VERMILION ENERGY

Vermilion Energy Inc.

Values Matter || 2023 SUSTAINABILITY REPORT

Excellence. Trust. Respect. Responsibility.

Published July 31, 2023

Disclaimer

Certain statements included or incorporated by reference in this document may constitute forward-looking statements or financial outlooks under applicable securities legislation. Such forward-looking statements or information typically contain statements with words such as "anticipate", "believe", "expect", "plan", "intend", "estimate", "propose" or similar words suggesting future outcomes or statements regarding an outlook. Forward looking statements or information in this document may include, but are not limited to: capital expenditures and Vermilion's ability to fund such expenditures; business strategies and objectives; operational and financial performance; sustainability (Environment, Social, and Governance or ESG) data and performance; estimated volumes of reserves and resources; petroleum and natural gas sales; future production levels and the timing thereof, including Vermilion's 2022 guidance, and rates of average annual production growth; the potential financial impact of climate-related risks; acquisition and disposition plans and the timing thereof; operating and other expenses, including the payment and amount of future dividends; royalty and income tax rates and Vermilion's expectations regarding future taxes and taxability; and the timing of regulatory proceedings and approvals.

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Abbreviations & Terms

Term/Abbreviation	Definition
bbl(s)	barrel(s)
bbls/d	barrels per day
boe	barrel of oil equivalent, including: crude oil, natural gas liquids and natural gas (converted on the basis of 1 boe = 6 mcf of natural gas)
boe/d	barrel of equivalent per day
CO2e	carbon dioxide equivalents
EESG	Economic, Environmental, Social and Governance Issues
GHG	Greenhouse gas
GJ	Gigajoules
HSE	Health, Safety, Environment
$M	thousand dollars
$MM	million dollars
mbbls	thousand barrels
mboe	thousand barrel of oil equivalent
mmboe	million barrel of oil equivalent
MWh	megawatt hour
NGLs	natural gas liquids
PPE	Personal Protective Equipment

Highlights

Economic

In 2022, Vermilion produced approximately 31 million boe of oil and natural gas, thereby investing:

- Close to $194 million in wages and benefits to our employees
- More than $755 million in taxes and royalties
- Close to $62 million in protecting our environment
- Almost $1.1 billion in 6,477 entities in our supply chain
- More than $117 million in shareholder dividends and share repurchases

Key Changes

We closed two major acquisitions:

- 2022: Leucrotta Exploration Inc., providing us with 77,000 net acres of Montney mineral rights with an expected 20+ years of low-risk, high-deliverability drilling inventory
- 2023: Equinor Energy Ireland Limited, which has increased our operated interest in Corrib to 56.5%

We closed one divestment:

- 2023: Approximately 5,500 boe/d of non-core light oil production in southeast Saskatchewan

Emissions

We reduced our Scope 1 emission intensity to 0.017 tCO2e/operated boe, reflecting a 10% reduction over our baseline year of 2019 and on track to achieve our 2025 target of 15-20%.

Community

We provided over $2 million in community investment donations to non-profit and charitable organizations around the world.

We also committed $1.2 million over the next seven years to Inn from the Cold, the largest organization in the Calgary region that is dedicated solely to families experiencing a housing crisis. We believe as they do: that a community is possible where no child or family is homeless

ESG Performance

- 2022 CDP Climate Change: A-; 2022 CDP Water Security: B; 2022 CDP Supplier Engagement Rating: A
- 2023 MSCI ESG Ratings assessment: AAA[1]
- June 2023 ISS Quality Score
  - 1 - Environmental
  - 2 - Social
- 2022 Great Place to Work Survey: Best Workplaces designation in Canada, Germany, United States and Australia
- 2022 Globe and Mail Board Games: 1st in our peer group

Our front cover photo features Sruwaddacon Bay, County Mayo in Ireland. A 4.6-kilometre section of the Corrib gas pipeline is installed in a tunnel under the Bay, which is a large tidal inlet and comprises part of a Special Protection Area for birds and an internationally important wetland (Ramsar) site. The area was monitored intensely for water birds before, during and for several years after the construction of the pipeline as part of the Corrib Biodiversity Action Plan. Related data on the habitats and species can be found here.

[1] The use of any MSCI ESG Research LLC or its affiliates ("MSCI") data, and MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement, recommendation, or promotion of Vermilion by MSCI. MSCI services and data are the property of MSCI or its information providers, and are provided 'as-is' and without warranty. MSCI names and logos are trademarks or service marks of MSCI.

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President and CEO's Message

I'm pleased to share Vermilion's 10th sustainability report with you, and to take a brief moment to reflect on how far we've come. When we released our first report in 2014, we did so because we believed it was the right thing to do.

It still is.

The focus a decade ago was primarily on transparency, but has evolved considerably since. Disclosure alone was first surpassed by an expectation around performance – how we were positioned on key indicators relative to our peers, and to our industry. Today, the focus is rightfully on ambition, on how we are contributing to solutions for what is being recognized as an energy trilemma: the need to balance energy security, affordability and sustainability.

The years since 2020 have shown us that the evolution of energy sources will not be easy or smooth. For companies like Vermilion, it's important to make decisions about our future operations that consider all of our stakeholders — from our employees to our investors to our communities.

That's why we previously set an aspirational target of net zero Scope 1 and 2 emissions by 2050. We're spending much of this year working on a plan to get there. It's abundantly clear that there's no single solution; instead, we need to consider all of the options available to us.

We've chose to focus our plan on four pillars:

- **Reduce** emissions, with methane a priority.
- **Convert** higher emitting elements of our portfolio to lower intensity production, considering both divestment and end-of-life fields.
- **Adapt** our portfolio to new energy, considering carbon capture and storage, renewable energy associated with our core operations such as biogas, hydrogen and geothermal production, and other new technologies.
- **Offset** as a solution for the emissions that cannot be eliminated.

We're excited about this work. There are many solutions that are making their way from inspiration to the laboratory bench to field pilots. I'm a firm believer in the power of technology, and can already see the increasing pace at which technology is offering ways to increase our operational efficiency while reducing our emissions.

We also recognize how interconnected climate issues are with the environment, particularly water and biodiversity, and we are focused on both, to ensure we are caring for our communities. Our Corrib Biodiversity Action Plans demonstrate best practice in this area, and I encourage you to check them out on our website, or review the research that the University of Western Australia is doing at our Wandoo offshore platform to learn more about the "rigs to reefs" effect that has increased marine biodiversity there.

Caring is something that I am consistently proud to see in our people, and this year has shown myriad examples of this. Our staff have hosted BBQs for local schools, gathered toys and more for holiday stockings, cleaned up riverbanks, planted trees, put together food and essential household items for hampers, and so much more. We've worked side-by-side to help people through the wild fires that occurred in north and central Alberta earlier this year, both on our well sites and in our communities, and we are pleased to continue to support the recovery efforts in these areas.

Which brings me back to this report. The data contained at the end of the report, in our performance metrics, is essential information. It provides a way for us track our progress and assess our performance. But even as the work of standardizing sustainability reporting grows, I believe that it's the people behind the data that matter. And I am grateful to each and every member of our staff, who show such commitment and dedication to each other and the company throughout the year.

As always, thank you for reviewing our sustainability reporting, and I look forward to your comments or suggestions.

Sincerely,

Dion Hatcher
President and CEO

Vermilion is guided by our core values:

- ***Excellence***
- ***Trust***
- ***Respect***
- ***Responsibility***

Introduction

Vermilion at a Glance

Our Focus

Founded in 1994, Vermilion is a publicly traded, widely held, international energy producer headquartered in Calgary, Canada.

We seek to create value through the acquisition, exploration, development and optimization of producing properties in North America, Europe and Australia — regions noted for their stable, well-developed fiscal and regulatory policies related to energy exploration and development.

Our Purpose

At the core of our business is our purpose:

To responsibly produce essential energy while delivering long-term value to our people, shareholders, customers, partners and communities.

We believe that providing energy to the many people and businesses around the world that rely on it to meet their daily needs and sustain their quality of life is both a great privilege and a great responsibility.

Our Priorities

We prioritize health and safety, the environment, and profitability, in that order. Nothing is more important to us than the safety of the public and those who work with us, and the protection of our natural surroundings.

Our energy transition strategy focuses on reducing environmental impacts of traditional oil and natural gas production while developing renewable energy projects closely related to our core competencies.

Our strategy aligns closely with the ideals and goals expressed in the Sustainable Development Goals, which we refer to throughout this report. [102-15]

8.1 Sustain per capita economic growth

Our Business

Our Operations

Vermilion's operations are focused on the exploitation of light oil and liquids-rich natural gas conventional and unconventional resource plays in North America and the exploration and development of conventional natural gas and oil opportunities in Europe and Australia.

Our Business Model

Vermilion's business model relies on our five long-standing core business principles, which are based on a conservative, long-term focus on balance sheet strength and capital discipline to generate strong returns.

They include:

- Maintaining a strong balance sheet with low leverage
- Managing a total payout ratio of less than 100%
- Consistently delivering results that meet or exceed expectations
- Protecting equity to minimize dilution, and
- Maintaining a strong corporate culture.

Our Strategic Plan

Vermilion's Strategic Plan includes six Matters of Importance, with strategic objectives that guide the Company's business plans to 2030:

- Extraordinary People and Culture
- Health, Safety and Environment
- Financial Discipline
- Robust and Profitable Portfolio
- Business and Operational Excellence
- Integrated Sustainability

These provide short, mid- and long term targets for the company and our people. We set annual commitments within each, and track achievements quarterly, reporting to senior management and our Board of Directors. Progress is reported annually in our Information Circular, and is also tracked using key performance indicators within our Short and Long Term Scorecards to assess company and individual performance, which is linked directly to compensation.

In addition to economic and investment metrics, our strategic objectives are guided by feedback from our external stakeholders, including voting results at our Annual General Meeting, and input from governance, investment and sustainability analysts, our communities and our people.

Our Value Chain

Our success is made possible thanks to close to 1,000 employees and contractors, as of December 2022, throughout our operations, and through an extensive supply chain.

Our supply chain encompasses a wide range of inputs, including specialized field expertise and technology, supplies ranging from drilling mud to event facilities, and expert consultant advice. It is extremely important to us that our suppliers not only deliver a sound financial investment in their goods and services, but operate in a manner that aligns with the values that guide our own corporate culture. As a result, we have strict requirements for third-party vendors who do business with Vermilion. 102-29

Our asset base comprises a diversified product and project portfolio that receives premium advantage pricing. This increases the stability of our cash flows and our flexibility in allocating our exploration and development capital. Our exposure to robust end markets includes:

- North American-based midstream and downstream refiners
- Asia Pacific-based refining and lubricant markets
- European downstream refiners, and
- Key aggregators and utilities. 102-6

Sourcing Our Energy

Hydrocarbon Basics

Vermilion focuses on conventional exploration and development in Europe and Australia, and on conventional, semi-conventional and unconventional exploration and development in North America.

- Approximately half of our oil and gas is produced without hydraulic fracturing
- We do not use hydraulic fracturing in Australia or Europe (with the exception to date of one well in Hungary)
- When we use hydraulic fracturing, it is under strict government regulation, and at depths that have not been correlated with seismic effects or impacts to groundwater

Rocks and Reservoirs Explained

All hydrocarbons (including oil and natural gas) are created from microscopic plants and organisms that lived predominantly in the ocean millions of years ago. When these plants and organisms died, they sank to the ocean floor, became preserved as kerogen and were covered by layer upon layer of sediment over millions of years. As the layers became more deeply buried and compacted, the heat and pressure within them began to rise, ultimately transforming kerogen into the hydrocarbons we know today.

Source rocks are the organic-rich layers of rock in which hydrocarbons are formed.

The pressure surrounding them generally forces the hydrocarbons to migrate upward from the compact or "tight" source rock into more porous and permeable layers of rock, known as **reservoir rock**.

The classification of a reservoir as conventional, unconventional or semi-conventional depends on the specific geology of the rock and the reservoir conditions encountered at depth.

Conventional Deposits

Generally, **conventional reservoir rocks** such as sandstones, siltstones and carbonates have sufficient porosity (the vacant space within the rock) and permeability (the connectivity between pore spaces) to allow fluids such as crude oil, natural gas and water to flow within and through the rock. Left unimpeded, the hydrocarbons continue their migration up towards the surface and escape as natural gas vents or oil seeps.

This upward migration, however, is often blocked by a layer of impermeable rock or other geologic formation. This traps the hydrocarbons, which then accumulate to form a **hydrocarbon deposit.**

If the reservoir rock has sufficient permeability to allow the hydrocarbons to naturally migrate within and through the rock, they are often referred to as **conventional pools or deposits**.

Recovering these hydrocarbons is generally referred to as conventional oil and natural gas exploration and development. Once the deposit is accessed, the hydrocarbons either flow to the surface under the reservoir's natural pressure, or can be pumped to the surface.

Decades of oil and gas production around the world have resulted in a decline of conventional resources, with the majority of them already subject to development.

Semi-Conventional Reservoirs

Vermilion uses "semi-conventional reservoirs" to describe reservoirs that – while requiring technology beyond pumping to bring hydrocarbons to the surface – can be accessed with significantly less intensive techniques than are required for full-scale unconventional production such as that of shale oil or gas production. As a result, these stimulations use a lower amount of pressure, water and other assorted products than those needed for unconventional reservoirs. Approximately one third of Vermilion's production comes from this reservoir type.

An example of this is the Cardium formation in western Canada, which is considered one of the largest stratigraphically trapped reservoirs in the world. It has been developed conventionally with vertical wells and limited stimulation for decades. However, new drilling techniques in the last decade such as hydraulic fracturing, horizontal drilling and new stimulation alternatives have made it technologically and economically feasible to access the reservoirs within the formation that historically have been too "tight" to produce.

Unconventional Deposits

Unconventional or "tight" deposits are usually classified as shale, siltstone or carbonates that are rich in mature organic matter, complex mineral compositions, laminated structures and tight storage space. They generally have ultra-low permeability and low porosity that prevent the hydrocarbons from flowing naturally through the rock.

This means that the hydrocarbons don't form easily accessible pools that can be produced at the surface.

This is where hydraulic fracturing plays a role: multi-stage hydraulic fracturing using horizontal wellbores makes it both possible and economical to produce from these previously inaccessible unconventional reservoirs.

Regardless of how they are produced, or the type of reservoir they come from, unconventional hydrocarbons are essentially the same as conventional hydrocarbons. The term "unconventional" simply refers to the methods that are used to extract them, as well as the type of reservoir rock from which they are produced.

Shale gas or shale oil is a particular type of unconventional resource that has not migrated and is produced directly from the organic-rich source rock in which it was formed.

Hydraulic Fracturing

Hydraulic fracturing is a government-regulated technology that has been successfully used in North America for more than 60 years. Government regulations, in combination with industry operating practices and Vermilion's own priorities of public and employee safety, environmental stewardship and operational excellence, help ensure safeguards are in place to protect the environment, including freshwater aquifers, and to ensure safe and responsible operations.

Hydraulic fracturing is a well stimulation technique in which rock is fractured by a pressurized liquid. The process involves the high-pressure injection of 'fracking fluid' (primarily water, containing sand or other proppants suspended with the aid of thickening agents) into a wellbore to create cracks in the deep-rock formations through which natural gas, petroleum and brine will then flow more freely. When the hydraulic pressure is removed from the well, small grains of hydraulic fracturing proppants such as sand hold the fractures open.

We publicly disclose 100% of the additives we use to FracFocus in both Canada and the United States, as well as via our regulatory submissions. We continue to work to decrease the required concentration of our additives and we work with our fracturing suppliers to source even better alternatives for future consideration.

For more information about our approach to water stewardship during fracking, see our Water Stewardship section.

Sustainability Vision

Our approach to sustainability, and our business in general, is that we prioritize safety and the environment over profitability: the safety and health of our employees, contractors and those directly or indirectly involved in our operations is placed above all else. [102-15]

Vermilion's sustainability report is our way of communicating how we identify the economic, environmental and social impacts of our operations, and how we integrate their associated opportunities and risks into our business strategy. Over time, our reporting activities are helping us to realize our sustainability vision, which is closely aligned with our company's purpose: as an international company, we responsibly produce essential energy while delivering long-term value to our people, shareholders, customers, partners and communities.

We understand our moral and legal duty to operate in a manner that protects the health and safety of our people and communities, provides responsible stewardship over the environment, and treats our people, partners and suppliers respectfully and fairly.

From the landowners with whom we share the landscape, to the families and businesses that rely on oil and gas to fuel their daily needs, our exploration and production activities have potential effects on a wide range of stakeholders who expect Vermilion to deliver consistently strong financial results in a responsible and ethical way.

These expectations align economic success with every element of our sustainability commitments, and have led us to prioritize our objectives in the following order:

1. The safety and health of our staff and those involved directly or indirectly in our operations. Nothing is more important.

2. Our responsibility to protect the environment. We follow the Precautionary Principle introduced in 1992 by the United Nations "Rio Declaration on Environment and Development" by using environmental risk as part of our development decision criteria, and by continually seeking improved environmental performance in our operations.

3. Economic success through a focus on operational excellence across our business, which includes technical and process excellence, efficiency, expertise and stakeholder relations.

We believe these three priorities generally do not conflict with each other, because business that is conducted in the safest and cleanest manner is also most likely to be the most profitable way to do business over the long term. Where they may be in conflict, we instruct our staff that the health and safety of people and the protection of the environment must always take priority over profitability.

For more information on how we manage sustainability, please see our Energy Transition section, including Governance and Strategy.

Sustainability Policy

To meet our commitments, we rely on the framework and priorities provided by our sustainability policy:

Vermilion's sustainability policy is guided by our core values of Excellence, Trust, Respect and Responsibility. It applies to all of our operations, and in each of the communities where we live and work. Sustainability is led by our senior management team and supported by our Board of Directors, and championed by our employees and contractors. It applies equally to our suppliers and to those who represent us or conduct activities on our behalf.

Guided by our Code of Business Conduct and Ethics, Vermilion meets or exceeds the requirements of all applicable laws and standards in the communities where we operate, through all of our activities, including exploration, drilling, completion, operation and remediation. In doing so, we are committed to transparent and respectful engagement with our stakeholders, including our investors, employees, partners, suppliers and communities.

Sustainability is integrated into all facets of our business, and is reflected in the following five key areas.

Governance and Ethics

Vermilion demonstrates strong corporate governance, with leadership that sets an example of the highest standards of ethics and integrity and a commitment to the responsible development of our diverse resource portfolio.

Our leadership model effectively embeds ethical, fiscal, environmental and social considerations into all aspects of our business, resulting in operational excellence and the protection of our human, natural, financial, operational, intellectual and reputational capital.

Economic Performance

Vermilion recognizes that strong, consistent fiscal performance provides positive economic benefits for all of our stakeholders.

We are financially disciplined,with a focus on balance sheet strength and return of capital. This approach, together with our technical and intellectual excellence, ensures we recognize and develop appropriate opportunities, effectively manage risks, and continuously improve operational efficiency.

People

Vermilion's commitment to people is embedded in our core values: we embrace diversity, we value and care for our people, and believe every employee and business associate worldwide deserves to be treated with dignity and respect.

We recognize the principles of The Universal Declaration of Human Rights, and have policies in place to support these principles throughout our operations, including creating a fair and equal-opportunity workplace.

We challenge and inspire our employees to achieve their best, and value the teamwork, collaboration and innovation that lead to creating both a great place to work and outstanding company performance.

Health, Safety and Environment

Vermilion is committed to conducting our activities in a manner that will protect the health and safety of our employees, contractors and the public while reducing our impact on the environment.

We fully integrate HSE into our business – with the mantra of Everyone. Everywhere, Everyday. Our vision is that the consistent application of our core values results in a workplace free of incidents, and that our proactive culture and behaviours create a high-reliability organization where HSE is fully integrated into our business; it is our way of life.

Every staff member, including management, is accountable for HSE and is actively involved in continuously delivering HSE performance improvements.

Communities

Vermilion strives to support the communities in which we operate using a shared value model. We work to develop economic and employment opportunities, build positive relationships and contribute to meaningful, mutually beneficial partnerships that strengthen both the community and our company capacity.

Our community investment program contributes to the quality of life in our communities through both charitable giving and employee engagement, supporting social, environmental and cultural issues. Through this program, our "Ways of Caring," we give back, we give time and we give together.

About Our Report

Our 2023 Sustainability Report is Vermilion's 10th report on how we manage economic, environmental, social and governance (EESG) factors, including impacts, risks and opportunities. It comprises two reports in one: a full sustainability report, and a Climate/Task Force on Climate-related Financial Disclosures Report.

This report covers 100% of Vermilion's business units: Canada, France, Netherlands, Germany, Ireland, Central and Eastern Europe, Australia and the United States, with data consolidation generally based on an operational control boundary.

