable>

##### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

##### Please explain

There are no significant goods and services that are not accounted for already. Therefore, 0 emissions associated with this Scope 3 category.

## Capital goods

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

We have no capital goods that are relevant for emission purposes. Therefore, 0 emissions associated with this Scope 3 category.

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

### Evaluation status

Relevant, calculated

### Metric tonnes CO<sub>2</sub>e

22466

### Emissions calculation methodology

Norwegian national standard factors for fuels have been applied.

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

100

### Please explain

These emissions are the sum of helicopter transport from shore to offshore installations (1,416 tonnes CO<sub>2</sub>) and fuel consumption on supply and stand-by vessels (21,050 tonnes CO<sub>2</sub>). All registered vessels and helicopters on hire for us have been accounted for.

## Upstream transportation and distribution

### Evaluation status

Relevant, calculated

### Metric tonnes CO<sub>2</sub>e

5353

### Emissions calculation methodology

Norwegian national standard factors for fuels have been applied.

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

100

### Please explain

This is the sum of emissions reported from oil tankers carrying products from shipment ports in Norway to customer under Lundin Energy responsibility.

## Waste generated in operations

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

Waste emissions are insignificant (<0.1%) in the context of our Scope 3 emissions, and thus not relevant to our organisation. We generate very little waste in our operations and the vast majority is recovered and/or recycled. Therefore, 0 emissions associated with this Scope 3 category.

## Business travel

### Evaluation status

Relevant, calculated

### Metric tonnes CO<sub>2</sub>e

1234

### Emissions calculation methodology

Reported by the various travel agencies, based on industry standards

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

100

### Please explain

All our corporate travel agencies report air travel emissions annually.

## Employee commuting

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

Commuting emissions are insignificant in the context of our Scope 3 emissions, and thus we do not consider them relevant to our organisation. The total emissions from these activities are expected to be less than 0.1 % of the total Scope 3 emissions. Furthermore, any emissions from fuel combustion due to employee commuting would already be accounted for in "use of sold products", to avoid double counting (as per IPIECA's Scope 3 Accounting Guidelines). Note that commuting from home to the offshore installation, is included under "business travel" and "fuel and energy related activities".

## Upstream leased assets

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

We have no upstream leased assets. Therefore, 0 emissions associated with this Scope 3 category.

## Downstream transportation and distribution

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

Lundin Energy does not have downstream operations. Any emissions from fuel combustion due to transport of our products downstream are already accounted for in "use of sold products", to avoid double counting (as per IPIECA's Scope 3 Accounting Guidelines). Therefore, 0 emissions associated with this Scope 3 category.

## Processing of sold products

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

Lundin Energy sells crude oil, hence this is not relevant for us. Any emissions from fuel combustion due to processing and refining of our products downstream are already accounted for in "use of sold products", to avoid double counting (as per IPIECA's Scope 3 Accounting Guidelines). Therefore, 0 emissions associated with this Scope 3 category.

## Use of sold products

### Evaluation status

Relevant, calculated

### Metric tonnes CO2e

12602146

### Emissions calculation methodology

National emission factors (Norwegian regulations, EU ETS guidelines).

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

32

### Please explain

68% of our net product sales come from our Edvard Grieg field, the remaining 32% are non-operated assets where Lundin Energy owns a share. Emissions from our net sales of hydrocarbons by end users have been estimated using national emission factors for oil and natural gas. The fractions of hydrocarbons combusted is based on a national inventory report (Endrava, 2019), where 86% of oil and 97% of natural gas is assumed combusted for energy utilisation. Note that our Scope 3 emissions are based on emissions from all our net sales volumes, i.e. including our sales from Lundin Energy non-operated assets.

## End of life treatment of sold products

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

This category of emissions is not relevant for the produce we sell (crude oil and gas). Any emissions from fuel combustion due to end of life treatment are already accounted for in "use of sold products", to avoid double counting (as per IPIECA's Scope 3 Accounting Guidelines). Therefore, 0 emissions associated with this Scope 3 category.

## Downstream leased assets

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

We have no downstream leased assets. Therefore, 0 emissions associated with this Scope 3 category.