Within each section of the report, we establish key areas of discussion for each of Vermilion's nine identified Material Topics under GRI Universal and Topic-Specific Standards, and Sustainability Accounting Standards Board recommendations, incorporating GRI's 10 key Reporting Principles for defining report content and quality [102-49]

- Dashboard page with the most recent updates
- Approach section that details why the Aspect is material, how we manage it, and how we evaluate and adjust as needed (our Discussion of Management Approach), and
- Individual pages that create easily accessible information for longer-term projects.

Where updates of previously reported information were required, they are noted in our Performance Metrics. [102-48]

Materiality Analysis

Our materiality analysis is carried out on the basis of double materiality, assessing our impact on society, the environment and people based on our stakeholder engagement. It was approved by the Executive Committee and reviewed by the Board of Directors in 2022, and comprises the following steps:

- Mapping our value chain
- Engaging with stakeholders
- Identifying issues
- Prioritizing issues, and
- Ensuring material issues are incorporated into our enterprise risk management system through the risk register.

Verification

Specific data or management systems have been independently audited or verified by the following organizations: GLJ Petroleum Consultants (reserves), Deloitte (financial); Jacobs (Scope 1, 2 and 3 emissions externally verified under ISO 14064-3), and NSAI (Germany Business Unit's environmental management system under ISO 14001:2015). [102-56]

Our Value Chain

Vermilion's operations influence an extensive value chain that connects energy resources with activities that are essential to our daily lives, including transportation, manufacturing and heating, thus contributing to the strength and resilience of the global economy and to energy security. [102-9]

Exploration	Supply	Production	Transportation	Product Use
How we identify, analyze and develop new energy opportunities	The external contractors, suppliers, materials and expertise we leverage throughout our processes for both traditional and alternative energy production, including geothermal and biogas	How we extract oil, gas, associated byproducts and geothermal heat from our operating properties, through the lifecycle from drilling & completion to production, cogeneration and reclamation	How Vermilion transports and markets our products and byproducts, along with the subsequent transportation of those products to the end consumer	The midstream and downstream refiners who are our customers, the manufacturers and consumers who use the resulting products, and the partners who benefit from our geothermal cogeneration projects

Value, impact or influence

Exploration	Supply	Production	Transportation	Product Use
Our decisions about where to operate and how best to source energy offer job creation and economic assets for communities, while requiring strong safety and environmental protection and community capacity analysis	Our purchasing decisions, including our performance expectations of suppliers, have a strong influence on company and community safety, environmental impacts and economic success	We focus on the operational excellence of our people, processes and technology to maximize safety and environmental management and economic value; this includes the land reclamation stage of well life cycle management	This supports local energy security, job creation and economic success while potentially involving safety and environmental impacts, including pipeline, road and rail transport safety, waste transportation and disposal safety	The economic value, and the potential safety and environmental impacts, of our products are important to industrial, financial and consumer sectors, all of which rely on a stable and secure energy supply

Focus of operational activity & decision making

Exploration	Supply	Production	Transportation	Product Use
Internal to Vermilion, with external consultation	Both internal and external to Vermilion	Primarily internal to Vermilion, with external consultation	Primarily external to Vermilion	Primarily external to Vermilion

Key stakeholders, listed by degree of impact [102-40]

Exploration	Supply	Production	Transportation	Product Use
• Communities • Government • Investors • Employees • Partners • NGOs	• Suppliers • Employees • Investors • Communities	• Communities • Investors • Employees • Partners • Government • NGOs • Media	• Communities • Partners • Customers/end users • Investors • Government • NGOs	• Customers/end users • Investors • Government • NGOs • Media

Primary issues [102-44] (top three to five identified through stakeholder engagement and issues monitoring)

Exploration	Supply	Production	Transportation	Product Use
• Safety • Environment • Community relations • Regulation • Governance	• Safety • Environment • Efficiency • Supply chain management	• Safety • Environment, including GHG emissions • Community / government relations • Staff relations • Efficiency	• Transport safety • GHG emissions • Spills • Ethics • Stable supply	• Safety • Stable supply • GHG emissions • Cost • Regulation

Stakeholder Engagement

Our people, communities, investors, governments and regulators, and partners and suppliers are Vermilion's key stakeholders: those who have the greatest impact on our business, or who are most impacted by our activities.

We base stakeholder identification and prioritization on our understanding and analysis of our value chain, with engagement that is guided by their impact and influence.[102-42 ,413-1]

Our key stakeholders influence our business and operations in important ways, including capital to fund our activities, licenses for exploration and production, and expectations regarding safety and environmental performance.

Meeting these expectations is the key to maintaining and growing our license to operate, and we therefore engage with these stakeholders on a regular and ongoing basis. [102-43]

Our corporate external stakeholder relations framework reflects the importance of community and government support, which we manage on a business unit-specific basis. This includes Public and Government Relations staff in France, Netherlands, Ireland, Germany, and Central and Eastern Europe; a regulatory specialist in the United States; our Land department in Canada (which plays a key role in both community and Indigenous Peoples relations), and those responsible for our Safety Case and Environment Plan in Australia.

While regulations prescribe specific external stakeholder engagement, our approach is to also proactively communicate with our community and government stakeholders and Indigenous rightsholders – both individually and in venues such as town halls, open houses and visitor centres, where we provide information about our activities (planned and ongoing) and invite feedback. For example, as we evaluate and prioritize our exploration opportunities, we present activity plans, including managing the environmental and social impact of our activities, to partners, government and regulatory authorities, and public and community stakeholders.

For stakeholders with lesser degrees of impact or influence, our engagement is more specific and generally involves direct issue-related communication.

The table on the following page details how we engage with our stakeholders, topics raised, and how we have responded.
102-40,102-42,102-43,102-44

Identifying Issues

To identify the topics material to our business strategy, we begin by reviewing our existing issues, and those that we have added based on stakeholder engagement and recommendations, including those related to:

- International standards, including the United Nations Global Compact, OECD Guidelines for Multinational Enterprises, The Universal Declaration of Human Rights, the Global Goals for Sustainable Development (SDGs) and the United Nations Declaration on the Rights of Indigenous Peoples
- Sector-related government, regulatory and industry bodies, including the Extractive Industries Transparency Initiative
- Reporting entities such as the Sustainability Accounting Standards Board (IFRS/ISSB), The Task Force on Climate-Related Financial Disclosures, European Union Corporate Sustainability Reporting Directive, GRI and CDP, and
- ESG thought leaders, peer companies and media reports. [102-15 102-46 102-47 103-1]

Current and Potential Investors

Engagement Channels	Topics Related	Response
Annual General Meeting and webcast, distribution of annual report & proxy statement	Financial results	Ongoing communication of material issues and results
Annual benchmarking against peers through Globe and Mail Board Games	Increasing emphasis on climate-related strategy and reporting, along with evolving regulatory approaches to sustainability reporting	ESG Rating Agency Responses
Business updates, analyst conference calls	Reporting recommendations from TCFD, IFRS/ISSB and EU Corporate Sustainability Reporting Directive	Sustainability reporting evolution
Ongoing presentations to investor and industry conferences, with webcasts posted on external Vermilion website and intranet	Increasing focus on emissions, freshwater use, biodiversity and lobbying	Response to requests for interviews and other input
Ongoing monitoring of and response to investor relations e-mail and phone inquiries		Reviews of evaluations by ESG rating agencies, including corrections, responses and engagement
Ongoing monitoring of and response to social media including LinkedIn		Input into business strategy, including risk register
Media monitoring/ media appearances		
News releases		
Engagement on sustainability-related queries from ESG investment agencies, potential investors and current shareholders		
Feedback for TCFD and SASB/ISSB proposed changes, directly and via industry groups		

Partners and Suppliers

Engagement Channels	Topics Related	Response
HSE Pre-qualification screening and auditing of operations to ensure compliance	HSE performance	Development of HSE High Five personal safety initiative and implementation of the IOGP Life-Saving Rules
Safety meetings, including both Vermilion staff and our contractors and partners	Access to opportunities	Focus on operational excellence
Contractor briefings from Vermilion staff on expected standards of behavior, including our Code of Business Conduct and our Anti-Discrimination and Harassment Policy	Production and financial results	RFPs and invitations to bid
Meetings, etc. to review requirements and negotiate contracts, as needed		
Daily operations, including inspections and field audits		
Meetings, phone calls, e-mails as issues or concerns arise		

Employees

Engagement Channels	Topics Related	Response
Great Place to Work® program confidential staff survey, communication of results to staff through e-mails and meetings, ongoing engagement of staff in feedback and improvement action planning meetings from department to team levels	Strategic direction of the company	Executive Committee response to town hall suggestions and questions
Global town halls, with executive question-and-answer sessions based on questions submitted anonymously in advance, or during the meeting	Employee engagement and satisfaction	Implementation of suggestions from staff working groups
Additional confidential staff surveys on topics such as HSE (Perception Survey), compensation and strategic community investment (choices of non-profit partners, activities, etc.)	Communication (internal and external) of strategic community investment program	Implementation of Fair Culture Policy in all business units
Additional town halls in each of our business units with leadership question-and-answer sessions	Clear communication and implementation of HSE program	Annual workplan within our VET Vision, with strategy to 2030
Extensive annual lunch and learn program with company, industry and wellness topics		
Whistleblower policy, 24/7 (referred to internally as “Reporting of Inappropriate Activity”)		
Company-wide working groups established to refresh our strategic plan		

Communities

Engagement Channels	Topics Related	Response
HSE Pre-qualification screening and auditing of operations to ensure compliance	Community support and capacity building	Progressing community investment program in all locations based on community and staff engagement (see Our Communities in this report) and guided by the concept of Creating Shared Value
Safety meetings, including both Vermilion staff and our contractors and partners	Public safety	Discussions with local communities regarding impacts and potential partnerships
Briefings from Vermilion staff on expected standards of behavior, including our Code of Business Conduct and our Anti-Discrimination and Harassment Policy	Environmental stewardship	Increased engagement with Indigenous Peoples communities, including business opportunities and community investment
Meetings, etc. to review requirements and negotiate contracts, as needed		Online community investment applications to streamline process for community groups
Daily operations, including inspections and field audits		
Meetings, phone calls, e-mails as issues or concerns arise		

Governments and Regulators

Engagement Channels	Topics Related	Response
Regulatory requirements in all of our locations	Compliance	Compliance with or exceeding all regulatory requirements
Meetings, phone calls, conferences with government officials	Technical expertise	Audits and inspections to confirm compliance
Government-Industry working groups	Economic and community development	Proactive community investment and sustainability programs

NGOs: Industry, Environment, Social

Engagement Channels	Topics Related	Response
Ongoing participation in industry meetings and conferences	Increasing transparency and communication of sustainability performance	Annual ESG rating agency submission and engagement
High-level review of NGO positions and topics	Environmental concerns and performance based on location, location (see our Environment section)	Alignment of sustainability strategy with UN SDGs
Meetings with NGO representatives		Active engagement with ESG rating agencies, including CDP, Sustainalytics, MSCI, Vigeo-Eiris, ISS and S&P Global
		Focus on operational excellence, including compliance with or exceeding all regulations
		Use of feedback in developing internal environmental and social programs

Materiality Matrix

Environment — Social — Governance

The issues identified in our stakeholder engagement are evaluated as to high, medium or low impact for Vermilion and for our stakeholders, including how directly affected the stakeholders are, and whether issues span multiple stakeholder groups. This is based on external engagement and input from our Board and senior leadership. Our current matrix reflects increasing importance for regulatory frameworks, lobbying and community support, freshwater management, biodiversity and supply chain risk.[102-49 102-46 102-47 103-1]

High

- Critical or immediate (0-3 year) risk to health & safety, the environment, financial performance, reputation, employee relations, community relations, or social license to operate
- Strong opportunity to significantly increase financial performance or operational efficiency

Medium

- Important but not critical risk (see high risk categories); mid-term (3-6 years)
- Good opportunity to increase financial performance or operational efficiency

Low

- Small or no risk (see high risk categories); longer term (6-50+ years)
- Small or no opportunity to increase financial performance or operational efficiency
- Already well managed

Risks are integrated into our enterprise risk management system and our business strategy as described in the TCFD Strategy and Risk Mangement sections of this report.

TCFD/Climate Report & Index

TCFD Integration Index

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Governance

As a responsible energy producer, Vermilion believes that we can best deliver long-term value by operating in an economically, environmentally and socially sustainable manner that recognizes the importance of all our stakeholders. We believe that integrating sustainability principles into our business increases shareholder returns, enhances development opportunities, reduces long-term risks, and supports the well-being of key stakeholders including the communities in which we operate.

Vermilion has established a leadership position in sustainability performance and disclosure since 2013, aligned with the Global Reporting Initiative (GRI). We have since integrated the Task Force on Climate-related Financial Disclosure (TCFD) and the Sustainability Accounting Standards Board (SASB) frameworks, and are moving towards the International Sustainability Standards Board (ISSB) S1 and S2.

Our discussion of Governance is also included in our Information Circular, with the discussion of Strategy, Risk Management, and Metrics and Targets also contained in our Annual Report. This recognizes the importance of climate-specific disclosure while reflecting its intersectionality with other environment-related risks and opportunities, social factors such as safety and community engagement, and governance-related matters.

Board Oversight

Integrated Sustainability is one of six strategic objectives that link together in our long-range business plan see Our Approach to Business). The Board has responsibility for overseeing Vermilion's sustainability- and climate-related strategy and performance, including direction, goals and targets, with Board committees providing additional sustainability-related expertise in their areas of focus:

Audit: risk management and internal control systems, including cybersecurity

Governance and Human Resources: executive and director compensation; talent management, succession planning and development of senior management and critical skill employees; governance practices and processes, including director training and development; and human resources including culture and employee engagement

Health, Safety and Environment (HSE): occupational, process and asset safety; environmental stewardship; risk management; and HSE-related sustainability initiatives

Independent Reserves: reserves, production and related disclosure to the Board, and

Sustainability: energy transition, including emission reduction targets; and social impacts, including human rights, community investment and government and other stakeholder relations.

Board and Commitee mandates, available on our external website, include sustainability-related roles and responsibilities.

The Board and Sustainability Committee receive briefings and performance reports quarterly that include ESG performance, sustainability activities, updates from business unit leaders, environmental and social trends, and strategic community investment activities. These are augmented with continuing education from third parties in fields such as climate change and the energy sector, the energy transition, and ESG factors in institutional investment.

The Sustainability Committee provides oversight for the long-range sustainability strategy, its implementation, progress including key performance indicators, and methods of communicating sustainability policies and performance. The committee also identifies and reviews emerging risks and opportunities associated with sustainability issues, and their integration into Vermilion's enterprise risk management framework and policies.

The committee Chair reports to the Board on the committee's work; in addition, reflecting the holistic way in which sustainability issues impact the Company, most members of the Board attend Sustainability Committee meetings. Thus, sustainability- and climate-related information is considered when the Board oversees major decisions, such as long-range planning, budget and capital allocation, and mergers, acquisitions and divestments. For example, the Board used the results of Vermilion's climate-related scenario analysis to inform its guidance and approval of our emission reduction targets.

Management Role

Organizational responsibility for sustainability- and climate-related issues flows from the Board to our Executive Committee, whose Principal members include the President and CEO, Vice President and Chief Financial Officer, Vice President, Business Development, Vice President, International and HSE, and Vice President, North America. Associate members include the Vice Presidents of People and Culture, Sustainability, Marketing, Investor Relations, Geosciences, and European Operations.

The President and CEO has responsibility for sustainability, including climate-related risks. Our Vice President, Sustainability reports to the President and CEO, and is responsible for developing sustainability strategy and reporting, including identifying, assessing and overseeing management of sustainability- and climate-related issues, working in partnership with corporate teams and business units

to ensure the Company's approach reflects the goals within our long-range business plan.

The Vice President, Sustainability also provides updates to and receives guidance from the Board and/or the Sustainability Committee at least quarterly, and the Executive Committee monthly, on strategy, issues, performance and reporting. The corporate sustainability team provides a centre of excellence approach, advising the business on all aspects of sustainability, including environmental, climate and social issues, based on extensive research and inputs from the business. The team is also responsible for external sustainability reporting, based on data from our HSE, People and financial information systems.

Our Vice President, North America and our Vice President, International and HSE lead the operationalization of sustainability, with business unit leaders responsible for strategy and activities, including managing climate-related risks and opportunities, with the support of sustainability leads in each business unit. The sustainability leads, along with the corporate sustainability team, meet quarterly to discuss related issues, trends and learnings. In addition, various departments within the Company report sustainability- and climate-related priorities and progress as frequently as weekly to management, and quarterly to the full Board or Board committees, on issues such as governance and ethics, HSE targets and performance, risk management, regulatory changes, and public and government relations.

Strategy

We have identified climate-related risks and opportunities (including those related to water) in short-term (0-3 years), medium-term (3-6 years) and long-term (6-50 years) horizons. These are described in our Annual Reports and below, with their potential company and financial impact (assessed using processes such as scenario analysis, cost projections and our Emissions Long-Range Planning tool), and our resulting management approach. Our CDP Climate Change and Water Security submissions provide additional information, including where in the value chain these risks and opportunities occur.

Geothermal heat from the produced water at our oil operations in Parentis supports the production of more than 7,500 tonnes of tomatoes annually in 15 hectares of greenhouses

Category / Issue	Description of Impacts	Potential Financial Impact	Management Approach
Short-term Transition Risks: 2022-2025			
Policy and Legal: Increased Pricing of GHG Emissions e.g. Carbon Tax	Short-term impact is primarily in Canada and Ireland. Canadian Federal Greenhouse Gas Pollution Pricing Act has set carbon tax rates at $50 per tCO2e in 2022, rising to $170 by 2030, with provincial reponses to keep pace with the federal system. Our Ireland operations are subject to the EU ETS and Ireland Carbon Tax systems. Longer-term impact rests on carbon pricing's vulnerability to changes in government policy.	With our recent northeast British Columbia acquisition, our Canadian carbon tax liability was approximately $1.6MM **in** 2022, and is forecasted to exceed **this** in the near term based on emerging but not yet finalized provincial regulations in line with the federal schedule. Our Ireland EU ETS liability was approximately $0.75MM in 2022, increasing to approximately $2.6MM in 2025 and $3.5MM in 2030. The Ireland Carbon Tax liability is expected to be an additional approximately $0.1MM/year over this period. All estimates are net Vermilion.	Our exposure is mitigated by provincial responses to the Act, including Alberta's Technology Innovation and Emissions Reduction (TIER) regulation and Output-Based Pricing Systems (OBPS) in Saskatchewan and forthcoming in British Columbia. Our ongoing efforts to reduce the energy and emissions intensity of our operations are integral to managing this risk, including our emission reduction targets. Vermilion continues to monitor and comply with taxation requirements.
Policy and Legal: Enhanced Emissions and other ESG Reporting Obligations	Climate and other ESG reporting obligations are evolving rapidly, with Vermilion potentially subject to the International Sustainability Standards Board (2024) and European Sustainability Reporting Standards (2028), U.S. Securities and Exchange Commission and Canadian Securities Administrators Climate-Related Disclosure Rules, and Canada's Modern Slavery Act. Although Vermilion's existing sustainability-related disclosure provides a sound foundation for compliance, there are costs to implement these, particularly potential requirements for increased levels of audit. The impact to Vermilion would be a decreased netback per BOE, due to increased expenses for staff time and system development and implementation.	The financial impact is an increase in operational cost associated with the management and quantification of emissions to meet new reporting requirements, and the administrative costs associated with reporting and audit obligations. This is estimated at $0.8MM annually.	Regulations in all of our business units are monitored on an ongoing basis, and assumptions/ scenario planning is used annually to assess risk. In Canada, we implemented an external emission data gathering software in 2021 to support the evolving regulatory landscape. Vermilion also engages stakeholders relating to emissions reporting obligations. Management of this risk is built into Vermilion's operations and our ERM. In addition, we expect to automate our emissions data gathering, aggregation and calculation processes in 2024, while ensuring audit-ready processes for all ESG data points to align with proposed regulatory requirements.
Policy and Legal: Changes in Mandates/Regulations re Products - Existing Production or Acquisition Impaired by Regulatory or Political Changes	Vermilion's operations are subject to regional regulatory and political changes that result in changes to equipment requirements such as engineering and equipment modifications to reduce carbon emissions and / or emissions of criteria air contaminants. The most likely short-term impact is regulations in Canada and the European Union to reduce methane emissions, in France to reduce flaring, and in Netherlands to reduce NOx. From a macro perspective, geopolitical impacts (e.g. war in Ukraine) have escalated diverging government and consumer viewpoints on the need for energy security vs energy transition. We expect that demand for oil and natural gas to remain strong in the short to medium term, while safety and environmental regulations governing its production will increase. We have identified these risks as interconnected and existing in the short-term; however, they should be seen as medium- to long-term risks as well, impacting both existing production and acquisitions.	Operational changes to comply with existing and pending methane reduction regulations are under evaluation but are expected to impact our Canadian and European operations in the near term. This includes Canada's proposed regulatory framework to reduce oil and gas methane emissions by 75% by 2030, the evolving EU-wide methane reduction regulations targeting a 58% reduction by 2030, and the elimination of routine flaring in France, also by 2030. The cost of compliance with the proposed regulations is not yet established, and will depend on the final versions of the frameworks.	Vermilion is closely monitoring regulatory and market changes to ensure its approach to resilience under evolving conditions remains appropriate. We provide feedback to governments on proposed regulations, as per our lobbying disclosures, and allocate resources, including staff and capital, to ensure that required operational changes can be effectively actioned. In the short term, we are pursuing two emission reduction targets, with associated measures including tying in vented equipment to flaring infrastructure in Canada, using NOx scrubbers and NOx certificates to comply with new regulations in Netherlands. In 2023, we are developing our net zero to 2050 plan and 2030 emissions reduction target. We are also working with external partners to further implement and develop emission reduction technologies that are economic to the company, in part due to the potential generation of carbon credits. Based on stakeholder engagement, Vermilion believes that independent assessments of our operations by third parties are an important tool to demonstrate our responsible approach to production of essential energy. As a result, we have sought and achieved Equitable Origin responsible gas producer certification for 3 of our Canadian sites, the AFNOR CSR Committed label in France, and the Business Working Responsibly mark in Ireland.
Reputation: Shareholder Divestment	Investors are raising concerns regarding risks related to emissions, environmental and biodiversity protection, water stewardship, and abandonment and reclamation liabilities.	Impact of divestment estimated to be equal to 0.25X of 2023E FFO reducing market capitalization by 317MM$. This estimate covers all significant sustainability risk scenarios including but not limited to water stewardship, biodiversity, modern slavery, and community relations.	In addition to our net zero transition plan development, we have set internal targets to reduce ARO liabilities and to maintain freshwater intensity performance via water management plans where higher-intensity freshwater use is, or could become, an issue. We are also prioiritizing compliance with incoming sustainability reporting requirements, which are largely investor- and financial institution-driven.