## Franchises

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

We have no franchises. Therefore, 0 emissions associated with this Scope 3 category.

## Investments

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

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

<Not Applicable>

### Please explain

We have no relevant investments that generate emissions. Therefore, 0 emissions associated with this Scope 3 category.

**Other (upstream)**

**Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

All upstream assets and emission sources of relevance have been mapped and provided. Therefore, 0 emissions associated with this Scope 3 category.

**Other (downstream)**

**Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

Lundin Energy has no downstream assets. Therefore, 0 emissions associated with this Scope 3 category.

C6.7

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**(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?**

No

C6.10

---

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

**Intensity figure**

5.1

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

299603

**Metric denominator**

barrel of oil equivalent (BOE)

**Metric denominator: Unit total**

57589000

**Scope 2 figure used**

Location-based

**% change from previous year**

23

**Direction of change**

Decreased

**Reason for change**

The reason for change in emission intensity is primarily due to (a) reduced exploration and appraisal activity, and (b) energy efficiency and flaring reduction (see emission reduction initiative described in question 4.3b). The overall emissions from our gross production activity was reduced by 3% (6,635 tonnes CO2e) from 2018 to 2019, mainly due to energy efficiency, flaring reduction and normalisation of operations. Emissions from exploration and production drilling activity was reduced with 80,000 tonnes CO2e compared to 2018. The main contributor to these reductions are the number of exploration wells (reduced from 5 wells drilled in 2018 to 3 wells drilled in 2019), reduced formation testing (reduced from 57,000 tonnes CO2 emitted in 2018 to 85 tonnes CO2 emitted from formation tests in 2019), and no production drilling in 2019.

---

**Intensity figure**

0.000102

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

299603

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

2948700000

**Scope 2 figure used**

Location-based

**% change from previous year**

32

**Direction of change**

Decreased

**Reason for change**

Our gross emission intensity, measured against the total revenue, was reduced from 150g CO2/USD to 102g CO2/USD. Revenue increased with approx 10% from 2018 to 2019 while our gross emissions were reduced by 25% (reasons for this described above i.e. emission reduction initiatives and reduced activities).

---

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 (barrel oil equivalent)

**Metric tons CO2e from hydrocarbon category per unit specified**

5.1

**% change from previous year**

23

**Direction of change**

Decreased

**Reason for change**

The reason for change in emission intensity is primarily due to (a) reduced exploration and appraisal activity, and (b) energy efficiency and flaring reduction (see emission reduction initiative described in question 4.3b). The overall emissions from our gross production activity was reduced by 3% (6,635 tonnes CO2e) from 2018 to 2019, mainly due to energy efficiency, flaring reduction and normalisation of operations. Emissions from exploration and production drilling activity was reduced with 80,000 tonnes CO2e compared to 2018. The main contributor to these reductions are the number of exploration wells (reduced from 5 wells drilled in 2018 to 3 wells drilled in 2019), reduced formation testing (reduced from 57,000 tonnes CO2 emitted in 2018 to 85 tonnes CO2 emitted from formation tests in 2019), and no production drilling in 2019.

**Comment**

In order to be aligned with the gross Scope 1 emissions (Lundin Energy operated gross only), the production volumes used when calculating the intensity figure, are gross volumes processed at the Edvard Grieg platform. In other words, no production from non-operated fields have been included. Also note, all Lundin Energy's operated producing fields utilise both oil and associated gas for power generation and/or export. It is therefore not expedient to express our emission intensity in a single hydrocarbon category.

**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**

0.019

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

0.002

**Comment**

The methane emission factor is reported with exported gas as a denominator. For our gross production, the emission factor is 0.019% (198.8 tonnes methane emitted vs. 1,070,913 tonnes exported gas). The denominator for gross total hydrocarbon exports is 7,962,722 tonnes, assuming 0.96 kg/Sm<sup>3</sup> gas and 0.85 kg/l oil. For net production, the emission factor is 0.033 % (191.8 tonnes methane emitted vs. 508,105 tonnes exported gas). The emission factor given net total hydrocarbon exports is 0.004%, with the denominator 4,699,946 tonnes).

**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	294597	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	4970.25	IPCC Fourth Assessment Report (AR4 - 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**

Unable to disaggregate

**Gross Scope 1 CO2 emissions (metric tons CO2)**

243174

**Gross Scope 1 methane emissions (metric tons CH4)**

78.31

**Total gross Scope 1 emissions (metric tons CO2e)**

245132

**Comment**

These emissions are from the Edvard Grieg platform and constitute emissions from combustion of diesel and gas from engines and turbines for power and heat production.

---

**Emissions category**

Flaring

**Value chain**

Upstream

**Product**

Unable to disaggregate

**Gross Scope 1 CO2 emissions (metric tons CO2)**

32042

**Gross Scope 1 methane emissions (metric tons CH4)**

1.95

**Total gross Scope 1 emissions (metric tons CO2e)**

32090.75

**Comment**

These emissions are from all flaring from the Edvard Grieg field

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**Emissions category**

Combustion (excluding flaring)

**Value chain**

Upstream

**Product**

Unable to disaggregate

**Gross Scope 1 CO2 emissions (metric tons CO2)**

1041

**Gross Scope 1 methane emissions (metric tons CH4)**

0

**Total gross Scope 1 emissions (metric tons CO2e)**

1041

**Comment**

These emissions are from combustion of diesel from the drilling rig Leiv Eiriksson during pilot hole drilling on the Solveig field in 2019.

---

**Emissions category**

Combustion (excluding flaring)

**Value chain**

Upstream

**Product**

Unable to disaggregate

**Gross Scope 1 CO2 emissions (metric tons CO2)**

18254

**Gross Scope 1 methane emissions (metric tons CH4)**

0

**Total gross Scope 1 emissions (metric tons CO2e)**

18254

**Comment**

These emissions are from combustion of diesel from the drilling rig Leiv Eiriksson during its exploration drilling campaign in 2019.

---

**Emissions category**

Flaring

**Value chain**

Upstream

**Product**

Unable to disaggregate

**Gross Scope 1 CO2 emissions (metric tons CO2)**

85

**Gross Scope 1 methane emissions (metric tons CH4)**

0

**Total gross Scope 1 emissions (metric tons CO2e)**

85

**Comment**

These emissions are from the formation testing of well 16/1-31S in PL 338 from the drilling rig Leiv Eiriksson.

**Emissions category**

Fugitives

**Value chain**

Upstream

**Product**

Unable to disaggregate

**Gross Scope 1 CO2 emissions (metric tons CO2)**

0

**Gross Scope 1 methane emissions (metric tons CH4)**

117.55

**Total gross Scope 1 emissions (metric tons CO2e)**

2938.75

**Comment**

These are fugitive emissions and cold venting emissions from the Edvard Grieg platform in 2019.

**Emissions category**

Fugitives

**Value chain**

Upstream

**Product**

Unable to disaggregate

**Gross Scope 1 CO2 emissions (metric tons CO2)**

0

**Gross Scope 1 methane emissions (metric tons CH4)**

1

**Total gross Scope 1 emissions (metric tons CO2e)**

25

**Comment**

These are fugitive emissions from the exploration drilling campaign performed with the drilling rig Leiv Eiriksson in 2019.

**C7.2**

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Norway	299567

**C7.3**

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

By facility

By activity

**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
Edvard Grieg platform, Norway.	280162.25	58.84	2.25
Solveig Field, pilot hole drilling	1041	58.7	2.16
Well 7121/1-2 S in PL 767	5503.95	71.7	21.2
Well 16/1-31 S and 16/1-31 A in PL 338	9152.025	58.9	2.3
Well 16/5-8 S in PL 815	3707.95	58.8	2.27

**C7.3c**

**(C7.3c) Break down your total gross global Scope 1 emissions by business activity.**

Activity	Scope 1 emissions (metric tons CO2e)
Exploration activity on the NCS (Lundin Norway Exploration activity)	18364
Emissions from the Brynhild, Solveig and Edvard Grieg fields (Lundin Norway Production field activity)	281203.25

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

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

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions, metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	299567	<Not Applicable>	All Lundin Energy's Scope 1 emissions are related to upstream oil and gas activity
Oil and gas production activities (midstream)	0	<Not Applicable>	No midstream activities
Oil and gas production activities (downstream)	0	<Not Applicable>	No downstream activities
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