Category / Issue	Description of Impacts	Potential Financial Impact	Management Approach
Reputation: Changes in Customer Behaviour and Legal Challenges	Government and community relationships are strongly linked to both social and regulatory licenses to operate. Communities where we operate also bear potential impacts, including noise, dust, lights, traffic, etc. Legal challenges against oil and gas industry increasing. Adoption of EVs, opposition to fossil fuels by public. Windfall tax/solidarity contribution.	Delays or shutdowns in production per day; Windfall tax impact of 222MM in 2022 expected to significantly decrease in 2023 due to decrease in commodity pricing.	Non-technical Risk Management Policy and framework, being implemented in 2023 that provides for community/social impact assessments. Lobbying policy being implemented in 2023. Strategic community investment program Ways of Caring. Engagement with governments on specific issues such as windfall tax.
Medium-Term Transition Risks: 2026-2030			
Technology	Our emission reduction projects and net zero to 2050 plan rely on technologies that are rapidly evolving, but in many cases unproven at larger scales and uneconomic for dispersed assets that are not, for example, near an electrical grid or pipeline gathering system. Assumptions by those outside the industry involve broad generalizations on methane reduction being economical for all assets, and in many cases may prove false. Some technology projects will fail; others will prove uneconomic.	Based on the capital and/or operating spend required to reduce our near-term carbon tax liability through emission reduction projects. To be recalcluated as part of the net zero by 2050 pathway plan.	Risk mitigated through careful and deliberate approach to new technology adoption. We have established sustainability project criteria that need to be met in order to move into the Vermilion Opportunity Development Process, providing various stage gates and offramps.
Market: Increased costs related to capital and financing	Pressure from stakeholders and limited access to debt, capital or insurance without the use of sustainability-linked financing arrangements	100 bps increase to total debt would represent $10MM	Establishment of 2 emission reduction targets and 1 ARO target, development of net zero by 2050 transition plan and 2030 target, to establish groundwork for sustainability-linked financing should it be required.
Medium-Term Physical Risks: 2026-2030			
Acute: Increased Severity of Extreme Weather Events such as Cyclones and Floods	Vermilion's Wandoo field off northwestern Australia, Corrib project off the Irish coast and oil fields in the coastal area of SW France can be impacted by extreme weather events such as cyclones, resulting in down time or damage to infrastructure. Such events can also impact the downstream handling capacity of our partners, resulting in a limitation to the distribution and sale of our products.	Based on the value of the Wandoo Platform and a 1-in-10,000-year cyclonic event, the financial implications associated with damage due to a severe weather event is estimated at $274MM (total impact before insurance). The third-party costs associated with potential damages from extreme weather events are not tracked.	Vermilion maintains insurance as a mitigative measure to reduce the financial impact associated with damage to our assets due to severe weather events. We also have a robust asset integrity program that maintains our offshore facilities to their original design specifications of CAT 5 hurricane force. We also have protocols for monitoring and preparing for cyclones, and have invested in our emergency response capabilities in the event of damage to our assets due to severe weather.
Long-term Transition Risks: 2030-2050+			
Technology: Substitution of existing products and services with lower emissions options, including market supply and demand	Although we see demand for oil and natural gas remaining robust in the short- to mid-term, it is likely that demand for oil and, to a lesser degree, natural gas will eventually fall as the energy transition evolves and various alternatives for renewable energy options become technologically and economically available. This could impact the need for our products in the longer term, post 2035 for oil and even further out for natural gas, potentially leading to lower commodity prices. As 2021-2022 have demonstrated, however, it will be critical to maintain adequate supplies of both oil and natural gas during the energy transition, to provide both accessibility and affordability.	Given the uncertain timeline and progression of the energy transition, and supply-demand dynamics, we are not using a financial forecast for impact. We are, however, using our scenario analysis to identify potential opportunities that would mitigate the risk to our products.	Based on our scenario analysis, we identified the need to explore new and evolving technologies and processes to identify synergistic fits for our business in both traditional and renewable energy production. We are pursuing this via our established track record in geothermal energy from produced water, for which our internal expertise in engineering, geoscience and drilling is particularly well suited. We are also investing in early R&D in other areas, such as biogas and the conversion of traditional oil and gas assets to geothermal and hydrogen production, to better understand the long-term potential.
Long-Term Physical Risks: 2030-2050+			
Chronic: Rising Sea Levels	Chronic Physical: Potential rising sea levels could impact our Netherlands assets and operations due to issues such as flooding, transportation difficulties, supply chain interruptions and salinization of groundwater.	A rise in sea level could have an estimated financial impact of $571MM before insurance at our main Netherlands gas processing facility Garijp (GTC) caused by an extreme 1-in-10,000-year tide/extreme wind event.	Physical measures such as conventional berms may not provide complete protection. Based on Vermilion's assessment of less than 0.05% probability over the next 5 years we have accepted this level of risk, reviewing it annually.

Category / Issue	Description of Impacts	Potential Financial Impact	Management Approach
Chronic: Changes in Temperature Extremes, Including Rising Mean Temperatures; Changes In Precipitation Patterns and Extreme Variability in Weather Patterns	Chronic Physical: Based on RCP4.5, which limits warming to 3C (overshooting 1.5-2C), our assets and operations could experience climate changes between 2041 and 2070 such as: North America: 2-3C increase, 12-14% increased precipitation, 7-8% increased aridity, >10 fewer frost days and <25% decrease in number of dry spells. Europe: 1-2C increase, 0-5% increased precipitation, 4-12% increased aridity, generally decreased frost days, with several areas seeing <25% increase in number of dry spells. Australia: 1C increase; 8% increased precipitation SMHI, Climate Information, https://climateinformation.org/, last accessed: 9 July 2023. Overall warming temperatures, greater precipitation and generally drier conditions (due to increased evaporation) may increase capital costs for drilling, completion and workover operations due to increased timelines, equipment breakdown and restricted access in North America (fewer frost days). They may also impact the health and safety of workers, and create variability and potentially more severe weather events such as flooding, drought and wild fires. Flooding could result in limited access to locations; droughts could impact the availability of surface and / or groundwater required for drilling and completion. This could negatively impact growth by increasing timelines and capital costs to bring on new production.	The financial implications of a single time event (i.e. wildfire) have been assessed on a case-specific basis. Vermilion maintains insurance to mitigate the potential impact of precipitation-related extreme events (i.e. Wild fire, Flooding) The financial implications of a decreased ability to access lands on an annual basis are difficult to quantify; however, based on Vermilion's experience, the most significant would result from shutdowns in drilling or completions locations. The estimated cost of this would be $0.5MM per day of delay.	Each of our assets is assessed for potential risks and hazards, including those associated with weather events, from lightning to flooding to wild fires. These risks are reviewed at least annually on a case-by-case basis as part of our Enterprise Risk Management system. Mitigation approaches such as clearance of vegetation around facilities, and physical barriers to flooding, are implemented as per our HSE Management System, to protect the health and safety of our workers, contractors and the public, and to protect the environment. For example, we have reduced the potential impact related to access in remote assets by using multi-well pads wherever possible, and we have flexibility as to starting our drilling activities earlier. This would significantly decrease capital considerations in the event that limited frost days occurred. Each risk associated with weather is assessed on a case-by-case basis. In the case of a longer term extreme precipitation event or drought, Vermilion would implement water management programs to reduce our reliance on fresh water sources to limit the potential impact on operations.
Short-term Opportunities 2022-2025			
Products and Services, and Resilience: Development of New Products and Services through R&D and Innovation; participation in renewable energy programs	Directly related to the long-term transitional risk associated with the substitution of low-carbon products, we have the opportunity to participate in the development of those products. This has the potential to reuse our current infrastructure to provide alternative products, such as biogas or hydrogen, or to develop new products such as geothermal energy, creating new revenue streams. An example of this opportunity is the geothermal heat we are providing heat from the produced water in our oil operations to develop sustainable agriculture and residential projects near our operations.	As this opportunity is in the early stage of assessment, it is difficult to quantify the financial impact, but it is estimated at up to $2.0MM per year in revenue and returns on investment. Potential also exists for significant cost adjustments, as assets slated for abandonment would be repurposed to enable them to continue to generate energy.	We are leveraging our technical experts and partnerships to provide input into alternative and renewable energy projects as they are identified. An example of the development of low emission goods/services is our France-based industry partnership with Avenia to expand the use of geothermal energy production in oil production, and a geothermal association in Germany. We have also developed criteria for approving the move of these ideas into our Vermilion Opportunity Development Process, which provides clear gates and criteria for considering and implementing such projects.
Products and Services: Access to New Markets	More stringent global measures to reduce emissions from individual ships by 30% by 2030, established through amendments to MARPOL Annex VI, came into force on Jan 1 2020, limiting the sulphur content of bunker fuel to a maximum of 0.5%. Vermilion's Australian Wando facility produces 4500 bbl/d of low sulphur crude oil that meets the needs of refineries in the short term to meet IMO regulations.	Vermilion conservatively foresees achieving a premium of $10/bbl for its Wandoo production over the next three years for cumulative incremental revenue of $49.3MM.	Vermilion continues to access local markets for our low sulphur production, while exploring regions to expand our operations. Our Marketing group ensures that Vermilion meets its contractual obligation with our buyers in terms of volumes, delivery dates and crude quality.
Products and Services: Ability to Diversify Business Activities; Shift in Consumer Preferences	Vermilion maintains a diverse, stable global portfolio of oil and gas assets. Our strong record of safe and socially conscious development of energy resources has provided opportunities to access and develop these resources. We see our commitment to sustainability as core to our business, which has provided important organizational focus on emissions quantification and management. As consumers become more aware of and involved in the selection of their energy sources and associated carbon intensity, we believe that Vermilion will continue to be a top quartile choice, providing us with opportunities not available to peer organizations.	The financial impact of changing consumer preferences in difficult to quantify. We foresee revenue opportunities in two distinct areas. (1) In consumers selecting premium energy products, with these products demanding a higher price than other energy sources on the market; currently we estimate the potential impact of premium pricing in the long-term to be $1-5 per BOE, or $31.1MM/year based on $1 at 2022 production levels. (2) Access to more stringent markets, supported by our environmental and sustainability performance. Vermilion has entered into German, Hungarian, Croatian and Slovak oil and gas operations, which our sustainability performance has supported.	Based on stakeholder engagement, Vermilion believes that independent assessments of our operations by third parties are an important tool to demonstrate our responsible approach to production of essential energy, and generate premium. As a result, we have sought and achieved Equitable Origin responsible gas producer certification for 3 of our Canadian sites, the AFNOR CSR Committed label in France, and the Business Working Responsibly mark in Ireland. We are currently assessing the potential to expand these certifications.

Category / Issue	Description of Impacts	Potential Financial Impact	Management Approach
Medium-term Opportunities (3-6 Years)			
Energy Source: Participation in Carbon Market	Under the revised EU ETS Directive in effect 2021-2030, it is anticipated that there will be an active market and consumers for the offset credits generated at some of Vermilion's sustainability initiatives around the world. This shift in the cap and trade scheme may provide opportunities for Vermilion to generate certified energy reduction / offset credits through our geothermal cogeneration projects in France; however, current carbon markets are experiencing significant volatility, including reputational impacts to voluntary markets.	Vermilion is not accounting for any short term financial impact due to the volatility in current markets.	We will continue to evaluate the benefit that certified offset credits from various emission reduction projects across our operations could provide. Examples of projects that have the potential to generate credits include four geothermal co-production projects in France. Vermilion's project assessment framework is applied to each identified opportunity, including considerations associated with emissions offset.
Long-term Opportunities (6-50 Years)			
Products and Services: Shift in Consumer Preferences	Under the Canadian Environmental Protection Act and based on commitments made by the Canadian and Alberta governments and energy utilities relating to COP21, there is a commitment to reduce emissions for coal-fired power generation. Based on this and with a number of power generating facilities in Alberta nearing the end of their service life, the demand for natural gas is likely to increase due to increased use of combined cycle gas turbine (CCGT) power generation.	The short term impact of this regulatory change on gas pricing is anticipated to be low and increase to medium in the mid- to long-term. Once the regulations have come into effect and the implementation period has occurred, there is a potential to see an impact on the marketable price and demand for natural gas. As a natural gas and oil producer, Vermilion would benefit from an increase in marketable prices for natural gas in our Canadian operations.	As we move further into the energy transition, we foresee natural gas playing an impactful role as a less carbon intense fuel than other options (i.e. coal). Vermilion continues to focus on the identification of resources and assets where we have the opportunity to apply our industry leading expertise to optimize production while reducing emissions. An example of our strategy to realize this opportunity is our asset base in Alberta, which currently includes a large liquids rich gas play. Vermilion's marketing team is also actively pursuing options for our natural gas production that will enable Vermilion to achieve the best netbacks on production.
Energy Source: Shift Toward Decentralized Energy Generation	The carbon intensity of energy used around the world has a direct relationship to where the energy product was generated. Vermilion's business unit structure supports production and distribution of energy products into local markets. This strategy results in the significant reduction of the carbon footprint of our energy when compared to non-local sources.	The long-term financial impact of decentralized energy generation will depend on the speed of the energy transition balanced against the need for energy security. As such, we believe it is not possible to predict the financial impact at this time.	Vermilion continues to assess where we can access local markets for our production, while exploring regions to expand our operations. The actions taken in the past several years to realize this opportunity include alterations to our structure, our strategic objectives and our operational development plans to support Vermilion as a distributed energy provider, and exploration and development programs in regions with relatively low energy production as compared to consumption (i.e. Hungary).

Resilience of the Company's Strategy

Our sustainability strategy rests on three pillars: Carbon, Conservation and Community.

Carbon

Countries in all of our operating regions are implementing policies to create a low-carbon future for the world's economy, consistent with a 1.5-2C or lower scenario. As a global energy producer, we have an opportunity to be part of the solution: to help ensure the supply of safe, reliable and affordable energy during this transition. The Board of Directors and senior leadership therefore responded to our risk and opportunity identification using a robust scenario analysis.

Vermilion initially examined two energy transition scenarios from the World Economic Forum. These compared a Gradual versus Rapid low-carbon transition based on inputs that included the International Energy Agency's New Policies Scenario (Gradual) and Sustainable Development Scenario (Rapid), which meets the Paris Agreement's goal to limit global temperature increases to 1.5 to 2ºC. Vermilion examined key factors impacting the speed of the transition – including the influence of new energy technologies; potential speed of their adoption; anticipated changes in policy and regulation; and emerging market pathways such as India – and resulting factors that could impact the company, including economics (demand, supply, consumer behaviour, and costs of energy); technological advancement; capital availability; government policy; and Company reputation. Among these, government policy was seen as most influential in the near to mid-term.

We applied these findings to Vermilion's strategy to 2050 and beyond, described below. In particular, the scenario analysis led us to develop two emission-related targets that were announced in 2021: an aspirational commitment to net zero emissions in our own operations, including Scope 1 and Scope 2 emissions, by 2050, and a near-term target to reduce Scope 1 emissions intensity from our operations by 15 to 20% by 2025, using a baseline year of 2019. See Metrics and Targets, below, for more information.

In 2023, we augmented this work with a new analysis of both climate-related transition risks and physical risks. It should be noted that these scenarios are neither predictions nor forecasts; while they rely on the work of credible third-party organizations, they are constructions based on circumstances and assumptions that are highly vulnerable to macroeconomic and geopolitical changes. We have used them to inform our discussions on short, mid- and long-term business strategy, along with risk identification and management.

In our scenario analysis, our Executive Committee and Board of Directors reviewed an internally developed comparison of a diverse range of climate-related transition scenarios. We focused on changes in demand for oil and for natural gas based on a Reference (business as usual) case and a Climate Policy (government support for reduced greenhouse gas emissions) case for Global, Advanced Economy and Emerging Economy scenarios. Specific scenarios included those from the International Energy Agency (Stated Policy, Announced Pledges and Net Zero), Equinor (Walls, Bridges), and BP (New Momentum, Accelerated), along with reference cases from Exxon, OPEC and the Energy Information Administration. The analysis showed the potential for energy demand declines over a 5- to 15-year horizon, but also showed greater impacts on specific assets based on government policies, location and logistics (landlocked vs waterborne), and proximity to petrochemical or carbon capture and sequestration capacities.

For example, our analysis for the Reference case in advanced economies points to strong policy uptake in Europe and Industrialized Asia, as well as energy efficiency improvements in the residential and commercial sectors. Oil demand declines as energy transition policy momentum pushes road transport towards electrification, which is further displaced by biofuels after 2030. Efficiency gains reduce consumption, while demographic trends work against oil demand. Climate Policy scenarios see advanced economies driving a rapid uptake of renewables to a near full phase-out of combustible natural gas use, leading to a finale in the role of gas as a transition fuel. Gas use in 2050 is mostly consumed by the petrochemical sector and for hydrogen production. Both scenarios rely on assumptions such as a continued improvement in advanced technology development for renewables (for example, battery improvement); and the addressing of supply chain human rights and environmental issues for critical minerals.

We also assessed the physical climate-related risks in each of our major operating regions using the International Panel on Climate Change's Representative Concentration Pathway (RCP) 4.5

scenario. We selected RCP 4.5 because it reflects the physical risks our operations would face if CO2 emissions do not start declining until approximately 2045, reaching approximately half of 2050 levels by the end of the century. This is more likely than not to result in rising global temperatures above 2C; specific geographic scenarios are summarized above in the Risks table.

While we have set emission reduction targets that are significantly more ambitious than this, using RCP 4.5 enabled us to identify impacts to operations such as rising temperatures, aridity and dry spells in many areas, rising precipitation in some areas, and rising sea levels. Since climate volatility would also increase, RCP 4.5 highlights the need to consider adaptation and mitigation tactics including changing work schedules for daily heat cycles, along with greater wind, storm and wildfire protection for our assets. We note that RCP 2.6 (which requires CO2 emissions to have started declining by 2020) relies not only on reducing emissions, but also on removing significant amounts of greenhouse gases from the atmosphere, and reflects similar physical risks as 4.5 in the next 10-15 years, with lesser effects in the period 2050-2100.

We have incorporated the results of the discussions around these scenarios into our business strategy work in 2023, including working on our net zero transition plan (see Targets and Metric section) and our Risk identification and management process.

Our sustainability strategy continues to emphasize ensuring our resilience under various scenarios, and rests on three emissions-related activities:

Focusing on efficient and responsible production of oil and natural gas, viewing emissions as potential energy source:

- **Lower carbon fuels.** Since 2012, we have shifted our production mix towards natural gas as a cleaner burning fuel than other fossil fuels. We also sell our fuels within the country of production wherever possible, reducing the carbon footprint associated with transportation of the fuel to consumers while increasing national energy security.
- **Socially responsible fuels.** We are committed to ensuring that our products are produced in an environmentally and socially responsible manner, respecting worker rights and community engagement. We operate in regions noted for their stable, well-developed fiscal and regulatory policies related to oil and gas exploration and development, and for their robust health, safety, environmental and human rights legislation.
- **Transparency and reporting.** We have established a strong record of reporting on greenhouse gas emissions, energy usage and other key environmental metrics, which has supported our emission reduction targets.

Implementing technically and economically feasible options for emission reduction, covering combustion, flaring, venting and fugitive emissions:

- **Greater energy efficiency.** Many energy and operational efficiency initiatives go hand-in-hand, which in turn helps us minimize our carbon footprint and reduce greenhouse gas emissions.
- **Lower greenhouse gas emission intensity.** We are committed to reducing the greenhouse gas emissions associated with our production, with particular focus on methane.

Exploring new and evolving technologies and processes to identify synergistic fits for our business in both traditional and renewable energy production: Alternative energy. We are continuing to develop our knowledge and use of alternative energy sources, including geothermal energy, for which our internal expertise in engineering, geoscience and drilling is particularly well suited. This work has begun with the geothermal potential of our produced water, supporting a circular economy model that conserves, reuses and recycles resources to better protect our environment. It is also expanding into areas such as biogas and the conversion of traditional oil and gas assets to geothermal and hydrogen production.

The other two pillars of our sustainability strategy reflect the interconnected nature of sustainability- and climate-related issues:

Conservation

We are committed to reducing the impact our operations have, beginning with regulatory compliance across all business units. Our conservation efforts are further focused in three areas:

Water: We recognize water as a basic human right, and as a vital resource that is shared among many stakeholders in our communities. We are therefore committed to protecting both the supply and the quality of water sources in our areas of operation by:

- Proactively preventing harm and supporting healthy surface and groundwater bodies
- Reducing potable and freshwater usage to the lowest level practical, and
- Taking a lifecycle and circular economy approach to water, exploring opportunities to reuse and recycle products such as produced water

Asset Retirement Obligations: We are adapting our long-term Asset Retirement Obligation management to include revitalizing or reusing assets to benefit our environment and our communities.

Biodiversity: We are focusing on protecting the species and habitats around us by proactively identifying biodiversity risks and opportunities, and implementing associated plans.

Community

Our communities comprise a wide diversity of people and organizations, but they have one key thing in common: they care deeply about the safety, environmental stewardship and corporate citizenship that we bring to our local operations. In addition, our people care deeply about their communities - whether we work there or live there, these are the places we call home. We therefore steward our operations and relationships to demonstrate our commitment to being a responsible producer and a valued and trusted neighbor and business partner, including:

- **Transparency** with respect to safe and environmentally responsible operations, including our potential impacts on local communities
- Maintaining **strong, genuine relationships** with our communities, with engagement based on respect, listening and openness, and
- Creating **shared value** focused on local economic and social development.
-

VERMILION WAYS OF CARING
give back. give time. give together.

Our Ways of Caring community investment program engages our staff in contributing to our communities

Risk Management

Vermilion's board and senior leadership provide risk oversight, including for sustainability-related risks such as climate.[102-30]

Effective risk and crisis management positions the company for better resiliency from the present to the future. We use a multi-layered approach to ensure identification, awareness and effective management of our business-related risks, including sustainability risks. This includes identifying business opportunities that may arise from changing conditions.

Sustainability-related risks and opportunities, including those related to climate, are integrated into multi-disciplinary company-wide risk identification, assessment, and management processes as part of our Enterprise Risk Management (ERM) system, based on the Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework.

This provides an integrated approach to managing risk as it impacts strategy and performance, and includes Operational, Market & Financial, Credit, Organizational, Political, Regulatory Compliance, Strategic and Reputational, and Sustainability categories.

Identifying and Assessing Risks

Risk management is the responsibility of the Board and the Executive Committee based on a Top-Down, Bottom-Up approach to engage all staff. Top-Down begins with our Board and its committees with clear terms of reference, including oversight for identification and management of specific allocations of risk type.

This is translated into action by our Executive Committee, which reviews and manages the ERM process through implementation of associated policies and procedures. Within our Executive Committee, the Vice President International and HSE and the Vice President North America have risk management responsibility on an operational level, while the Chief Financial Officer is responsible for overseeing risk management performance.

Bottom-Up is how staff implement, maintain and improve risk management processes, applying the hazard-risk-mitigation process in every part of our business.

Risks are identified by key staff across our company, including our Operations, Finance, Health, Safety and Environment, Economics, Government and Public Relations, and Sustainability teams at corporate, business unit and asset levels. These employees have significant experience, and use a wide array of inputs, including operational and facility assessments, technical and research reports, external stakeholder organizations, government policy and regulation changes, industry initiatives, communities and landowners, and non-governmental entities.

The results are incorporated as specific risks into our Corporate Risk Register, which provides a consistent framework to ensure the effective tracking and communication of our material risks. Using our Risk Matrix as a prioritization tool, teams assess each risks's severity, likelihood, speed of onset, and vulnerability using scales from 1 to 5 for each factor, based on human, environment, financial, social license and cybersecurity impacts. In addition, risks such as commodity pricing, production and carbon taxes are stress-tested to identify the impact of changes over time.

Our sustainability materiality analysis, which assesses issues with impact for both the Company and our key stakeholders, is integrated into our ERM system using the Corporate Risk Register through a collaboration between Finance, HSE, Operations and Sustainability teams.

Every risk case includes whether climate-related risk is a contributing factor.

The results are reviewed annually at minimum by the responsible teams, and provided to the Executive Committee and the Board and its Committees as appropriate, who further review and assess the risks including interdependencies based on the company's risk tolerance.

Managing Risks

Our risk management approach focuses on reducing the risk to a level as low as reasonably practicable, accepting the risk, and/or controlling it (such as insuring it). For example, if direct mitigation is not possible (e.g. changes in temperature extremes), we would adapt our business processes to reduce the potential impact (e.g. changing work hours to avoid extreme mid-day heat). In other situations (e.g. increasing risk of flood), we may take measures to protect against the risk (e.g. flood controls) while also insuring our operations.

Financial impact is deemed substantive if it could cause a business loss of more than $10 million CAD (unrisked and before mitigation/recovery instruments). Substantive is defined further using the following thresholds:

- Has persistent but reversible, long-term effects on habitat, ecological communities, land, air, or water. Escalations include irreversible effects on these elements, persistent reduction in sensitive ecosystem function, or effects beyond a regional or operations scale.
- Requires a specific asset to be shut in for unknown duration during regulatory or legal proceedings. Escalations include the permanent withdrawal of authority to operate.
- Reputational damage is national or international, or stakeholder concerns lead to regional or more widespread interruption of operations.

Emissions Long-Range Planning

To support climate risk identification and management, we previously developed a Carbon Liability Assessment Tool, with Scope 1 emissions quantification and regulatory information for each business unit. We assessed the price of carbon on both a realized cost and shadow pricing basis, and identified likely carbon pricing scenarios for all our operating areas.

Our internally developed Emissions Long-Range Planning Tool uses our 10-year projections of production to estimate Scope 1 and 2 emissions, associated carbon taxes and the impacts of emission reduction projects. We are now using this to support our planning of production, capital allocation, budgeting, target setting and merger, acquisition and divestment decisions.

Targets & Metrics

Metrics Used to Assess Sustainability- and Climate-Related Risks and Opportunities

Our reporting describes significant economic, environmental, social and governance measures, which are reported with reference to SASB/ISSB and GRI. These include but are not limited to:

- **Climate:** energy consumption and intensity; investment in and generation of renewable energy; greenhouse gas emission and intensity, including flaring and venting, and avoided emissions; and water withdrawal, including from areas of high baseline water stress, and discharge.
- **Environment:** Waste generation and management; Asset integrity and spills; abandonment and reclamation liabilities, and Environmental investment
- **Social:** Health and Safety; People; and Community investment
- **Governance:** Ethics

These metrics contribute to a sustainability contribution of 10% of the Corporate Performance Scorecard for our Long-term Incentive Plan, comprised of progress towards our 2025 emission intensity reduction target and 2027 ARO liability reduction target, along with select ESG rating agency scores.

HSE metrics also comprise 10% of the scorecard for our Short-Term Incentive Plan. These are industry-typical leading and lagging indicators reflective of responsible, safe and sustainable operations:

- Leading indicators (inputs) focus on at-risk behaviours and are directly linked to injury and motor vehicle incident reduction initiatives and outcomes.
- Lagging indicators (outputs) include total recordable injuries, lost time injuries, motor vehicle incidents, and liquid spills and releases, which are assessed against internal and industry/peer benchmarks.

These plans apply to all employees, including our executive team.

Thus, sustainability- and climate-related performance is linked not only to executive but to all employee compensation, given that we use the same scorecard for every staff member. We report on this externally through our Proxy Statement and Information Circular each year.

We also track carbon pricing, and have identified actual and likely pricing scenarios for all of our operations based on current government policies and published research relating to the Paris Agreement. For example, in Canada, the 2022 carbon tax was $50 per tCO2e, and in Ireland, carbon pricing was 81 € per tCO2e.

We also gain an external perspective on our performance via third-party ESG rating agencies, including:

- CDP Climate Change and Water Security: CDP Climate and Water scores of “A-” and “B” in 2022
- ISS ESG QualityScore: Recognized as a leader in managing risk in our industry with a decile rating of “1” for Environmental and “2’ for Social practices in June 2023.
- MSCI ESG Rating: In 2023, Vermilion maintained our AAA rating.
- S&P Global Corporate Sustainability Assessment: Vermilion was top of our peer group in the 2022 Assessment
- Sustainalytics ESG Risk Rating, which is not permitted to be disclosed by issuers without a license, but which is publicly available on their website .

Scope 1, 2 and 3 GHG Emissions Disclosure

We report Scopes 1, 2 and 3 emissions, which are externally verified under ISO 14064-3. Historical, corporate and business unit data can be found in our Performance Metrics section.

Targets and Performance

Vermilion has set two emission-related targets:

- Net zero emissions in our own operations, including Scope 1 and Scope 2 emissions, by 2050. We are transparent that this is an aspirational goal, and that we will build the plan to achieve this target over time.
- As a first step, we set a near-term target to reduce Scope 1 emissions intensity from our operations by 15 to 20% by 2025, using a baseline year of 2019. We intend to set new targets every five years at minimum, building on this foundation while exploring broader options, including the potential to reduce Scope 3 emissions.

We developed, and the Board approved, these targets following our climate scenario analysis and

extensive internal assessment. There are significant inherent uncertainties in how the energy transition will accelerate over the next three decades. Our intention is to manage these by focusing on responsible production of essential oil and natural gas for as long as these forms of energy are needed, while developing opportunities in other areas that are an economic and synergistic fit for our business.

Committing to an aspirational net zero target was important, but setting a company-wide nearer term target as the first step in creating a clear pathway was even more so. We looked at our own operations – from how we manage emissions data to options for emission reduction – and at how our peers and the majors are approaching this. From this, we identified emissions intensities and opportunities for reduction within our business units, and set our 2025 target.

This is being achieved, starting with our business units with higher emissions intensities, with an initial focus on efficiency, including process changes, venting reductions, instrumentation upgrades from gas to air and power efficiency options, along with improved metering and field measurements.

All of these factors are also being considered as we work on our Net Zero Transition Plan through 2023. Based on our scenario analyses, we have identified four key pillars to support both a Net Zero by 2050 target for Scope 1 and 2 emissions, and the establishment of our mid-term 2030 Scope and 2 emission intensity reduction target:

- **Reduce** emissions, with methane a priority, by reducing flaring, venting and fugitive emissions; driving operational and energy efficiencies; electrifying operations where grids are low-intensity; and assessing new technologies as they become viable.
- **Convert** higher emitting elements of our portfolio to lower intensity production, considering both divestment and end-of-life fields.
- **Adapt** our portfolio to new energy, considering carbon capture and storage, renewable energy associated with our core operations such as biogas, hydrogen and geothermal production, and other new technologies.
- **Offset** as a solution for the emissions that cannot be eliminated.

We anticipate that our plan will be complete in 2024, and that it will constitute a living document - one that will be updated as economic, technological and regulatory landscapes evolve.

Technology use is already driving significant operational efficiencies.

Details of our continued progress against these and previous targets are provided here:

Category	Target	Progress (see Energy and Emissions Reduction page for details)
Scope 1 – flaring and venting	Set in 2014: Reduce flaring emissions at our light-oil assets in southeast Saskatchewan acquired in 2014 by 50% by 2020	Achieved above target: 88% reduction in annual emissions as of end 2020
Scope 1 - methane	Set in 2014: Methane reduction target included in the target above to reduce flaring emissions at our light-oil assets in southeast Saskatchewan acquired in 2014 by 50% by 2020	Achieved above target: 86% reduction in annual methane emissions as of end of 2020
Scope 1 – flaring and venting	Set in 2014: Reduce flaring emissions at one of our major facilities in France by 65% by 2015	Achieved: 65% reduction in emissions (avoiding the flaring of 14,500 tCO2e annually) by implementing a gas export system
Scope 2 – renewable energy	Set in 2015: Exceed 5% of our total power consumption coming from renewable sources (and replacing traditionally generated electricity) by 2017	Achieved above target: Reduced Scope 2 emissions in Netherlands from 41% of our 2015 gross Scope 2 emissions to 2% in 2016 and 0% in 2017. This program has been extended through 2023, and has now been adopted in our Ireland and Germany business units.
Renewable Heat Energy Target	Set in 2015: Generate 31,380MWh of renewable geothermal energy annually in our France Business Unit from our Parentis battery's tomato greenhouse project until at least 2035	Above Target: 2022 production was 59,144 MWh of geothermal energy from four sites
Scope 1- flaring and venting	Set in 2018: reduce the flaring and venting emissions, including methane, associated with the Spartan assets acquired in 2018 by 50% by 2024	Target exceeded in 2021 and assets partially divested in 2023.
Scope 1 – methane	Set in 2018: Similar to our 2014 acquisition of Elkhorn, this is a proportional target associated with our program to reduce methane emissions for our 2018 acquisition of Spartan by 50% by 2024.	Target exceeded in 2021 and assets partially divested in 2023.
Scope 1 GHG emissions	Set in 2021: Reduce Scope 1 intensity by 15-20% from our 2019 baseline year by 2025.	On track: 10% reduction achieved in 2022

Approach to Methane Emissions

As one of the highest-impact greenhouse gases, methane is an important element in Vermilion's focus on climate-related risks and opportunities, particularly in reducing our greenhouse gas emissions from natural gas production. The economic viability of methane leakage prevention is important, with two factors influencing continuing developments: significant advancements in technology – fostered by government commitments surrounding climate change – and the cost of carbon. Combined, these will act to improve the technical ability and abatement costs associated with methane leak detection and the updating of older infrastructure that is prone to sources of methane.

We are actively pursuing options to reduce our methane emissions, supported by commitments from many of our operating regions. Alberta, for example was the first regional government in North America to commit to a methane emissions reduction target for the oil and gas sector – 45% by 2025 – and France has signed on to the World Bank's Zero Routine Flaring by 2030 Initiative.

Understanding that this is a developing area, we have teams in each business unit that monitor regulatory development and share learnings with other business unit teams and corporate groups. We continue to assess our operations to determine areas where we can prevent methane releases and have a positive impact on our Scope 1 emission intensity reduction target. This also supports our participation in both voluntary and regulatory-driven methane reduction programs.

Sources and Detection

Similar to any upstream oil and gas operation, the majority of methane emissions from Vermilion's operations stem from uncombusted venting or fugitive sources, and flared gas (which typically achieves 98% combustion efficiency).

Vermilion has emissions quantification programs in all operated business units. We also have fugitive emission programs in place that are managed through our operations groups in each business unit, with the exception of our offshore platform in our Australia operation (an oil asset with no natural gas production infrastructure). Our Leak Detection and Repair (LDAR) program varies between business units:

Canada: An expanded LDAR program was implemented in 2020, with effectively 100% of our operated Alberta facilities and multi-well pads now assessed annually using optical gas imaging (OGI) technology. At our predominantly oil-producing Saskatchewan assets, OGI surveys are undertaken annually at our larger facilities in accordance with regulatory requirements. Routine checks for natural gas releases using a Forward-looking InfraRed (FLIR) camera are completed by operations personnel at our smaller Saskatchewan assets in conjunction with regular field visits. In addition to thermal imaging, Auditory, Visual and Olfactory (AVO) inspections are a standard component of operator field visits. Targeted identification of leaks during facilities work is also built into all turnaround activities.

France: Quantitative LDAR programs vary annually. As this is an oil-dominated asset, the volume of natural gas and associated methane emitted is low. All operated well clusters are checked at least daily, and twice daily in more sensitive areas such as Parentis Lake. Pipeline routes are surveyed at weekly or monthly intervals depending on the sensitivity of the pipeline location and pipeline type. Process safety equipment, including pressure sensors and hydrocarbon detection equipment, is also installed on wellheads, cellars and pipeline infrastructure to detect leaks, shut-in production and alert operations personnel.

Netherlands: This natural gas-producing asset has a robust LDAR program, with effectively 100% of accessible flanges and potential leak points screened annually using thermal imaging technology.

Australia: This is an oil asset with no natural gas production infrastructure. Any associated gas is either utilized in on-platform processes to displace fuels we would have to bring from the mainland, such as diesel, or maintained within the process and reinjected into the formation it was produced from. While we do not complete a formal LDAR program for natural gas, any significant potential leak sources would be identified by our continuous gas detection monitoring system (line of sight and point source) or through on-platform crew visual inspections. Where required, equipment is repaired and pressure/leak tested prior to return to service.

United States: This predominantly oil asset has a comprehensive LDAR program that includes initial and semi-annual monitoring for fugitive emissions using a thermal camera at all well sites that are subject to EPA and/or Wyoming air permit requirements. In addition to point source identification, Vermilion has permanently mounted monitoring equipment at our major facilities that checks for the presence of natural gas outside of the process on an ongoing basis.

Germany: All producing oil and disposal wells are thoroughly checked at least twice per week. Wells that are not in production are checked monthly. In our operated gas assets, all well sites and facilities are checked five times per week. During these checks, all accessible flange connections are visually inspected for leaks. Field and transportation pipelines in our operated oil assets are inspected once per week in populated areas and once per month in unpopulated areas. Pipeline routes in our operated gas assets are checked every two months by walking in populated areas, and twice per year in unpopulated areas in accordance with regulatory requirements. Oil and gas transportation pipelines are also helicopter surveyed on a biweekly basis.

Ireland: In the first year of operation, a Differential Absorption LIDAR (DIAL) Survey was completed to survey for methane and VOC emissions. No significant emissions were observed from the areas measured. OGI surveys are completed on Corrib on a bi-annual basis and cover approximately 80% of accessible leak points. All identified leaks are managed through the operations weeps and seeps repair program. To date, 80% of all identified leaks are below the measurable leak detection rate for the High Flow Sampler.

Energy and Emissions Management

The following projects highlight our progress in addressing energy efficiency and emissions reduction.
302-4 305-5

Scope 1 Emissions

Reducing Flaring and Venting in Southeast Saskatchewan

Following the 2014 purchase of light-oil assets in Southeast Saskatchewan, we made important improvements that reflect our focus on safety, sustainability and operational excellence. These included a target to reduce flaring and venting emissions by 50% by 2020, compared to a baseline of 2014. This was achieved above target, at 88%.

In May 2018, Vermilion completed the acquisition of Spartan Energy Corp. This increased Canadian production by approximately 30% relative to 2017. Similar to the 2014 acquisition, we set a target to reduce associated flaring and venting emissions by 50% by 2024, compared to 2018. This is being accomplished through a variety of gas conservation and recovery initiatives, including the construction of new infrastructure and implementation of enhanced operational practices and technology, and as of 2021 had achieved beyond our target:

- Reduced absolute emissions/year by approximately 186,231 tCO2e, or 55% (compared to 2018 baseline of 340,926)
- Reduced absolute methane emissions/year by 78,189 tCO1e, or 57% (compared to 2018 baseline of 136,714)

These assets were partially divested in 2023.

Carbon Capture and Storage in Weyburn, Saskatchewan

We have a non-operating financial interest in the Weyburn-Midale Carbon Capture and Storage facility in Saskatchewan. This is one of the world's largest carbon capture, utilization and storage projects, bringing in CO2 from a utility in North Dakota to use in enhanced oil recovery (EOR), after which the CO2 remains permanently sequestered in the field.

In 2022, our partnership accounted for 1,784 bbls day, or approximately 4% of our total production on an equity basis.

CNG Replacement

In 2020, our Canadian operations worked with our vendors to trial the replacement of diesel or propane with compressed natural gas (CNG) for boilers and water heating for the drilling program in Alberta. This provided cost savings while also reducing CO2 emissions by 27% for the program: 380 Tonnes, which is equivalent to taking 82 passenger vehicles off the road for a year.

The project has been expanded in subsequent years with CNG now representing approximately 40% of our North American drilling and completions fuel on an energy content basis.