**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 for in Scope 2 market-based approach (MWh)
Norway	35.3	0	1866.4	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 (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Norway office	35.3	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) Break down your organization’s total gross global Scope 2 emissions by sector production activity in metric tons CO2e.**

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	35.3	0	These emissions relate to our office-based emissions in Norway.
Oil and gas production activities (midstream)	0	0	No midstream activities
Oil and gas production activities (downstream)	0	0	No midstream activities
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

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?**

Decreased

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	No change	0	No change in renewable energy consumption in reporting year
Other emissions reduction activities	9112	Decreased	3	The operational emissions and power generation for the Edvard Grieg field has been largely unchanged from 2018 to 2019, with a slight increase in emissions (1,465 tonnes CO2e) from 2018 to 2019 (not included in numbers in this table). The Edvard Grieg Flaring Strategy came into effect in 2018 and has since resulted in significant decreases in emissions compared to the start-up years. Reduced down-time and improved emission levels per down-time period has resulted in reduced emissions from flaring and from need for diesel during down-time periods. The decrease of 9,112 tonnes CO2e corresponds to 3% of the previous year's emissions.
Divestment		<Not Applicable >		No divestments in reporting year
Acquisitions		<Not Applicable >		No acquisitions in reporting year
Mergers		<Not Applicable >		No mergers in reporting year
Change in output	89993	Decreased	23	There was a significant drop in drilling activity from 2018 to 2019. The production drilling campaign on Edvard Grieg ended in 2018, resulting in a drop in emissions of 9,748 tonnes CO2e from this activity in 2018. There was a significantly reduced exploration and appraisal campaign in 2019 compared to 2018, resulting in net reduction in emissions of 80,245 tonnes of CO2e (81% reduction). The total decrease of 89,993 tonnes CO2e corresponds to 23% of the previous year's emissions.
Change in methodology	0	No change	0	No change
Change in boundary	0	No change	0	No change
Change in physical operating conditions	0	No change	0	No change
Unidentified		<Not Applicable >		N/A
Other		<Not Applicable >		N/A

C7.9b

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

Location-based

C8. Energy

C8.1

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

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

C8.2

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

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	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 (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	1183975	1183975
Consumption of purchased or acquired electricity	<Not Applicable>	1866	0	1866
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	0	<Not Applicable>	0
Total energy consumption	<Not Applicable>	1866	1183975	1185841

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	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

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

**Fuels (excluding feedstocks)**

Marine Gas Oil

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

96017

**MWh fuel consumed for self-generation of electricity**

96017

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

0

**Emission factor**

3.16785

**Unit**

metric tons CO2 per metric ton

**Emissions factor source**

EU ETS Emission factors as applied in Norwegian Emission standard legislation. Some of the Marine Gas Oil (around 17 %) has been used in gas turbines as CHP energy source.

**Comment**

Source: <https://www.miljodirektoratet.no/sharepoint/downloaditem?id=01FM3LD2QLIGIQJCM6JZB3MG3ZLNZPRQ6FC>

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**Fuels (excluding feedstocks)**

Natural Gas

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

1087958

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

1087958

**Emission factor**

0.0028

**Unit**

metric tons CO2 per m3

**Emissions factor source**

Measured and calculated based on daily analysis of natural gas composition and subsequent calculation of heating value.

**Comment**

The actual power and heat production and consumption on the Edvard Grieg field is given in the C8.2d. A total of 366,496 MWh electricity was generated in 2019, of which 134,000 MWh was exported to the Ivar Aasen field. The CHP plant also generated 87,600 MWh of heat, consumed on the Edvard Grieg field.

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**C8.2d**

(C8.2d) 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	366496	229122	0	0
Heat	87600	87600	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

## C9. Additional metrics

### C9.1

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

### 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	30.5	No comments
Natural gas liquids, million barrels	1.2	
Oil sands, million barrels (includes bitumen and synthetic crude)	0	No oil sands or bitumen production
Natural gas, billion cubic feet	18	

### 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.

Reserves are categorised according to methodology and uncertainty under the 2018 Petroleum Resources Management System (SPE PRMS guidelines of the society of Petroleum Engineers (SPE), World Petroleum Council (WPC), American Association of Petroleum Geologists (AAPG) and society of Petroleum Evaluation Engineers.