Power Generating Replacement in Canada

We are replacing traditional thermoelectric (TEG) power generating devices at remote production sites with hybrid solar/ methanol fuel cell units. Unlike TEG units which run (and therefore consume fuel) continuously, the hybrid units run on demand only. Based on manufacturers specifications, this reduction in operating time is expected to result in a greater than 99% emissions reduction in relation to the TEG units.

Between 2017 and 2020, a total of 35 EFOY units were installed at 12 locations in Alberta. Based on the annual energy generation rates and a specified emissions reduction of approximately 8.2 kg CO2e/KWh, the operating EFOY units represented an estimated CO2e savings of approximately 100 tonnes in 2021.

Additional Projects

In 2023, we continued a project initiated in 2019 to convert high-bleed pneumatic devices to low-bleed units. Based on the equipment supplier's data, this is expected to reduce vented emissions by approximately 5,000 tCO2e/year.

We have completed the installation of nine solar powered chemical injection pumps at our well site facilities in Alberta (fully funded by provincial grants). This project is expected to reduce Vermilion's emissions by 9,000 tCO2e/year

Due to a recent equipment upgrade in our German business unit, the existing natural gas production at three sites in Bergen (district of Celle) will be up to 70 percent more efficient. The increased production efficiency means an additional approximately 2,040 households can be reliably supplied with domestic natural gas annually. This natural gas production makes a valuable contribution to security of supply in Germany, and reduces import dependency and CO2-intensive transports from abroad.

Flaring and Venting

Gas Micro-Turbines

France: At our Vic Bilh site in 2021, we successfully piloted the use of micro-turbines that consume natural gas that would otherwise need to be incinerated. Since commissioning, the turbines have produced an average of 258 KWh and a maximum of 395 KWh, out of the 570 KWh required to operate the two oil wells associated with the gas byproduct, thus also decreasing our use of the national grid. Based on the Vic Bilh results, the micro-turbine project was expanded on a larger scale to Cazaux in 2023, with additional studies planned for Parentis and Vaudoy in 2024. The Cazaux installation is scheduled to be operational in Q4 2023 and is expected to generate approximately 40% of the electricity requirements for the Cazaux field (8 MWh).

Incinerator Technology

France: At our battery in Parentis, where no regional gas gathering infrastructure exists to tie in our gas, Vermilion has installed high efficiency incinerator technology that has significantly reduced flaring while resulting in no noise, vibration or smoke.

Scope 2 Emissions

ISO 50001 Certification

Germany: Our German business unit is certified annually under ISO 50001 for Energy Management. This Standard provides a framework for developing, implementing and maintaining an energy management system that supports continual improvement in the efficient use of energy. We have developed an energy management practice that includes strategic planning, communication, procurement and design, verification, monitoring, internal audits, and corrective actions. As part of the certification process, we set energy reduction targets, and are externally audited on our progress.

Purchase of Green Power

Netherlands: In 2016, Vermilion began purchasing 100% green power via Guarantees of Origin from our largest power provider. The Netherlands accounted for approximately 41% of Vermilion's gross Scope 2 emissions in 2015, and for 0% beginning in 2017. We have continued this program since.

Expansion: We began purchasing power from 100% renewable sources via our electricity provider in Ireland in 2021 and in Germany in 2023.

Use of Solar Power

Canada: We have a program to install pump-off controllers at well sites so that the pump only operates when enough fluid is present. Annually, this is expected to reduce power consumption by approximately 17%, resulting in an estimated 10,000 kWh saving per year per well.

Additionally, an initial, full-scale trial of a solar remote power generating (EPODTM) unit was initiated in 2021. Capable of generating approximately 8 MWh/year, the EPODTM unit is expected to result in an annual CO2e savings of approximately 40 tonnes when compared to traditional, fuel-based power generation.

Other solar power initiatives that have been implemented include: installation of solar powered remote monitoring devices; installation of new solar equipment in conjunction with our DCET program; solar retrofits of legacy pumps; and, installation of solar- powered leak detection systems.

Collectively, these initiatives are expected to result in a further CO2e savings in excess of 100 tonnes/year.

France: In Parentis, we provided space for a partnership that installed solar panels over our parking areas, providing cover and generating grid power.

Air Emissions

Reduction of NOx Emissions

Netherlands: On our drilling operations beginning in 2019, we have reduced NOx emission exposure by approximately 10% compared to the base case, by using NOx scrubbers on our drills. We are using both NOx scrubbers and purchasing NOx certification via permanent withdrawal of agricultural NH3 emissions for other drills.

Feature: Renewable Energy Projects in France

In 2008, Vermilion teamed up with four agricultural engineers who wanted to create an economically and ecologically viable greenhouse operation in which to grow tomatoes. The concept was to use geothermal energy from our Parentis oilfield's produced water to supply an industrial-sized tomato greenhouse operation. Today, this ongoing operation has catalyzed an entire agricultural sector, and we have expanded the concept to heating a residential neighbourhood, a microalgae producer, and a college in three additional communities in France. This represents strong partnerships developed over the years that represent added value for the areas that host our activities.[203-2]

In Parentis, our commitment to provide heat free-of-charge and free of carbon emissions for 25 years has made the greenhouse operation profitable to build and operate, which in turn has enabled our partners to expand, and attracted other business to the area.

We are incredibly proud of the role we played in this economic growth, with its social and environmental benefits. Not only have we helped create new jobs in a new industry, we have effectively decoupled economic growth from greenhouse gas emissions for this sector.

Here's how it grew.

It began with tomatoes

The mayor of Parentis brought Vermilion and the tomato growers together in the mid-2000s. The ensuing discussions led to the rezoning and issuance of related municipal permits, and the signing of our 25-year partnership agreement. Tom D'Aqui (the tomato- growing cooperative) built their first 10-hectare greenhouse next to our Parentis battery, we installed the heat exchange technology and brought the operation online in 2012, establishing that this model not only worked, but worked well.

How our geothermal energy is sourced

- Vermilion's petroleum extraction process in the Parentis field produces a mix of oil, gas and water, which is naturally heated to around 60°C.
- Once the oil and gas are separated out, the heated water enters a "closed loop" system where heat exchangers transfer its caloric energy to a second water system belonging to Tom d'Aqui (while ensuring fluids from the two water systems never come into contact).
- The second water system heats the Tom d'Aqui greenhouse located next to the Parentis battery.
- Vermilion reuses the produced water by pumping it back underground to maintain reservoir operating pressures and enhance production.

Within the overall agricultural sector listed above, the direct impact of our produced water geothermal system includes:

- 7,500 tonnes of tomatoes grown annually in 15 hectares of greenhouses
- 10,000 tonnes of greenhouse gases avoided each year
- 250 direct jobs

This system also allows the Tom d'Aqui greenhouse to be heated without carbon emissions, a key element in their certification as an eco-greenhouse. The project also reduces the cost of traditional tomato growing operations in the region, allowing the producers to compete with warmer climate producers.

Circular Economy Recognition from the Government of France

This shared focus on innovative technology and environmental responsibility earned our partnership the 2013 Circular Economy Award for Industrial and Regional Ecology from the French government, recognizing economically successful enterprises that operate within a circular economy.[G4-OG2/3]

Expanding beyond

By demonstrating proof-of-concept, our partnership with Tom d'Aqui has been credited as being a catalyst for three new projects launched independently of Vermilion. It has also attracted other business to the area, creating an agricultural sector that has become an important factor within the region's economy. Our heat contributes 40% of the sector's needs; the other projects have been developed using recycled biomass, with the result that this is now the largest tomato production in France from non-fossil fuel sources, including:

- 15,000 tonnes of CO_2 avoided every year
- 15,000 tonnes of fresh tomatoes produced annually

- 27 hectares of greenhouses built, comprising four greenhouses
- 350 long-term jobs created, and
- 37 million euros invested in economic diversification in a rural area.

Sharing Our Expertise

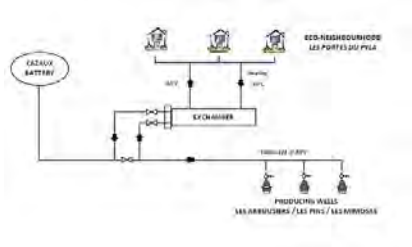
Based on our success, we supported AVENIA, an industry partnership that advises the French government on energy, to launch an industry and country-wide study to identify the potential for waste energy use from oil and gas operations. In addition to contributing financial support, we provided the expertise of our people, and actively encouraged other companies to participate. The results were shared following a detailed review by AVENIA.

Moving from Agriculture to Housing, in La-Teste

We are using a similar geothermal concept to support an Eco-Neighborhood in La-Teste. This 30-year partnership with the city and the French land developer Pichet is using our geothermal energy to heat 550 apartments, saving 50% of the heating bill for the residents and 500 tonnes per year of CO2. The community, which has reserved one third of the apartments for low-income social housing, also features a community centre and various sports facilities.

The technology works the same way as in our greenhouse partnership:

- Vermilion produces oil from three fields in the Arcachon Basin (part of the Aquitaine Basin): Les Mimosas, Les Pins and Les Arbousiers. The production is gathered in a central battery where approximately 1,000 m3/ day of water at a temperature of 70 degrees Celsius is produced along with the oil.
- A heat exchanger on our battery allows the transfer of the energy from the produced water to the eco-neighborhood, producing up to 80% of the heat needed; the remaining 20% will be supplied by the use of gas resulting from biomass, thanks to a COFELY/ENGIE boiler.



Advancing to New Projects

In 2021, we established a third geothermal application in France. Our Vic Bilh asset is providing geothermal heat to a nearby Fleur de Vie facility that produces high quality spirulina, a microalgae with a wide variety of uses.

In addition, our Les Pins asset began providing geothermal heat to Arcachon school in late 2021.

Feature: Renewable Energy Projects in The Netherlands

As a key part of the low-carbon transition, Vermilion is leveraging the proof-of-concept established in France to develop alternative energy projects in our operations in The Netherlands. There, the Dutch Energy Agreement (DEA) targeted a 400% increase in renewable energy contribution from 4% in 2013 to 16% in 2023. We are playing an important role by demonstrating that, beyond using natural gas as a lower carbon transition fuel, synergies exist between natural gas production and green or renewable energy. We are also using our core business, based on geoscience expertise and our existing infrastructure, to investigate several important avenues for supporting the DEA's target.

Biogas Production

In Harlingen, we have partnered with SPF Group, a producer of sustainable fuels, to investigate the use of our Harlingen Treatment Centre location for their biogas production site. The location includes a quay that makes it possible to receive raw materials via water, thereby limiting truck transportation, and it offers existing buildings instead of new builds, which supports the sustainability principle that all parties involved are pursuing. It can also make use of Vermilion's extensive gas infrastructure there. SPF Group has located their head office at our location.

Combined Gas and Geothermal Exploration

This work in Noord Holland focused on developing geothermal assessment plans on new gas drilling prospects so that a single drilling operation can address the potential of both natural gas and geothermal energy opportunities. It makes good economic sense: geothermal projects are currently economically viable only in very good reservoirs and with subsidies. Combining gas and geothermal exploration increases the return on investment significantly; however, current regulations do not allow for this combined approval approach.

The Green Deal: Ultra Deep Geothermal Energy

Vermilion was one of seven companies to partner with the Dutch government, EBN (a natural gas exploration and production company owned by the government) and TNO (a Dutch non-profit for applied scientific research) to investigate ultra-deep (4,000 metres) geothermal energy that would produce the high heat needed by industrial energy customers.

As part of our participation, we undertook a geological evaluation of the available 3D seismics. From this, we have concluded that the required Dinantien carbonate platform in Heerenveen is probably not present. So, although we certainly see the possibilities for ultra-deep geothermal in the Netherlands, we consider the opportunities for the successful development of a project at this specific location in Heerenveen within the frameworks outlined to be too small. While the project identified that this is not currently practical in our area of operation, our participation demonstrates our partnership approach to developing new products and services through research and development.

Gas to Geothermal Energy Conversion

Our project to convert two of our depleted gas wells in Middenmeer, in North Holland, to geothermal production is on hold while the technical and economical aspects are further analyzed.

External Associations, Initiatives and Advocacy

We recognize the need to ensure that our advocacy efforts reflect our business strategy, particularly on climate change and the energy transition. We engage directly with government representatives when we believe we can make a difference in policy and regulation to support oil and natural gas companies as partners in the energy transition.

We also participate in government industry working groups, often at government request to provide technical expertise as one of many stakeholder positions considered prior to regulatory changes.

We are committed to transparency in our advocacy efforts, including:

- Participating in advocacy registries wherever required
- Providing summaries of our advocacy positions, and
- Listing our membership in key trade and industry associations.

Climate Position

Vermilion supports the goals of the Paris Agreement and governments' actions, including public policies, to develop and implement related climate change policy and regulation, while recognizing the critical role that oil and natural gas will play during the energy transition to ensure accessible and affordable energy supplies.

While oil and gas resources are still needed during the energy transition, the provision of clear, stable and reasonable regulations will allow energy producers such as Vermilion to continue to operate in an environmentally and socially responsible manner.

We believe that domestic energy supply should be prioritized over importing oil and gas, for its contributions to national energy security, the economic benefits it provides to local communities through employment and local investment, its compliance with stringent safety, environmental and workplace regulations, and the lower carbon footprint it often provides.

Lobbying Policy

In 2023, we implemented our lobbying policy, which describes our management system for direct and indirect (trade and industry association) advocacy.

Governance: Each business unit leader is responsible for positions and activities in their region; Vermilion's Executive Committee is responsible for corporate positions and company-wide lobbying activities. Only those individuals specifically designated as spokespersons or representatives may advocate on behalf of the company.

Review process: We annually review our direct lobbying activities, including any required advocacy registries:
France: The High Authority for the Transparency of Public Life Report.
Ireland: Quarterly reporting to the Register of Lobbying.

We also annually review all trade and industry associations to which we belong, for alignment of activities and organizations with the Paris Agreement and with our Climate Position. We use a scale between fully aligned and misaligned for each. If misalignments are identified, we engage with the association to understand and influence the issue. We consider cancelling membership only if no improvement proves likely.

We provide our Executive Committee and Board of Directors with a report summarizing our reviews, including misalignment and recommendations.

Results: In 2022, two associations had no commitment or equivalent to the Paris agreement, one of which also had lobbying activities misaligned with Paris. We are engaging with one association, and considering membership withdrawal in the other. Fees paid in 2022 included: ***External lobbyists:*** $78,000; and ***Memberships in associations that also lobby:*** $1.26 million.

Summary of Advocacy Positions

Global: *support for the role of responsibly produced oil and natural gas to provide affordable and dependable energy as a bridge to greater reliance on renewable fuels; opposition to the European Union Solidarity Contribution as not following EU policy, unfairly and retroactively targeting a single sector and disregarding the risk and reward relationship for hydrocarbon producers and the low European natural gas pricing since 2015 and particularly in 2020*

France: *support for the transformation of extractive sectors to serve our regions*

Netherlands: *advocacy for the role of small natural gas fields during the energy transition, including government adherence to legal timelines for permitting, and distribution of royalties to local communities*

Ireland: *support for the role of natural gas in improving domestic energy security during the energy transition, including as lower carbon than imported gas, for the government's 2050 net zero carbon targets, and for the potential use of our infrastructure for blue or green hydrogen*

Germany: *completed working with government and the extractive industry to support a new regulatory approach to working in water protection zones; finalized working with industry and ministries on new deep drilling regulation*

Central and Eastern Europe: *advocacy for permitting and progressing projects in a timely fashion*

Membership in Key Business and Industry Associations

Association	Details
Australian Institute of Petroleum	Promotes industry self-regulation and effective dialogue with government and the community; includes the Australian Marine Oil Spill Centre
Australian Petroleum Production & Exploration Association	Represents Australia's oil and gas exploration and production industry
Australian Resources Energy Group	Policy and advocacy focused on the Australian resources, energy and supply industry
Budapest Chamber of Commerce and Industry	Supports the development of the Hungarian economy representing the general and joint interests of its member business organizations
Business in the Community Ireland	Purpose to inspire and enable businesses to bring about a sustainable, low carbon economy and a more inclusive society where everyone thrives
BVEG - Federal Association of Natural Gas, Petroleum and Geoenergy	Represents the interests of German oil and gas producers, underground storage facility operators and service providers active in the industry
Canadian Association of Petroleum Producers	Represents the Canadian upstream oil and natural gas industry; advocates for and enables economic competitiveness and safe, environmentally and socially responsible performance
Element NL - Dutch oil and gas explorer and producer association	Represents and advocates for the Dutch oil and gas explorer and producer association; works to continuously improve practices related to safety, environment and public acceptance
Energy and Equipment Materials Users Association	Focused on supporting its member companies with safety, efficiency and compliance good practice
Emsachse	Multi-sector collaboration to address joint economic challenges and interests in the Ems-Axis growth region
Energy Sector Sustainability Leadership Initiative	Calgary-based voluntary working group on energy sector sustainability best practices
Eurogas	Represents the European gas sector; aims to strengthen the role of gas in the energy mix through ongoing dialogue
France-Canada Chamber of Commerce	Promotes business activities between Canada and France
French FAB	Promotes the French industrial ecosystem, including responsible business practices
Geothermal Forum Lower Saxony	Platform for the exchange and preparation of information for the geothermal industry
Geothermie Nederland	Trade association for geothermal energy, committed to the availability of sustainable and affordable heat for citizens and businesses
German Society for Petroleum and Coal Science Technology (DGMK)	Promotes and advances science, research, technology and continuing education relating to fossil fuels
Ibec	Ireland lobby and business representative group focused on a positive climate for business and employers
Irish Offshore Operators' Association (IOOA)	Represents the Irish offshore oil and gas industry, providing a common approach to issues such as safety, the environment, legislation and employment; advocates for the development of oil and gas exploration and production in Ireland's waters
Hungarian Mining Association (MBSZ)	Represents all sectors of the mining industry in Hungary
MEDEF	Network of entrepreneurs in France
Petroleum Association of Wyoming (PAW)	Dedicated to the betterment of the state's oil and gas industry, including government advocacy on the responsible development of oil and gas
Pole AVENIA	Voluntary competitiveness cluster with many programs related to supporting geothermal development in France
Saskatchewan Petroleum Industry Government Environmental Committee	Government and industry cooperative approach to ensure the continued growth of the oil and natural gas industry in a manner that minimizes adverse environmental effects
Union française des industries pétrolières	Represents the petroleum industry; provides the French government with ongoing industry feedback on various European Union directives/initiatives
Western Energy Alliance	Represents companies engaged in environmentally responsible exploration and production of oil and natural gas in the western United States

Our Leadership

Governance Dashboard

Excellence. Trust. Respect. Responsibility. These four core values guide what we do and how we do it.

SDG	Target	Vermilion's Contributions
	SDG 13.1. Take urgent action to combat climate change and its impacts	This applies directly to Vermilion's investments in environmental protection, disclosures of GHG emission and intensity data, internal carbon pricing and carbon liability analysis, and overall governance of climate risks and opportunities.
	16.1: Reduce all forms of violence 16.3: Promote the rule of law 16.4: Combat organized crime 16.5: Reduce corruption and bribery 16.6: Effective, accountable and transparent institutions 16.7: Responsive, inclusive, participatory and representative decision-making	Internal policies on ethics, workplace violence, discrimination and/or harassment; whistleblower; human rights Audited annual reporting Anti-corruption policies Internal governance structures Compensation Board of Directors effectiveness disclosures

In 2022, the Board followed its previous materiality assessment, climate scenario analysis and emission reduction target-setting by:

- *Linking executive and employee compensation to climate concerns by adding targets for emission intensity reduction and Asset Retirement Obligation (ARO) liability reduction to the LTIP scorecard*
- *Evaluating performance against our 2025 target to reduce Scope 1 emissions intensity by 15 to 20% by 2025*
- *Ensuring the Company evaluate a clear pathway in 2023 to achieve our Scope 1 and 2 net zero emissions by 2050 target, including a 2030 Scope 1 and 2 emission intensity reduction target*
- *Receiving business unit updates on sustainability-related projects, including potential renewable fuel partnerships and projects utilizing end of life assets*
- *Assessing freshwater use in our global operations, and ensuring water management plans for higher freshwater intensity assets are developed and/or maintained*
- *Approving corporate lobbying activities to ensure alignment with our stated climate and other positions, including the Paris Agreement*

Commitments and Progress

2021 Target	2022 Target	2023 Target
Conduct annual "say on pay" advisory vote at AGM [102-37]	Conduct annual “say on pay” advisory vote at AGM	Conduct annual “say on pay” advisory vote at AGM
Received 42% shareholder approval. The Board took the results of this vote into account and engaged with shareholders to understand their concerns. We then made several changes, including setting the President’s compensation at 25th percentile compared to our peer group.	*Received 96.6% shareholder approval*	*Received 93.25% shareholder approval*
Review Vermilion’s updated sustainability strategy, including mid- to long-term emissions-related reduction targets	Review Vermilion’s updated emissions reduction strategy, including progress on mid- to long-term emissions-related reduction targets	Review Vermilion’s updated emissions reduction strategy, including progress on mid- to long-term emissions-related reduction targets and development of net zero transition plan
100% achieved	*100% achieved*	*On track*
Increase Board gender diversity to 30% by the 2024 annual general meeting, and apply to become a member of the 30% club, joining their campaign to increase	Maintain Board gender diversity at least 30%, along with membership of the 30% club	Maintain Board gender diversity at least 30%, along with membership of the 30% club
100% achieved	*100% achieved*	*100% achieved*
Review sustainability-related information in regulatory filings in alignment with recommendations from the Task Force on Climate-related Financial Disclosures	Maintain sustainability-related information in regulatory filings in alignment with recommendations from the Task Force on Climate-related Financial Disclosures	Review ISSB S1 and S2 impacts on inclusion of sustainability-related information in regulatory filings
100% achieved	*100% achieved*	*On track*

Board Composition

As of July 2, 2023, Vermilion’s Board is comprised of 10 directors and 1 corporate secretary.