All oil and gas reserves (P1 (Proven) + P2 (Probable) + P3 (Possible)) and about 50% of the Contingent Resources, have been audited by an external third party.

### 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	693.3	857.5	1042.8	Estimated net total resource base given is the total net proved+probable+possible reserves plus total net Contingent Resources (2C) (excludes prospective resources).

### 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	95	95	92	
Natural gas	5	5	8	
Oil sands (includes bitumen and synthetic crude)	0	0	0	N/A

### 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**

Shallow-water

**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 (%)**

91

**Comment**

---

**Development type**

Deepwater

**In-year net production (%)**

0

**Net proved reserves (1P) (%)**

0

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

0

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

0

**Net total resource base (%)**

9

**Comment**

---

**Development type**

Arctic

**In-year net production (%)**

0

**Net proved reserves (1P) (%)**

0

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

0

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

0

**Net total resource base (%)**

9

**Comment**

Lundin Energy has booked resources from discoveries in areas north of the polar circle. However, the areas offshore where we have license acreage are ice free all year around and the ice edge is at least 200 km away. All the arctic resources are deep water. All the non-arctic resources are shallow water.

---

**Development type**

Ultra-deepwater

**In-year net production (%)**

0

**Net proved reserves (1P) (%)**

0

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

0

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

0

**Net total resource base (%)**

0

**Comment**

No ultra-deepwater resources

---

**Development type**

Oil sand/extra heavy oil

---

In-year net production (%)

0

Net proved reserves (1P) (%)

0

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

0

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

0

Net total resource base (%)

0

**Comment**

No oil sand or extra heavy oil reserves/resources

**Development type**

Tight/shale

In-year net production (%)

0

Net proved reserves (1P) (%)

0

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

0

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

0

Net total resource base (%)

0

**Comment**

No tight shale reserves/resources

**Development type**

LNG

In-year net production (%)

0

Net proved reserves (1P) (%)

0

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

0

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

0

Net total resource base (%)

0

**Comment**

No LNG reserves/resources

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	30% of our R&D budget each year is dedicated to projects with positive environmental outcomes

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

(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Other energy efficiency measures in the oil and gas value chain	Applied research and development	≤20%	2100000	

## 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.**

15

*Free cash flow breakeven pre-dividend based on the 2P reserves production profile for the period 2020-2026*

## C10. Verification

### C10.1

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

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

### C10.1a

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

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

Lundin Petroleum\_ Sustainability Report 2019.pdf

Lundin Petroleum CDP verification letter 2019.pdf

**Page/ section reference**

Pages 1-2 for the verification letter, page 40 for the Sustainability Report 2019

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

### C10.1b

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

**Scope 2 approach**

Scope 2 location-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

Lundin Petroleum\_ Sustainability Report 2019.pdf

Lundin Petroleum CDP verification letter 2019.pdf

**Page/ section reference**

Pages 1-2 for the verification letter, page 40 for the Sustainability Report 2019

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

## C10.1c

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

**Scope 3 category**

Scope 3: Use of sold products

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

Lundin Petroleum\_ Sustainability Report 2019.pdf

Lundin Petroleum CDP verification letter 2019.pdf

**Page/section reference**

Pages 1-2 for the verification letter, page 40 for the Sustainability Report 2019