Nine Directors (90%) are considered independent, and three (30%) are female. [102-22]

President Pay Ratio

We disclose the annual total compensation of our President (as our highest paid employee) compared to the median annual total compensation for employees. [102-38] Vermilion’s 2022 President-to-employee ratio of 19-1 is magnitudes lower than the 324-1 ratio for S&P 500 Index companies reported for 2021 by the American Federation of Labor-Congress of Industrial Organizations. [102-39]

Diversity

We recognize the importance of equitable gender representation on the Board. The Board Diversity Policy includes a clear commitment to maintain Board gender diversity at a minimum of 30%. In support, our formal recruitment process for Board positions includes a candidate screening step that includes reasonable efforts to secure at least 50% of qualified women applicants and the interview pool for every Board position available. Vermilion is also a member of the 30% Club, joining the campaign to increase gender diversity on boards. [102-24]

We prioritize career development and succession planning for our female employees to foster a more balanced senior leadership team in the future.

We also have a mentoring program focused on helping high-potential female employees develop their management skills and prepare for senior leadership roles. To support our diversity goals,we will continue to expand this program to additional participants. [102-24]

Our Approach to Governance

The Board ensures that we operate in a manner consistent with good governance and recognized standards. Strong governance is in the best interest of our stakeholders and promotes effective decision-making at the Board level and throughout the company.

Our Board of Directors approves our corporate strategic plan, which takes into account the opportunities and risk to our business, including those related to ESG and sustainability. The Board oversees our approach to sustainability and our processes and procedures to mitigate environmental impacts, address health and safety matters that may arise, and consider human capital management.

Management reports on the company's ESG performance to the Board on a quarterly basis.

Management

Complete details related to Board governance can be found in our regulatory filings, particularly our annual Management Information Circular and Proxy Statement (Information Circular).

Key highlights include the following:

Independence of Directors: We define independence as the absence of relationships that could compromise the ability of a director to exercise judgment with a view to making an objective assessment of management and assessing the merits of management initiatives. We appoint an independent Chair of the Board, or if the Chair is not independent, an independent Lead Director. Our independence statement is publicly available via our Board Operating Guidelines, on our corporate website. [102-23]

Board Structure: Our Board structure is a one-tier system. Our directors oversee all matters related to performance, including our economic, environmental, social and governance impacts, through five committees (below): [102-18]

- Audit
- Governance and Human Resources
- Health, Safety and Environment
- Independent Reserves
- Sustainability

International directorships: Vermilion practices good governance standards with its international subsidiary companies, and has appointed independent directors to the Boards of our various subsidiaries.[102-25] International Board members are responsible for overall guidance of the subsidiaries and are knowledgeable in the country of operations, with backgrounds in a combination of legal, regulatory, executive leadership and operations. The Boards of our international subsidiaries are two-tier systems and include representation by non-executive directors and employees.

Compensation Transparency: We communicate the individual compensation of our Board of Directors and our five highest paid executive officers via our annual Proxy Statement and Information Circular. We also publicly disclose the measures relevant for performance-based variable compensation.

Board Skills: We maintain a skills matrix in which each Director rates their expertise in each area annually, including for sustainability competency factors, from limited to expert. The results are then evaluated for individuals and for the Board as a whole. Our most recent assessment determined that the majority of directors are skilled, or at expert/mastery levels.[102-28]

The matrix is reviewed annually by the Board to ensure an appropriate mix of backgrounds, skills and experience to guide Vermilion's long-term strategy and ongoing business operations.

All Directors skills are included within their bios in the Information Circular.

Board Diversity: We recognize the importance of diversity as a component of board effectiveness and business performance, and have adopted a Board Diversity Policy. For the purposes of Board composition, diversity includes, but is not limited to, skills and experience, gender, age, ethnicity, national origin, sexual orientation, disability, Indigenous people, gender expression/identity, family status or religious beliefs, and "Diverse Persons" includes, but is not limited to, women, people of different race, Indigenous people, individuals who identify as LGBTQ2S+, and people with disabilities. We believe that by composing our Board of individuals that bring diverse backgrounds and skills, Vermilion has been and will continue to be successful in problem-solving, deliberating key issues and making quality decisions that deliver positive long-term results for our shareholders and stakeholders alike. Diversity and complementarity of skills are key criteria in Vermilion's board nomination process.

In addition, we have a formal recruitment process for Board positions that includes a candidate screening step that addresses gender diversity. The candidate screening process should include reasonable efforts to secure at least 50% of qualified women applicants and the interview pool for every Board and

Executive Officer position available. We have also set — and met — a target of at least 30% female board members. [102-24]

Board Election and Tenure: Board members are elected and re-elected on an annual basis individually, as opposed to elected by slate. We have a retirement guideline at age 75 (which we can make exceptions for), but we do not have a director term limit. While term limits can help ensure the Board gains new perspectives, imposing this restriction means it would lose the contributions of longer serving directors who have developed a deeper knowledge and understanding of Vermilion and our industry over time. We also value new perspectives. See also Board Tenure on our Dashboard page.

Performance, Evaluation and Adjustment

Board Evaluation: The Governance and Human Resources Committee, whose members are all independent, ensures that each member of the Board, the Committees and the Chair are assessed annually in light of their relevant mandates and level of expertise within our skills matrix. The evaluations are completed via a confidential questionnaire, and one-one-one interviews:

- The confidential questionnaire assesses the effectiveness of the Board and the Chair.
- One-on-one interviews explore the performance of the overall Board, individual directors and committees, with feedback collected from all directors and key executives.

Through these evaluations, directors assess the contributions of their peers, including the Chair of the Board, in order to provide performance feedback and suggestions for improved effectiveness or contributions. [102-28]

Following the assessments, a summary of the results is compiled and presented to the Board with a recommended action plan. Throughout the year, a status update is provided to the Board.

The evaluations help assesses whether changes need to be made in the Board's processes, composition or Committee structure. Our goal is to continuously develop a top performing Board with diverse skills and deep expertise that adds value to the business through governance oversight.

Company and Board Performance – Awards: We monitor corporate governance best practice development on an ongoing basis, engage with key governance and proxy advisory services, and adjust our practices where we determine it to be beneficial for the company and our shareholders. We are proud to be consistently recognized for excellence in governance practices by a wide range of governance-related organizations, including the Globe and Mail Board Games report, the Canadian Coalition for Good Governance, and MSCI. For details, please see our Awards page.

Ethics & Anti-Corruption

Our Approach to Ethics, and Why It Matters

Every member of Vermilion, from the Board to our staff, understands they have a fiduciary and ethical duty to the company and its stakeholders, including the obligation to act honestly and in good faith. Our Code of Business Conduct and Ethics ("Code of Conduct") and Anti-Corruption, Sanctions and Anti-Money Laundering Policy outline a framework of guiding principles for directors, officers, employees and contractors globally, and support the personification of our core values and the demonstration of ethical business practices.[102-16]

Management

Specifically, the Code of Conduct covers:[102-25]

- Conflicts of interest
- Compliance with the law
- Outside business interests
- Confidential information and securities trading
- Retention and destruction of records
- Accounting and auditing
- Recoupment of incentive compensation
- Entertainment, gifts and favours
- Improper payments, including bribes and facilitating payments
- Fair dealing - Non-profit and professional association
- Protection and use of the corporation's property
- Political participation
- No loans to executive officers or directors
- Disclosure
- Workplace conduct and safety
- Environment
- Reporting of inappropriate activity
- No retaliation
- Responsibility

The Anti-Corruption, Sanctions and Anti-Money Laundering Policy further covers:

- Improper payments
- Facilitating payments
- Due diligence
- Agents
- Contractors in high-risk jurisdictions
- Foreign joint ventures
- Gifts, entertainment and travel expenses
- Political and charitable contributions
- Employment of public officials
- Violations
- Audit
- Private-to-private corruption
- Economic sanctions
- Anti-money laundering compliance
- Reporting
- Corrective action

These documents are available publicly on our external website, and are also contained within each country-specific Employee Handbook, which are available in English and in our other major languages, including French, Dutch and German. These handbooks are available 24/7 on our company intranet, and also contain Vermilion's country-specific policies, workplace guidelines, and employment obligations.

Our employment obligations cover the following topics:

- Code of Business Conduct & Ethics
- Social media
- Reporting of inappropriate activity
- Personal information privacy
- Anti-corruption policy
- Health & Safety - Environment
- Discrimination, harassment and workplace violence
- Drug and alcohol
- Fitness for Duty

Training on Codes of Conduct is provided as part of the onboarding process for new employees and contractors. We also require all of our directors, officers, employees and contractors to review these documents and their obligations annually, and to electronically confirm their understanding and compliance with these obligations using our People information management system. [102-17]

Within the company, our President and CEO, Chief Financial Officer, and Vice President People and Culture, hold responsibility for these policies, while our entire executive committee operates with an open-door policy for staff concerns about any of these issues.

Whistleblower Policy: Our whistleblower policy – also known internally as our "Reporting of Inappropriate Activity Policy" – prohibits retaliation, harassment or discrimination against anyone making a complaint or reporting a concern. Further ethics reporting can be found in our Performance Metrics. [102-17]

Vermilion's Whistleblower Hotline is hosted by a third-party provider: Grant Thornton Care. This provides a confidential, accessible tool for anyone wanting to report a concern or ask a question. Anonymous reports can be made 24 hours a day, 7 days a week. All reports are promptly and thoroughly

investigated in accordance with Vermilion's Code of Business Conduct and Ethics.

We encourage the reporting of all types of inappropriate activity, including:

- Questionable accounting, internal accounting controls, or auditing matters ("Accounting/Audit Matters Concerns");
- Suspicions of fraudulent financial information or the reporting of fraudulent information;
- Conduct that results in a violation of law by Vermilion or in a substantial mismanagement of the company's resources and if proven constitutes a criminal offence or reasonable grounds for dismissal of the person engaging in such conduct ("Grave Misconduct");
- Any discrimination, retaliation or harassment against any person who reports incidents of Accounting/Auditing Matters Concerns, fraudulent financial information or Grave Misconduct, or who participates in an investigation of complaints about these concerns; or
- Any single or repeated incidents of objectionable or unwelcome conduct, comment(s), bullying, discrimination, harassment or action(s) by a person in the workplace that appears to, or reasonably would be expected to, cause offence or humiliation or may affect another worker's health and safety.

Third Party Vendors: As part of our management guidelines, authorized Vermilion personnel must ensure that third-party vendors – suppliers and service providers – who enter an agreement with Vermilion for the handover of work and properties must communicate all appropriate Vermilion policies, standards, procedures and practices, and must monitor for their compliance. This is in place in all of our business units, and an audit protocol has been established to ensure this communication occurs. Examples of these policies include our Code of Business Conduct, and our obligations to provide a workplace free of harassment and violence.

New Business Development, including Joint Ventures: Analysis of corruption risks is specifically included in all new business development. When we consider entering a new country of operations or entering into any joint venture or partnership, we conduct an initial assessment based on Transparency International. If we decide to proceed with that business development or partnership, we conduct additional research and due diligence based on the results of the initial assessment, including the degree of risk presented by the partner, location, and the nature and sensitivity of the joint venture. When we hire consultants and services in other countries as part of business development or new ventures, we provide our Anti-Corruption policies and require they sign a compliance certificate to abide by our policy and the country's anti-bribery laws. Joint venture partners are also required to acknowledge both local and Canadian laws, and warranty that they will not violate anti-corruption laws, or authorize or provide any kind of payment that would be in contravention of those laws or our anti-corruption policies. Further information is contained in our Code of Business Conduct and Ethics, and our Anti-Corruption, Sanctions and Anti-Money Laundering Policy.

Measurement

To ensure that 100% of our staff and contractors have confirmed that they understand the policies and are not aware of any contraventions, either by themselves or others, we track the response rate from the annual employee and contractor sign-off for compliance with our Code of Conduct. Sign-offs that are not completed are followed up, to ensure that the policies are understood and complied with.

To further demonstrate ethical and anti-corruption transparency, we track and publicly disclose:

- Payments made to all governments in countries where we operate, through our Extractive Sector Transparency Measures Act (ESTMA) report; Canada is a supporting country to the Extractive Industries Transparency Initiative, which has confirmed that ESTMA provides an equivalent level of reporting to the EITI Standard.
- Memberships in key industry-related trade associations, including those with advocacy mandates.
- Key community investment partnerships: payments must be made to a registered non-profit or charitable organization, are reviewed by our community investment staff, and authorized by leaders as per our financial authority grid. As part of our accounting system, they are included in our internal controls, including financial audits.
- Political contributions: we do not contribute payments to political campaigns, political organizations, or lobbyists.

Evaluation and Adjustment

Specific staff who may encounter anti-corruption issues have undergone additional training. This includes our senior executive and management, financial, sustainability and business development / new ventures teams. Training requirements are assessed annually.

Our People

People Dashboard

Our culture is the single most important factor in our success — and that's driven by our people

SDG	Target	Vermilion's Contributions
	3.4 Reduce premature mortality through prevention and treatment, and promote mental health and well-being	Access to preventive health care, including supplementary medical coverage for all permanent employees, access to mental health care, and support for safe and healthy surroundings and lifestyles.
	5.4 Recognize and value unpaid care and domestic work and shared responsibility	Family-friendly work options, including parental leave, vacation purchase, flexible work hours, remote work option two days a week, and part-time work with benefits.
	8.2 Achieve full and productive employment and decent work for all women and men	A range of workforce protections, including respect for labor rights, detailed codes of conduct, robust compensation and benefits program, and a range of options for training and development.

2022 Key Metrics

Total Workforce (Dec 31, 2022)

- *970 staff*
- *76% permanent employees*
- *52% located in North America, 39% in Europe; 9% in Australia*

Position Changes

- *52 new permanent employee hires; 56% filled internally*
- *Voluntary turnover rate of 5%; retirement of 1.5% and total turnover of 8%.* [401-1]

Training and Development

- *19,889 hours of training and development*

Women in Leadership

- *18% executive roles*
- *15% all leadership roles*

Targets

- *100% of permanent employees participating in an annual review and development plan*
  - *99% achieved*
- *Strong staff participation in global annual Great Place to Work survey (reinstated in 2022)*
  - *76% overall participation rate*

Our Approach to People

Our staff are key to achieving our operational and business goals, so our approach to People begins with our values: Excellence, Trust, Respect and Responsibility. We are focused on building a team of diverse, talented and engaged people who work together to achieve superior results and make Vermilion an exceptional place to work. Because we view our strong culture as the foundation of our success, it influences everything we do, which is why we prioritize:

- Collaborating and having fun working together, sharing ideas and best practices
- Rewarding high performance and celebrating our successes
- Investing in career development and promoting wellness
- Working flexibly and balancing our work and personal lives, and
- Valuing a diverse workforce that reflects the communities in which we work.

Management

We are committed to maintaining Vermilion as a workplace of choice, to enable us to attract and retain high quality staff. This includes offering competitive compensation and benefits packages, providing a safe and respectful work environment, and sustaining our strong culture.

Recruitment

We look internally to fill job postings wherever possible, to provide our staff with career advancement and/or development opportunities. When we recruit externally, we hire employees with strong technical skills and vision who want to work in a highly collaborative and dynamic environment.

Onboarding

Our onboarding process is designed to make our new team members feel immediately welcome, connect them with their immediate team and key colleagues, and integrate them quickly into our culture. This includes reviewing our People, Code of Business Conduct and Ethics, Anti-Corruption and HSE policies, explaining compensation and benefits programs, ensuring IT systems are available, and providing key information about our company and culture.

Compensation and Benefits

We acknowledge the value our people bring via a market-competitive compensation and benefits approach. Our programs are designed with a common structure across all geographies where possible, with alignment to local markets.

Our compensation philosophy and program objectives are the same for employees at all levels, with details in our annual Information Circular and Proxy Statement. All permanent employees are offered a competitive base salary, short- (bonus) and long-term incentive plans, and a pension or retirement-like scheme. Short- and long-term incentives are associated with both individual and company performance, and are linked to specific corporate metrics. These include sustainability and HSE performance indicators to support our priorities of safety and environmental protection, along with market performance compared to peers, strategy delivery, and financial and operational success.

Health and Wellness

We strive to foster workforce well-being through competitive health and wellness benefits. In Canada, for example, these include a taxable lifestyle account and tax-free health care spending account; health, vision and dental plans; short- and long-term disability benefits; basic and dependent life insurance plans; critical illness and "best doctors" insurance; parental leave; and company-paid access to an employee family assistance program. [401-2 401-3]

In many of our business units, staff have the option to purchase additional vacation days. The Vacation Purchase Policy was introduced in response to employee feedback requesting additional flexibility to support work-life balance and family life.

In addition, we returned to an annual fitness challenge in 2022 and 2023, where our staff tracked their activity to journey virtually around the world and compete for fun prizes.

Mental Health and Wellness

The pandemic created an unprecedented source of stress, from family health worries to the challenges of working remotely. Our global Mental Health and Wellness program aims to help foster a supportive work environment for our staff, and to provide resources in addition to our existing employee and family assistance program.

This includes the Canadian Mental Health Association's Not Myself Today initiative, a confidential online program open to all staff globally that offers information, tools and activities to help understand the basics of mental health, have better discussions, increase emotional intelligence, address stress and build a generally more supportive and productive work environment.

We also host events such as an annual Mental Health Week with activities that include staff-suggested music playlists, taking time to chat with each other, mindfulness workshops, meditation, gratitude sharing and yoga; and an HSE & Wellness Fair with a variety of external and internal experts on everything from financial wellness to auto tire safety.

Anti-Discrimination and Harassment

Our Code of Business Conduct and Ethics is clear that discrimination or harassment against any individual with respect to race, religion, age, gender (including pregnancy and childbirth), marital status, family status, sexual orientation, national or ethnic origin will not be tolerated. Furthermore, discrimination against any activity specifically protected under the Code of Conduct, such as expressing good faith opposition to prohibited discrimination or harassment, or participating in making a good faith complaint of discrimination or harassment, will not be tolerated.

Our Discrimination, Harassment and Workplace Violence Policy ensures that all staff are provided with the opportunity to work in a supportive environment within which individuals are treated with respect, provided with equal opportunities, and kept free of discrimination, harassment (including sexual harassment) and violence from other staff, and that they understand the different reporting options.

Complaints or concerns can be raised via a staff member's supervisor, human resources, any member of senior management, or anonymously via our Whistleblower webpage, which is available 24/7 online. All complaints are reviewed, documented and resolved as per the process in our Fair Culture policy.

In accordance with the Fair Culture policy, we respect the confidentiality and fairness of the investigation process. In order to protect both, we do not report on numbers of complaints, investigations and confirmed incidents of specific types of complaint. In a smaller company such as ours, this reporting could lead to being able to identify outcomes for those indirectly involved in the investigation such as witnesses, which would not be appropriate.

Works Councils

Several of our business units benefit from Works Councils, which help guide the employee-employer relationship. Works Council members are elected by employees to represent the workforce in discussions with the company on changes that affect the work environment, job expectations or benefits. They can also bring forward suggestions, grievances and concerns.

Works Councils can be established by employee elections in France and the Netherlands in companies with more than 50 employees, and in Germany with more than five. Works Councils are in place in France, and in Germany for our field staff. In the Netherlands, the Works Council is eligible to form whenever employees wish.[102-41]

Diversity and Women in Leadership

We recognize the importance of diversity. Our Board Diversity Policy includes a commitment to maintain Board gender diversity at a minimum of 30%. We are also a member of the 30% Club of Canada, which aims to increase gender diversity on boards.

Our formal recruitment process for Board members provides a candidate screening step that includes reasonable efforts to secure qualified women for at least 50% of applicants and the interview pool. Our intention is to broaden each search process to ensure qualified women candidates are available for consideration. [102-24]

We continue to prioritize career development and succession planning for our female employees to foster a more diverse senior leadership team in the future. For details about our female mentoring program, see the Performance Management, Training and Development section.