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

## 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?**

Yes

## C10.2a

**(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?**

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Progress against emissions reduction target	ISAE3000	In line with Swedish law implementing the EU Directive 2014/95/EU and to render data credible, Lundin Energy's annual Sustainability Report, where all relevant ESG data is disclosed and communicated to stakeholders in a timely and complete manner, is subject to an external limited assurance by a third party verifier.
C5. Emissions performance	Year on year emissions intensity figure	ISAE3000	In line with Swedish law implementing the EU Directive 2014/95/EU and to render data credible, Lundin Energy's annual Sustainability Report, where all relevant ESG data is disclosed and communicated to stakeholders in a timely and complete manner, is subject to an external limited assurance by a third party verifier.
C6. Emissions data	Year on year change in emissions (Scope 1 and 2)	ISAE3000	In line with Swedish law implementing the EU Directive 2014/95/EU and to render data credible, Lundin Energy's annual Sustainability Report, where all relevant ESG data is disclosed and communicated to stakeholders in a timely and complete manner, is subject to an external limited assurance by a third party verifier.
C6. Emissions data	Year on year change in emissions (Scope 3)	ISAE3000	In line with Swedish law implementing the EU Directive 2014/95/EU and to render data credible, Lundin Energy's annual Sustainability Report, where all relevant ESG data is disclosed and communicated to stakeholders in a timely and complete manner, is subject to an external limited assurance by a third party verifier.

## C11. Carbon pricing

### C11.1

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

Yes

### C11.1a

**(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.**

EU ETS

Norway carbon tax

## C11.1b

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

### EU ETS

**% of Scope 1 emissions covered by the ETS**

92

**% of Scope 2 emissions covered by the ETS**

0

**Period start date**

January 1 2019

**Period end date**

December 31 2019

**Allowances allocated**

276257

**Allowances purchased**

276257

**Verified Scope 1 emissions in metric tons CO2e**

276257

**Verified Scope 2 emissions in metric tons CO2e**

0

**Details of ownership**

Facilities we own and operate

**Comment**

We are EU ETS compliant for all emissions from oil and gas producing assets, including assets not yet producing. Thus we are compliant for the Edvard Grieg field, the Brynhild field and the Solveig field. There were no emissions from the Brynhild field in 2019. The Solveig field had emissions of 1 041 MT of CO2, which was EU ETS compliant and properly compensated for. The Edvard Grieg field had calculated emissions of 275 216 MT of CO2, which were properly reported and compensated for. All the remaining Scope 1 emissions from our assets were from exploration drilling which is not EU ETS compliant. Our scope 2 emissions were related to office power consumption which is not EU ETS compliant in Norway.

## C11.1c

---

(C11.1c) Complete the following table for each of the tax systems you are regulated by.

**Norway carbon tax**

**Period start date**

January 1 2019

**Period end date**

December 31 2019

**% of total Scope 1 emissions covered by tax**

92

**Total cost of tax paid**

99815918

**Comment**

Cost in NOK

## C11.1d

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

Lundin Energy is allocating required financial and human resources to the planning, monitoring, verification and reporting of carbon dioxide emissions, both at the development and production phases of our projects. The main purpose of the effort is to achieve best energy efficiency in our operations, which in turn also enables us to comply with the EU ETS scheme. In 2019, this applied to the Solveig field for the pilot hole drilling phase and to our producing facilities on the Edvard Grieg field. For these Norwegian operations, Lundin Energy has compensated for all emissions due to production and drilling through carbon quota purchasing in accordance with Norwegian and European legislation.

## C11.2

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

Yes

## C11.2a

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**(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.**

**Credit origination or credit purchase**

Credit purchase

**Project type**

Wind

**Project identification**

APX VCS Registry Certified Project: "Wind Power Project of CLP Windfarms (India) Private Limited at Jath" VCU Serial No. 6539-325397504-325404203-VCU-050-APX-IN-1-1479-01012018-31122018-0

**Verified to which standard**

VCS (Verified Carbon Standard)

**Number of credits (metric tonnes CO2e)**

6700

**Number of credits (metric tonnes CO2e): Risk adjusted volume**

6700

**Credits cancelled**

Yes

**Purpose, e.g. compliance**

Voluntary Offsetting

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## C11.3

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

Yes

## C11.3a

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

**Objective for implementing an internal carbon price**

Navigate GHG regulations  
Stakeholder expectations  
Change internal behavior  
Drive energy efficiency  
Drive low-carbon investment  
Stress test investments  
Identify and seize low-carbon opportunities  
Supplier engagement

**GHG Scope**

Scope 1

**Application**

The internal carbon pricing is applied in all aspects of planning, designing and communicating current and future field developments and operations. Variations in carbon pricing are also applied to assess the sensitivity of decisions made.

**Actual price(s) used (Currency /metric ton)**

72

**Variance of price(s) used**

Price includes CO2 fee (Norwegian taxation) and expected EU-ETS Quota prices with sensitivities. We apply differentiated pricing.

**Type of internal carbon price**

Implicit price

**Impact & implication**

Lundin Energy operates in a regulated and highly priced carbon environment. - Compensation for emissions is made through purchasing carbon quotas within the EU-ETS trading scheme and a carbon tax to the Norwegian state. - A carbon price, based on the combined cost of the quota and the tax, is factored into the economic planning and engineering design of new projects. - The price fluctuates based on foreign exchange and the EU-ETS costs, but a base figure of \$72 is used with upward costs projections. - The price will vary according to national regulation and the EU-ETS trading scheme. - The internal carbon price, based on what the Norwegian government set as regulated price, is incorporated into Lundin Energy's economic planning models approved by the CFO. - Investment decisions are made on a wide range of factors, which includes current and forward looking pricing of emissions.

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## C12. Engagement

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### C12.1

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

Yes, our suppliers

Yes, other partners in the value chain

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**C12.1a**

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**(C12.1a) Provide details of your climate-related supplier engagement strategy.****Type of engagement**

Engagement & incentivization (changing supplier behavior)

**Details of engagement**

Offer financial incentives for suppliers who reduce your operational emissions (Scopes 1 &2)

**% of suppliers by number**

100

**% total procurement spend (direct and indirect)**

100

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

0

**Rationale for the coverage of your engagement**

This engagement applies to Lundin operated drilling rigs, thus covering 100% of Scope 1 emissions, not directly under Lundin Energy Norway ownership. Part of Lundin Energy's sustainability commitment is to ensure the Company acts in a responsible manner. Recognising climate change as a global issue requiring global action, Lundin Energy engages with those actors within its supply chain who can positively contribute to reducing GHG emissions. Drilling rigs are a key source of emissions and thus working with these suppliers is critical to achievement of our Carbon Neutral target.

**Impact of engagement, including measures of success**

A part of Lundin Energy's strategy is to adopt best available techniques where available, and to set the same expectations from its suppliers through contractor requirements. By setting best available techniques as a primary requirement in its tendering process, Lundin Energy reinforces its encouragement towards suppliers to provide energy and emissions efficient solutions. Examples on how we have engaged with our suppliers include working closely with our main Edvard Grieg field development contractor, Aker Solutions, to ensure an optimised hydrocarbon process. The contractor was engaged to minimise emissions in conjunction with flaring, both with respect to the percentage of time the flare is lit as well as limiting the greenhouse gas emissions resulting from it. A TFMC field development contract for Solveig further highlights the importance of documentation of best available technique solutions, providing as low emissions as practicable. Lundin Energy has also entered rig contracts where financial emission reduction incentives have been implemented. The measures of success are the total emissions reduced from the relevant supplier initiatives, and are monitored over time. Suppliers are prompted to establish carbon KPIs that can be tracked, measured and disclosed to Lundin Energy. These emissions KPIs are reported to us and we can help define appropriate projections and expectations.

**Comment**

---

**Type of engagement**

Engagement & incentivization (changing supplier behavior)

**Details of engagement**

Offer financial incentives for suppliers who reduce your upstream emissions (Scopes 3)

**% of suppliers by number**

100

**% total procurement spend (direct and indirect)**

100

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

0.4

**Rationale for the coverage of your engagement**

Lundin Energy recognises the global challenges associated to climate change, and acknowledges that the global response should include efforts to limit the temperature increase to 1.5 degrees and to reach a global peak of greenhouse gas emissions as soon as possible. As such, Lundin Energy engages with various actors across the value chain who have the potential to help contribute to the reduction of emissions. Fuel related emissions for supply and stand-by vessels are one example of such an engagement.

**Impact of engagement, including measures of success**

Lundin Energy has a strategy seeking to implement the best available techniques throughout its operations, including setting the same expectations for its suppliers. As set out in its Contractor Declaration, having best available techniques as a primary requirement in tendering processes encourages suppliers to provide energy and emission efficient solutions. Lundin Energy has entered into long-term contracts with the LNG powered supplier/standby vessel, Island Contender, because of its lower carbon footprint. Other LNG vessels have been used for shorter periods of time, for the same reason. The measures of success in this instance is t the emissions savings from switching to LNG vessels, and these KPIs can be monitored over time. Each supplier is prompted to establish emissions KPIs that can be tracked, measured and disclosed to Lundin Energy. The KPIs are then reported to us and we can help the suppliers to define appropriate projections and expectations.