We are also pleased to sponsor and attend events such as the Calgary Influential Women in Business Awards and "The Only One in the Room" board diversity panel discussion with DiliTrust, The51 and Board Ready Women.

Fair Culture

Ensuring that Vermilion has a positive, healthy and safe work environment is our top priority. That means it's essential to have fair and consistent procedures to review, document and resolve events or potential violations of company policies and guidelines or local laws. These Fair Culture policies apply to all Vermilion staff and third parties performing work in all of our business units.[102-16]

Fair culture is about understanding human involvement in relation to events in a way that:

- Encourages organizations to learn from their mistakes
- Identifies the underlying causes of events involving human error
- Fairly assigns responsibility and consequences to individuals and leaders following an event
- Rewards behaviors that meet or exceed expectations, and closely examines and addresses non-compliance; and
- Identifies appropriate organizational resolutions to address the underlying causes of events.

Our Fair Culture policies create a balanced approach to assessing organizational, leader and employee accountability, helping to align Vermilion with industry best practices and positioning us as a leader in creating a balanced and transparent culture.

Communication

Communication is critical to building a strong and respectful culture, where employees understand Vermilion's corporate goals and the key role they play in helping to achieve them, and where the company in turn understands what is important to staff.

We have a culture of open, two-way communication. Members of our senior management team make regular visits to our field and international business unit locations. Through the Great Place to Work survey, our people often tell us that they value the approachability of our leaders at Vermilion, and that they feel heard.

VETnet: Our corporate intranet (VETnet) is a key communications channel, offering both global and local news in English, French, Dutch and German. Content generation is shared amongst stakeholders from across the organization, focusing on corporate news, shared learnings, HSE and community investment activities in all our locations. Every VETnet page features a Suggestion button, which staff can use to make suggestions or raise concerns.

Town Halls and Communication from our Executive Committee. Our corporate town halls include both virtual and in-person events, held at least quarterly. Content includes health and safety updates, and operational updates from business units and key areas such as HSE and Community Investment, featuring leaders and staff from around the world.

These meetings are recorded and archived globally on VETnet so that staff can access them regardless of location and time. Confidential surveys provide staff with opportunities to raise questions and make suggestions to the senior management team, who participate regularly in a Q&A panel.

Confidential post-surveys provide staff with a forum for feedback on the effectiveness of the town halls, interest in the topics presented, and suggestions for future content. These components are an excellent way for questions, concerns and suggestions to be raised, as staff feedback is incorporated into ongoing company strategy discussions.

Technical Sharing. We ensure that learnings are shared via our Global Operating Best Practice team, which provides a company-wide communication platform to share insights and connect our staff, along with peer assists for our technical teams.

Measurement, Evaluation and Adjustment

Vermilion uses Workday, an integrated, web-based people information system that enables employees to easily and quickly manage their personal information online 24/7, including payroll information, while providing leaders access to required information on their teams. .[102-49]

We use a variety of indicators to ensure that our People programs are achieving our goals:

- Voluntary turnover rates
- Ease of finding qualified candidates
- Results from Great Place to Work and other staff surveys, including department and team workplans that respond to staff concerns and suggestions
- Monitoring and acting on staff suggestions
- Market surveys to ensure we remain competitive
- Evaluating changing legislative or regulatory requirements, and
- Gap analysis for performance metrics.

We adjust our People policies as needed to ensure we remain competitive with our peers, align to changing regulations, and respond to staff requests.

A Great Place to Work

Vermilion has demonstrated excellent results in the Great Place to Work Institute's® Best Workplaces competition, which we use as a tool for continuous improvement in our culture and people practices. We put the survey on hold in 2020 due to COVID-19, continuing to ask our staff for important feedback by switching to smaller, more specific and more regular staff surveys.

We reinstated the survey in 2022, earning recognition as a Best Workplace in Canada, Germany, United States and Australia, and gaining important insight into areas of strength and opportunity globally.

The rankings are based on the Institute's two-fold approach, which includes an independent assessment of our culture along with our employees' confidential responses to the Institute's survey. In part, we attribute these results to the importance we place on reviewing and addressing the staff feedback through the surveys.

These results also tell us what our people value about Vermilion — including competitive total compensation, opportunities for growth and development, and pride in how we give back to our communities.

Performance Management, Training and Development

Our performance management system, along with our focus on learning and development, contributes to our overall philosophy to support our people to develop not only the skills they need for their current job but those that will benefit them throughout their career.

Performance Management

Vermilion is committed to engaging and supporting employees as they identify and achieve career and development goals.

Our performance management program supports two-way communication between leaders and staff, and we aim for 100% participation for permanent employees.

Overall, the process includes:

- Setting clear expectations for performance
- Creating and communicating performance and development goals, and career aspirations
- Identifying opportunities to learn and grow
- Providing ongoing feedback
- Evaluating results and how they were achieved, and
- Recognizing accomplishments.[404-3]

Individual performance goals are tied to our long-term business strategy's six Matters of Importance, ensuring that employees know how their work supports the company, and how they contribute to our success:

- Extraordinary People and Culture
- Health, Safety and Environment (HSE) – Everyone, Everywhere, Everyday
- Financial Discipline
- Robust and Profitable Portfolio
- Business and Operational Excellence, and
- Integrated Sustainability.

KPIs include both standard industry metrics and internal measures of performance, and are discussed annually in the Information Circular.

The management-by-objectives process begins at the start of the year, when our people identify their performance and development goals, career aspirations and mobility interests through our Driving Excellence – Plan Forward process.

Feedback is provided via ongoing conversations throughout the year between leaders and staff, a mid-year checkpoint, and the Looking Back – Performance Review process at year-end.

Leadership

Our leaders are evaluated on an additional set of leadership attributes, including achieving results through teamwork, HSE leadership, managing and setting priorities, and demonstrating Vermilion's values.

Development

Providing opportunities for development is a critical element of how we engage with our employees, supporting productivity and contributing to staff attraction, motivation and retention.[404-2]

Our approach includes:

- Work experiences: on-the-job training through varied projects and roles
- Relationships: coaching and mentoring from others and connecting with external networks, and
- Formal training: specific technical and business education training courses and conferences.

We take a lifelong learning approach, combined with annual identification of specific performance and development goals for all permanent employees.

SUPPORTING OUR PEOPLE HELPS US TO RETAIN AND ATTRACT THE BEST TALENT IN THE INDUSTRY.

Engineers in Training
We have programs in place in several business units that provide rotating terms of training and exposure across various engineering disciplines for early career engineers.

Apprenticeships
Vermilion continues to participate in an industry partnership in Australia that has created a standardized education and training program to build a skilled, diverse and capable workforce for the future of the oil and gas industry. This covers those leaving secondary (high) school, and adults who already have a trade but are seeking a career change to become dual-traded and is in addition to Vermilion's own apprenticeship program. As of 2023, we have four people on staff through this program.

In Ireland, the Vermilion Energy Apprenticeship Program includes both on-job training at our Bellanaboy Gas Terminal and off-job formal courses through the Education & Training Board, Ireland. In 2023, we had two four-year apprentices working toward becoming fully trained Technicians.

International Experiences
Our international presence also provides selected staff unique opportunities to work on assignment, helping to broaden their operational expertise and understanding of our global operations while sharing key specialist expertise among our locations.

Female Mentoring Program

We are committed to workplace practices that support and recognize the distinct needs of our female employees. We are continuing our mentoring program that focuses on helping high-potential female employees develop their management skills and prepare for more senior roles. This program matches these employees with senior leaders at Vermilion, and includes identifying goals for their participation, regular meetings and sharing of relevant information, and check-ins.

Prioritizing career development and succession planning for our female employees fosters a more diverse senior leadership team in the future, which is a strategic objective for Vermilion, and supports employee attraction and retention. In 2022, 8.5% of our employees were involved in this program.

Leadership Development Program

To support our leaders, and in turn their teams, we have established a leadership development program with globally recognized content and self-evaluation opportunities that provide a consistent learning journey as our leaders progress in their careers across the company. This program provides standardized training to support our leaders' career development and to ensure that all of our leaders have a similar foundation from which to lead their teams.

Specifically, it provides four foundational pillars (LEAN): Learn (foundational leadership training, self awareness, situational leadership, navigating difficult discussions, cohesive teams, emotional intelligence); Elevate; (leadership exchange, mentorship, book club); Assess (360 feedback); and Discover (awareness of self and others in the workplace).

It is critical for us to provide relevant information that supports our leaders whether they are an existing leader, new to the company, or recently promoted into a leadership role. This includes helping them to understand roles and objectives, and how to support their people.

Ultimately, this provides strong leaders who are able to set the right direction, lead by example, inspire and develop others, and deliver the business and operational results that allow us to deliver energy production on a daily basis, along with long-term value to all of our stakeholders.

Ensuring that all of our leaders have a similar foundation from which to lead their teams helps provide a common language for expressing challenges and solutions, and supports equitable treatment of teams across the organization. In doing so, it supports employee satisfaction, attraction, productivity and retention. In 2022, 21% of our employees participated in this program.

Measurement, Evaluation and Adjustment

We use strong workforce and succession planning processes that identify company needs for skills, knowledge and experience, cross-referenced to our performance management process.

This creates an opportunity for us to identify potential career paths for staff within Vermilion, and areas where we may need to recruit externally for specific positions. The Great Place to Work and other staff survey feedback also provides input to our training and development activities.

Over the past several years, we have strengthened training offerings in such areas as HSE courses, and expanded our lunch and learn program to topics such as reserves, investor relations, Indigenous relations, and employee benefit programs. In addition we have had a strong focus globally on leadership development, including HSE leadership development.

We track answers to the question "I am offered training or development to further myself professionally" in every business unit through the Great Place to Work survey. This question provides a clear measure of employee engagement and satisfaction. We are also able to compare these responses to the training and development funding per business unit.

In addition, our ongoing evaluation has allowed us to target increased communication on key performance management topics.

Health, Safety and Environment

Health Safety and Environment Dashboard

HSE: Everyone. Everywhere. Everyday.

Our Safety SDGs:

Our Environment SDGs:

At Vermilion, our Health, Safety and Environment (HSE) approach reflects the integrated nature of these elements. The following sections highlight our overall approach, followed by specific health and safety and environment-related material.

In 2022, we met 100% of our corporate leading HSE Key Performance Indicators (KPIs).

Our 2022-23 HSE accomplishments reflect our progress towards realizing our HSE vision. These include:

HSE Culture

- Conducted the 2022 HSE Perception Survey globally with all business units and corporate, developing and communicating action plans
- Guided more than 10,200 hours of HSE-related training in 2022
- Completed an update of the HSE Leadership Training program
- Worked jointly with the Board HSE Committee to review and provide status updates for the HSE Scorecard for 2023

Environmental and Operational Stewardship

- Vermilion achieved a “A-” ranking for our CDP climate and a “B” for our water security submission; Vermilion was the only member of our peer group to score an “A-“ in climate. Our Supplier Engagement Rating in 2022 was “A”

Communications & Knowledge Management

- Implemented and continued to promote the International Oil and Gas Producers (IOGP) Life-Saving Rules to facilitate a standardized and highly efficient program across the company that brings awareness and tools to reduce risk of life threatening activities
- Developed and launched HSE Onboarding modules globally to build HSE competency and set expectations for new employees

Health

- Supported the Not Myself Today program focused on mental health and wellbeing
- Worked with the People and Culture team to plan and host our HSE and Wellbeing Fair in Q2 2023

Management Systems

- Completed the Process Safety Management System (PSMS) gap assessment and action plans for each BU
- Assessed the HSE Management System, capturing Best Practices as well as opportunities; corporate and BU teams are integrating the findings into the 2023 HSE Plan/Strategy with root cause analysis and contractor management as a focus

Our HSE Approach and Management

Our HSE Vision is an extension of our core values of Excellence, Trust, Respect and Responsibility, and reflects our commitment to conducting our activities in a manner that ensures the health and safety of our people and those involved directly or indirectly in our operations. This is Vermilion's highest priority. Nothing is more important than the safety of staff, partners, suppliers, communities and all those who work with us.

Protecting the environment immediately follows safety in our priorities. While this presents as a critical operational risk from an adverse environmental incident, it also offers important opportunities to improve technology and processes to both protect the environment and contribute to operational excellence and return to shareholders. [413-2]

We operate by the mantra of **"HSE: Everyone. Everywhere. Everyday."** because we believe that striving for a healthy workplace free of incidents is key to efficient and successful operations that will continue to generate strong returns to our employees, shareholders and the communities that we operate in. When it comes to HSE, protecting our people and the places they work, play and call home is what really matters.

HSE Management

HSE Policy

Our HSE Policy is also our promise. It applies to all Vermilion activities, and provides an overall commitment to key principles for managing health, safety and the environment. The policy, which is the basis for Vermilion's HSE objectives and targets, outlines the overall direction of our organization with respect to HSE and contains a commitment to continuous improvement.

Vermilion is committed to ensuring we conduct our activities in a manner that protects the health and safety of our employees, our contractors and the public. Our HSE Vision is to consistently apply our Core Values of Excellence, Trust, Respect and Responsibility. This results in a workplace free of incidents and ensures that our proactive culture and behaviours create a high-reliability organization where HSE is fully integrated into our business – it is our way of life.

Vermilion will maintain health, safety and environmental practices and procedures that comply with or exceed regulatory requirements and industry standards.

Our commitments to achieving strong HSE performance include:

- Maintaining an integrated Management System with clear objectives and expectations to identify hazards and manage risks
- Ensuring visible active commitment from leaders at all levels of the organization to meet our HSE performance targets
- Providing every employee and contractor with a safe and healthy workplace
- Ensuring we nurture our ownership culture where all employees and contractors have a high level of responsibility to HSE
- Prioritizing a culture where everyone is empowered to speak up and promote safe behaviours and environmental protection
- Continuously evaluating and improving our management systems, standards and operating practices and procedures
- Making a positive contribution to the protection of the environment and seeking improvements in the efficient use of natural resources
- Providing ongoing training and competency assessments to ensure safe operations
- Ensuring open and timely communication with all stakeholders, and
- Ensuring the resources necessary to support this policy are provided

Hazard awareness, risk reduction and environmental stewardship comprise an integral part of any job. This is a joint effort that requires continuous support from everyone who works at Vermilion. The protection of health, safety and the environment must be a key part of the planning and execution of every task. All those engaged in work for Vermilion shall be aware of this policy and conduct their duties and behaviours in alignment with these principles.


Health, Safety and Environment (HSE) Policy

HSE Roles and Responsibilities

Our HSE Policy is clear that HSE is the responsibility of every person who works for, with or on behalf of Vermilion, from our permanent employees to our contractors .

Structural responsibility for HSE rests with our Board of Directors, which maintains oversight of HSE performance through its HSE Committee, which has regular and direct communications with our Executive Committee and senior management teams. Management responsibility for HSE rests with all of our Executives and operationally with our Vice President, International & HSE, who leads strategy and performance. In addition, the leaders of each of our business units are responsible for HSE performance within their operations, supported by specialist HSE staff.

HSE commitment and leadership is engrained in Vermilion's leaders, through visible and active participation. They set the tone, provide the vision and resources required to achieve our HSE objectives, and actively participate to ensure the importance of HSE is well understood and a high standard of compliance is maintained. This is supported by our performance management system, which includes an HSE leadership objective for all leaders, connecting leader compensation directly to HSE and ensuring that HSE is viewed as a priority for every leader and every team in the organization.

We also strive to engrain safety and environmental awareness throughout all facets of the organization, not just in our field operations. We believe our HSE mantra emphasizes that keeping people and the environment safe isn't just up to the HSE or operations departments, but involves every individual, whether they work as a technician in the field, an accountant in the office, or as a volunteer in the community during a Day of Caring.

To support this, we hold a variety of meetings with participants that include our senior management team and HSE advisors from all divisions and subsidiaries, representing 100% of our staff; these include weekly management and operations meetings, quarterly meetings with the Board's HSE Committee that includes our senior leadership, and a monthly HSE Managers' meeting that focuses on sharing lessons learned from each of our operations.

HSE in Our Operations and Supply Chain

We require third-party contractors and sub-contractors – our vendors – to be HSE pre-qualified prior to commencing service work. This helps ensure that they have an HSE program in place that meets or exceeds our requirements. We also observe and interact with our vendors on an ongoing basis to ensure that they are adhering to Vermilion's HSE practices, procedures and rules. This is supported by our Contractor Selection and Management Standard, which provides industry best practice contractor management principles, guidance and a pre-qualification tool and questionnaire. It covers:

- Determining business unit level roles and responsibilities
- Conducting an initial risk assessment of business unit work activity
- Pre-qualifying contractors
- Assessing supervision requirements of contractors, and
- Managing risk through verification of contractors.

To support this work, we hold mandatory monthly HSE meetings in every field district that all staff (field and administration) attend and senior management routinely participate in. On a quarterly basis, the HSE district meetings are replaced by HSE-focused town hall meetings that include our vendors. This results in a better understanding of Vermilion's HSE requirements, and an improved understanding of where and how we can provide better support to our vendors.

Our site and work procedures also provide strong oversight of staff and contractor activities. For example, safety and environmental certifications, such as H2S and enclosed space training, must be current and in place; we track and monitor these for staff, and require proof of certification for vendor staff. Hazard identification is a key part of every job and as a result, Vermilion work permits are required in order to enter our locations, and registration is required on our roads and sites, to ensure that we know who is on site to do what work, and when. Appropriate Personal Protective Equipment (PPE) is provided by Vermilion or the contracting company as appropriate, and is a requirement to access our sites. Working conditions are also clearly identified and monitored, including maximum working hours per day (which include driving time to and from our locations).

In addition, staff and contractors must complete online training prior to arriving on site, to ensure they are familiar with our most important HSE procedures. In Australia, those traveling to our offshore platform must undergo further training, to support critical platform and helicopter safety procedures.

Our Contractor Selection and Management Standard and associated guidelines and tools includes specific activities to support HSE performance: for example, having the Vermilion staff member responsible for the vendor provide information and briefings on our Code of Business Conduct and Ethics and our HSE program requirements, including our High 5 personal safety initiative and site-specific hazard awareness.

5 Key HSE Focus Areas

We believe there are clear linkages between strong HSE performance and strong business performance. We focus on five key pillars of HSE performance to enhance our ability to advance our HSE priorities and reduce our risk, which helps us ensure worker and public safety, environmental protection and the delivery of superior business results — now and in the longer term.

HSE Culture

2030 Vision and Outcomes:

- The consistent and continual application of our core values results in an ownership culture at all levels of the organization. Culture drives our behaviour, resulting in a high reliability organization where HSE is fully integrated into our business; it is a way of life.
- We have a culture and attitude of ownership where all employees and contractors have a high level of personal responsibility
- The importance of HSE is communicated and demonstrated clearly and consistently from senior leadership at every opportunity
- Visible commitment from leaders at all levels of the organization – everyone is a leader

Communications & Knowledge Management

2030 Vision and Outcomes:

- Continuously learns and shares information to improve performance
- Values training and validates competencies
- Demonstrates reliable data systems, analysis, trending and generation of improvement actions

Health

2030 Vision and Outcomes:

- The H in HSE is defined and includes physical, mental and occupational health components
- Our organization identifies and provides mitigations for employee health risks

Management Systems

2030 Vision and Outcomes:

- Our HSE Framework is fit for purpose across the business and integrated into everyday business process and activities with a defined relationship to our Management Systems.
- A robust HSE Framework that has a broad array of systems, standards, practices and procedures to identify hazards and manage/reduce risk
- Demonstrates regulatory compliance
- Provides important organizational focus to low probability, high consequence events

Environmental & Operational Stewardship

2030 Vision and Outcomes:

- Robust auditing process that drives change in the application and integration of the Management System objectives and expectations
- Integrates sustainability policy and practices into business strategies and performance measures
- Considers that HSE and sustainable development have a direct correlation to business success

Our HSE Framework

Three Management Systems form our HSE integrated framework, which starts with our core values and extends to a robust set of Standards, Practices and Procedures. Our HSE Management System (HSE MS), Asset Integrity Management System (AIMS) and Process Safety Management System (PSMS) provide the formal structure that helps us foster a workplace culture where HSE is always a priority. The HSE MS manages personal or behavioural safety, while process or technical safety is managed through AIMS and PSMS.

These systems reflect industry best practice and ISO principles to ensure that HSE issues are systematically identified, controlled, and monitored.

In addition, our German business unit is certified to ISO 50001 for energy management, and our Ireland business unit is certified to ISO 14001 for environmental management.