**Comment**

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**C12.1d**

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

Energy efficiency and carbon emissions are being implemented as part of our contractual requirements and key monitoring parameters in the selection, and follow-up, of construction sites and suppliers within development field projects. Lundin Energy also engages closely with other relevant license partners, both in license committees and in industry association groups, on emission reduction and other climate change induced issues. In license committees meetings, the Company requests emissions reports from its operating partners. Engagement with the Norwegian Oil and Gas Association focuses on the elaboration (upon inception) of a Roadmap to 2030 and 2050, where industry partners have agreed to reduce emissions within their proportionate share, to help Norway meet its Paris Agreement Commitment.

**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?**

- Direct engagement with policy makers
- Trade associations
- Funding research organizations
- Other

**C12.3a**

**(C12.3a) On what issues have you been engaging directly with policy makers?**

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Clean energy generation	Support with minor exceptions	Engagement in Norway with the government and the Parliament, on the topic of power from shore.	Power from shore on the Norwegian Continental Shelf is an issue that has been under discussion in Norway for a few years. The issue is how Norway can effectively meet its commitment to reduce its emissions by introducing efficiency measures locally, such as having offshore installations powered from shore rather than using produced gas. Johan Sverdrup is a good example of how the issue can be resolved, as it receives power from shore.
Regulation of methane emissions	Support with minor exceptions	Engagement in Norway on the topic of monitoring, measuring and reporting of fugitive emissions.	Interaction with the authorities on the details related to requirements for monitoring and reporting of fugitive emissions.

**C12.3b**

**(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?**

No

**C12.3d**

**(C12.3d) Do you publicly disclose a list of all research organizations that you fund?**

No

**C12.3e**

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

In addition to its strategic and operational commitment to lower its carbon footprint, Lundin Energy contributes to climate change resilience in a number of ways, both through dialogue and by supporting start-ups in the renewable energy sector. It takes active part in the debate on climate change and environmental issues via corporate participation in conferences, research institutions and via Lundin Norway through engagement with the Norwegian Oil and Gas Association (NOROG). Lundin Energy continued its cooperation with the Swedish environmental think tank Fores, which carries out research and promotes market-based solutions to climate change and other environmental challenges and the aim of this engagement is to gain a better understanding of climate change issues, from a scientific, regulatory and industry perspective, and to keep updated on developments on international climate policy.

Lundin Norway has over a period of 6 years supported a number of research projects with potential climate related impact, among which "From source to solution for CO2 at 78 degrees north?" a pilot study on carbon capture and storage (CCS) technology. Through its partnership with the Lundin Foundation, the Company has been focusing on supporting innovative solutions to key development challenges in the areas of access to renewable energy.

**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?**

Through its Sustainability Management System Review/Audit processes, Lundin Energy reviews on an annual basis how climate change issues are integrated into its strategies and operational activities, including contractors' activities. The reviews/audits are carried out with general managers, the Sustainability Vice President and the HSE Director, and include individual discussions with other heads of departments such as exploration, drilling and operations, and thus should such activities arise, they would be unveiled in this process.

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**

Complete

**Attach the document**

Lundin Petroleum\_ Sustainability Report 2019.pdf

**Page/Section reference**

Throughout

**Content elements**

- Governance
- Strategy
- Risks & opportunities
- Emissions figures
- Emission targets
- Other metrics

**Comment**

**Publication**

In mainstream reports

**Status**

Complete

**Attach the document**

Lundin Energy Annual Report 2019.pdf

**Page/Section reference**

4, 6, 15-17, 35, 37

**Content elements**

- Governance
- Strategy
- Risks & opportunities
- Emissions figures
- Emission targets

**Comment**

C15. 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.

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Alex Schneider, CEO	Chief Executive Officer (CEO)

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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

**Please confirm below**

I have read and accept the applicable Terms