HSE Management System

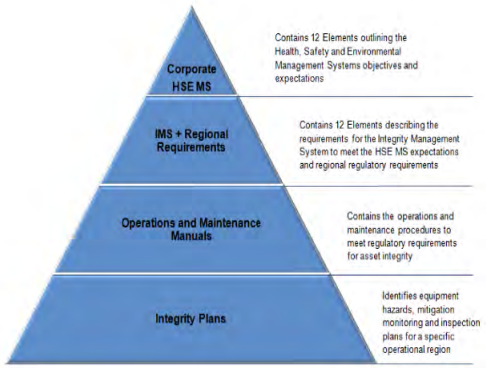
Our HSE MS provides the structure for the delivery of our HSE policy and commitments, including areas of corporate ownership and responsibility, with the objective to increase consistency across the organization in its development and implementation. By following the HSE MS's action steps of Plan, Do, Check & Correct – which provide a process for continual improvement – we identify and manage health, safety and environment hazards and risks associated with our company's global operations. Elements within the system include:

- Management, Leadership and Policy
- Corporate and Social Responsibility
- Risk Management
- Management of Change
- Training and Competency
- Operations and Maintenance
- Contractor Management and Procurement
- Emergency Preparedness, Management and Response
- Incident Management
- Security Management
- Documents and Records
- Performance Management

Asset Integrity Management System (AIMS)

AIMS serves as the framework of processes and procedures that helps us execute safe and reliable asset operation, and includes elements such as our Tank Integrity Management System, Pipeline Integrity Management System, and Pressure Equipment Integrity Management System. Through AIMS, we understand when work on an asset needs to be performed, how much it will cost, and where to start. Perhaps even more importantly, it helps us understand the impact and cost if no action is taken. Adherence to quality standards and practices, effective testing and inspection of equipment, quality of spare parts and repairs, and correct control of operating parameters are all within the scope of AIMS. A successful AIMS helps us improve operational safety, reduce spill volumes and frequency, increase overall reliability and life expectancy of assets through cost effective measures, assure proper management of high risk assets, implement best practices in managing our assets, and ensure compliance with regulatory requirements.

Like our HSE MS, it is a tiered, integrated documented system:



Process Safety Management System

PSMS serves as the "backbone" of how we manage process safety. This is a blend of engineering and management skills focused on preventing high impact, low probability events and near misses, such as fires, explosions, well blowouts and damaging releases associated with the loss of containment of energy or dangerous substances. It applies to our entire activity spectrum, including Production, Facilities and Storage, Construction, Acquisition and Divestment, Abandonment/ Reclamation/Remediation, Exploration, Drilling, Completions, Workovers and Transportation.

Our PSMS is comprised of 14 interactive elements that identify key responsibilities and requirements, and is based on a Plan-Do-Check Correct cycle. This helps us identify hazards, manage risk, eliminate or mitigate potential environmental impacts, operate safely and reliably, develop and share best practices, drive operational discipline, and support continuous improvement. In addition to our overlapping HSE MS Elements, PSMS also includes Process Hazards Analysis, enhanced Management of Change, Mechanical Integrity (integrates AIMS). Each of these Elements has specific Standards, Practices, Procedures and Guidelines to ensure the Element objectives and expectations are being met.

HSE Measurement, Evaluation and Adjustment

The foundation of our event management is our corporate Event and Environmental Management Information System (EEMIS), a web-based system that collects information about potential hazards, near misses and incidents and the actions taken to resolve them. This includes HSE, regulatory and public complaint incidents, covering immediate and root cause details, actions taken, and preventive measures to avoid repeat incidents. 403-2c

Because of the potential risk to our people, the public and the environment, our Executive Committee members are immediately informed of all high potential near misses, recordable injury events and serious incidents via our EEMIS. Lost time incidents and serious events are also reported to all staff throughout the company, focusing on learning and prevention.

Our data collection, methodologies and tracking have consistently improved over time. This baseline has progressed into trend analysis, which allows us to assess identified hazard exposures, root causes and Management System gaps, with particular consideration given to our top fatal risks. This work, augmented by our triennial HSE Perception Surveys, allows us to identify additional areas for improvement such as the implementation and ongoing support of the Life-Saving Rules.

Vermilion uses a variety of HSE performance measurements that provide timely information on the progress and current status of the strategies, processes and activities to manage risk and safety. These are reported internally on a real-time, monthly, quarterly and annual basis, with select metrics included in our sustainability reporting.

We focus on the development of meaningful leading indicators that tell us how effective we are at identifying and reducing hazards in the workplace. These include activities such as contractor observations, site inspections, finding closeout, compliance/regulatory inspections, management and staff participation in safety meetings, and site visits. They also measure the development activities influencing safety performance and continuous improvement.

We recognize that to adequately assess HSE performance, we need to take a balanced approach by also measuring outcomes. These lagging indicators include elements such as severe injury incidents, recordable injuries, motor vehicle accidents, liquid spills and release volumes, compliance and annual total recordable injury frequencies. However, we realize that lagging indicators are reactive in nature, can be a poor gauge of prevention, and sometimes may lead to falsely interpreting low injury rates as an absence of risks. We therefore prefer to concentrate on more proactive performance measures.

HSE Performance Linked to Executive and Employee Compensation

Our HSE KPIs are included in the calculation of our Corporate Performance Scorecards for:

- *Bonus, or 1-year performance (10% weighting), based on an industry-typical set of leading (prevention) and lagging (outcome) indicators including total recordable and lost-time injuries, motor vehicle incidents and liquid spills or releases.*
- *Long term incentive program, or 3-year performance (via the significant HSE contributions to emission reductions, abandonment and reclamation obligation reductions, and ESG rating agency scores which carry a combined 10% weighting).*

By including HSE as a metric in our scorecards, we ensure management continues to focus on HSE performance. As such, they directly impact all employee and executive compensation.

HSE Training and Communication

Vermilion's HSE Focus Areas of Communications & Knowledge management highlights continual learning and information sharing to improve our performance and helps validate competencies across the organization.

HSE Competency for Leaders

Vermilion is committed to ensuring all of our staff understand the importance of HSE and demonstrate this in their actions. All Vermilion's leaders – whether operational or functional – contribute to Vermilion's success by generating HSE awareness, identifying hazards, and understanding and mitigating the HSE impact of requests made of staff and operations. That's why our Performance Management system includes an HSE Competency for Leaders:

Demonstrates HSE Leadership:

- Visibly acts in accordance with all HSE policies, standards, procedures, legislation and core values
- Engages staff to identify and mitigate hazards and risks in order to fully integrate HSE into Vermilion's day to day culture, and
- Facilitates the sharing of HSE lessons learned.

We expect our leaders to act in accordance with our Core Values, HSE policies, Management Systems standards, procedures, and legislation, and to:

-
- Understand HSE requirements, make them a priority and integrate them into daily activities
- Walk the talk, not hesitating to intervene for the safety of all staff
- Report unsafe situations, be willing to be challenged and follow up on commitments; and
- Believe in continuously learning and take an active role in safety meetings, investigations and reviews.

We provide resources to help our leaders understand what success looks like. This focuses on:

- Our HSE Journey
- Human Behaviours
- Communication
- HSE Reporting and Investigations
- Hazard Recognition
- Risk Management, and
- New and Inexperienced Workers

Operator Competency

We have developed a comprehensive HSE training matrix for all technical positions at Vermilion globally – from field operators to senior professional staff – that identifies the associated mandatory and recommended HSE training requirements. Operator competency supports hazard identification and mitigates our exposure to a potential HSE event by ensuring that staff are properly trained to safely execute their daily tasks. A clear view of employees' competencies and training increases Vermilion's confidence that job functions are being performed safely and consistently within regulatory and Vermilion-specific policies, practices and guidelines.

We have advanced our Operator Competency Programs in Canada, France, The Netherlands and Australia. These projects have included knowledge identification, task inventory and procedures, SOP development and levels of assessment.

This work will help us fulfill our HSE vision of a healthy workplace free of incidents, but will also support more effective workforce planning, and increase employee satisfaction and productivity.

HSE Training

Additional HSE training takes many forms throughout our organization, and includes external certifications, internal courses and seminars on topics such as HSE leadership training, hazard awareness and management, functional process hazard and risk analysis, incident investigation, first aid, ergonomics, road safety, work management, regulatory updates and personal safety. In addition, our lunch and learn programs encompass HSE topics related to work and beyond, including safe driving and safety at home.

HSE onboarding for all new employees, introduced in 2022, provides training modules that introduce our HSE culture and values, and provide education on HSE policies and procedures.

HSE Communications

We believe that regularly communicating key HSE information supports our focus on culture, helping to create an environment of empowerment, trust and accountability. Our communications strategy therefore focuses on multi-layered, formal and informal communications via a variety of channels:

- Regular visibly active leadership and communication by our executive team
- Strong HSE messaging from our business unit leadership
- Accessible HSE information and documents available through our intranet and shared team sites
- Quarterly reporting of HSE KPIs to all staff via our intranet, and to our leadership, including the Board of Directors
- Mandatory monthly HSE meetings in every field district that all staff (field and administration) attend and senior management routinely participate in; quarterly, the HSE district meetings are replaced by HSE-focused town hall meetings that include our vendors (third party contractors)
- Regular HSE Leadership meetings at the corporate level, with participants that include our senior management team and HSE advisors from all divisions and subsidiaries, representing 100% of our staff
- Safety discussions in team meetings, led by both leaders and staff to encourage continuous focus on hazard identification and management
- Global HSE Perception Survey held every three years to seek feedback from all staff, in addition to business unit-specific Perception Surveys held more frequently, and HSE-focused questions within our annual Great Place to Work staff feedback survey
- HSE focus in all communications, including administrative matters, to ensure HSE messaging includes a focus on office as well as operational staff
- HSE stories on our intranet, with content encouraged from all staff members throughout the business
- Special events in our offices and field locations that focus on HSE, such as the 2023 HSE & Wellness Fair in Calgary, the World Day for Safety and Health at Work awareness day in Germany, and safe driving days in France

Safety Dashboard

HSE: Everyone. Everywhere. Everyday.

SDG	Target	Vermilion's Contribution
	3.6 Halve the number of global deaths and injuries from road traffic accidents	We have identified transportation, including driving, as one of our top fatal risks, and included it in our risk management priorities.
	8.8 Protect labour rights and promote safe and secure working environments for all workers	Safety of workers and communities is Vermilion's highest priority; we continually improve our HSE Management System to support this, and report robust KPIs annually.

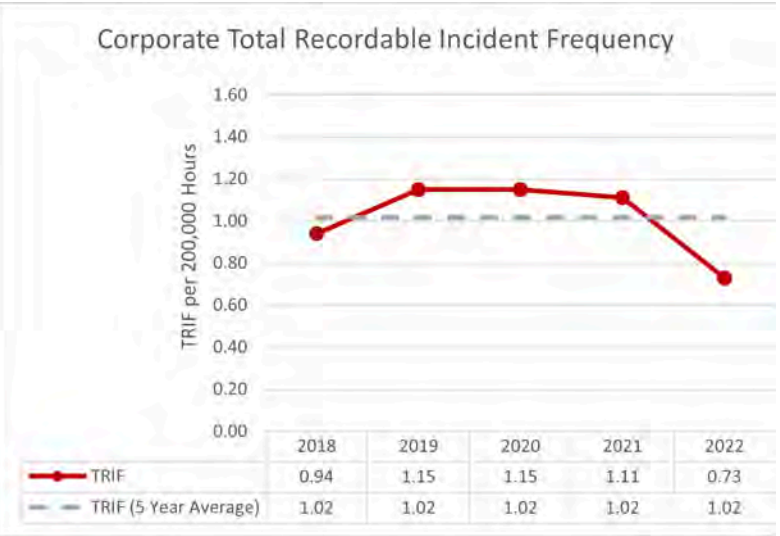
Total Recordable Injury Frequency (TRIF)

TRIF based on incidents per 200,000 hours is shown from 2018 to 2022 and as a 5-year average. In this period, we have had a number of acquisitions that required us to integrate new operations into our business, including several that required implementation of our higher HSE standards.

COVID-19

Vermilion continues to monitor health and safety concerns due to COVID-19, focusing on maintaining a safe, healthy workplace for both field and office staff while ensuring business critical activity continues. Our teams work together to evolve comprehensive practices, procedures and communications to help our people protect themselves and each other.

We have returned to a more normal work environment, including a remote working policy that provides for 2 flexible location days per week, and we continue to emphasize mental health and ergonomic concerns to support our people no matter where they are working.



Commitments and Progress

2021 Targets	2022 Targets	2023 Targets
Implement additional elements of the Environmental and Event EEMIS globally	Conduct the triennial HSE Perception Survey globally	Develop targeted action plan to focus on recordable injury and motor vehicle incident reduction
100% achieved	*100% achieved*	*In progress*
Complete Process Safety Management System document with roll out and training	Complete Process Safety Management System document with roll out and training	Continue focus on Process Safety Management System document through gap assessment
In progress	*In progress*	*In progress*
Update Fatal Risk Program using the Life-Saving Rules program	Re-apply the Corporate Compliance and Assurance Standard	Continue focus on Life-Saving Rules by rolling out Start Work Checklists
100% achieved	*100% achieved*	*In progress*
Update 2030 HSE Strategy with short and long-term action plan and communication plan	Review and update the HSE Leadership Training Program	
100% achieved	*100% achieved*	

Our Approach to Safety

At Vermilion, we are committed to our vision of **HSE: Everywhere. Everyday. Everyone.** We are focused on ensuring everyone who comes to our locations returns home safely every day.

Management

In addition to our overall HSE Framework that is made up of our Core Values, Vision and HSE Policy, supported by our HSE Management System, Asset Integrity Management System and Process Safety Management System, we have established practical tools and processes that are specific to the protection of the health and safety of our workers and our communities.

In particular our **Operational Risk Management Standard** provides a consistent, systematic approach to integrating risk assessment (identification, analysis and evaluation), risk treatment (tolerability, mitgation and management action plans), risk acceptance, and risk monitoring and review into all parts of our business.

This is supported by our **Contractor Selection and Management Standard**. This provides requirements for hiring and managing contractors and sub-contractors (contractors) to conduct work, deliver goods, or supplies services to Vermilion, including the minimum requirements to identify, evaluate and approve contractors, and describes the phases of the contracting lifecycle requirements using a risk-based approach, including pre-qualification, supervision and verification.

Our **Corporate HSE Compliance Assurance Standard** provides a set of audit and assessment requirements, including intended scope, frequency, objectives and stakeholders for each.

Public Safety and Emergency Response Program

We understand and accept the high expectations placed on us by our stakeholders to ensure Vermilion recognizes, considers and mitigates potential safety impacts on the residents in the communities in which we operate. Ensuring public safety has been, and will continue to be, our number one priority. This is our license to operate.[413-2]

We have communication plans in place throughout our global locations, including outreach to our communities and nearby landowners. For example, our Corrib operation in Ireland includes online community emergency response information for both the Corrib Gas Onshore Pipeline and the Bellanaboy Bridge Gas Terminal.

We follow the globally accepted Incident Command System (ICS), which applies to all kinds of emergencies, large and small. It is applied consistently with local emergency responders and across each operating area, and provides a common organizational structure and communications strategy to aid the management of resources.

Exercise Zephyr

In 2022, we participated in a major exercise in Australia based on a loss of well control incident originating at a fictitious petroleum facility. Facilitated by the industry's Australian Marine Oil Spill Response Centre, who partnered with the Western Australian Department of Transport as the responsible authority for emergencies in the state, the exercise involved more than 250 responders from our industry peers, regulators, response agencies and specialist organizations.

The exercise was conducted over four continuous days across two locations 2,000 kilometres apart: Perth (base for Incident Command Teams and our own Australian office) and Karratha (base for Field Response Teams). It provided an excellent opportunity for government and industry to test their response readiness and cross jurisdictional coordination, and we were pleased to play our role.

Exercises in Context

Simulations and exercises are organized throughout the year to train our people and test the effectiveness of our emergency response plan (ERP) under various scenarios.

We also evaluate the effectiveness of every exercise and ERP that is conducted.

Level 1 ERP
Table top exercise – Includes discussion of various emergency scenarios, cross training of ICS roles and responsibilities.

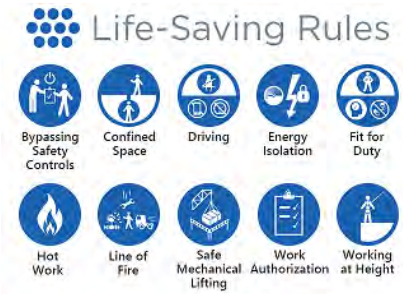
Level 2 ERP
In-Country Operations-only Simulation – Includes the mobilization of business unit staff, first level of scenario role playing.

Level 3 ERP
Simulation includes Vermilion's Corporate Command Team Activation. Corporate Command owns corrective action logs and improvement schedule. Role playing of all Vermilion personnel involved.

Level 4 ERP
Simulation includes Vermilion's Corporate Command Team Activation and external parties (other industry, emergency responders, government authorities, other external stakeholders).

Life-Saving Rules

We have implemented the IOGP/ Energy Safety Canada Life-Saving Rules, to focus attention on key actions that will prevent fatal injuries during higher risk activities. These rules are specific to the oil and gas industry, and provide our staff and contractors with consistent actions and approaches, no matter which worksite they are working on.



This is an evolution of our previous work on identifying and managing fatal risks, and incorporates strong management programs, including hazard identification and risk management, competency and risk-specfic training.

For example, we hold regular road safety training and awareness events in our business units, and we monitor proactive indicators of road safety in our fleet vehicles, including overall speed and hard braking events, in addition to outcome indicators such as incidents.

Vermilion HIGH 5

We developed this personal safety awareness program as part of our commitment to continuous improvement, including reducing workplace-related injuries. The tool provides a simple checklist of five questions to confirm if it is safe to proceed with a task, or if we need to stop and regroup.

If the answer to any of the preceding five questions is no, all work must be stopped, the task reassessed using a hazard-risk-mitigation methodology, and all required actions implemented to ensure a safe workplace. Only once the answer to every question is yes may work start or resume.

Tools such as these have been rolled out globally to our staff and vendors. They don't replace any design, technical and administrative layers of protection that we already have in place, but are an additional layer of defence to achieve safe performance. They can also live beyond the work site: we encourage our staff to use the tools in our offices and everyday lives, increasing awareness of possible hazards that can impact safety.

Safety Case Approaches

Regulators in Ireland and Australia use a Safety Case approach. In Australia, for example, our Wandoo facilities have a Safety Case and Environment Plan that are assessed and accepted every 5 years by the Regulator, NOPSEMA to ensure:

- The identified hazards and potential impacts are suitable for the Wandoo Facilities
- Hazards are assessed and managed to as low as reasonably practical, and
- A management system is in place to support and monitor implementation of hazard controls on a continual basis.

The Safety Case is focused on the prevention of major accident events. Vermilion is required to identify, assess and manage major accident events through a series of formal safety assessments, including flammable hazards analysis, explosion risk assessment, and Escape, Temporary Refuge, Evacuation and Recovery Analysis.

The Environment Plan addresses the environmental impact from operations, well construction and oil spill response and includes:

- Wandoo Facility Environment Plan
- Wandoo Well Construction Environment Plan
- Wandoo Field Oil Spill Contingency Plan

The Safety Case and Environment Plans require engagement with relevant stakeholders, including our workforce and those that may be directly impacted by our day-to-day activities.

Continuous Improvement

We constantly look for ways to use technology to reduce risk and increase safety. One example is the commissioning of Re-Gen Robotics to clean two 15-metre tanks at our Corrib facility in Ireland. The robot cleaner was adapted to our system, and provided an auditable record of its actions. The use of robotics reduced the tank shutdown by half, and, importantly, meant that no human had to enter the vessels. We also use robots for inspection, again increasing efficiency and limiting time in tank.

We are also using drones to make visual inspections more efficient and safer. Equipped with high-resolution cameras and multiple sensors, they are replacing time-consuming and potentially hazardous manual inspections. Some of our staff are now certified drone pilots, providing our teams with real-time data for decisions on asset management, site planning, environmental monitoring and maintenance.

In Canada, we have installed approximately 800 “WatchDog” devices: hardware devices that attach to a wellhead and connect sensors, a camera, solar batteries and a modem to a cloud-based web platform. In addition to providing remote monitoring for a well’s performance, these devices can detect leaks and other events, flagging them for our staff who can respond and remedy quickly and often remotely. This reduces potential spill volumes, and also greatly reduces driving time for our operators, who would otherwise have to visit the well sites, thus also making their work safer.

Measurement and Evaluation

Vermilion uses a variety of safety performance measurements that provide timely information on the progress and current status of the strategies, processes and activities we use to manage risk and safety.

We focus on developing meaningful leading indicators that tell us how effective we are at identifying and reducing hazards in the workplace. These indicators also measure development activities, influencing safety performance and continuous improvement. [403-1]

To adequately assess safety performance, we take a balanced approach by measuring outcomes such as recordable injuries. However, such lagging indicators are reactive in nature, can be a poor gauge of prevention and sometimes may lead to falsely interpreting low injury rates as an absence of risks in the workplace.

We therefore prefer to concentrate on more proactive measures of performance.

Our leading and lagging KPIs are published monthly on our intranet to allow staff to follow their progress on hazard awareness and risk management. The KPIs also contribute to our corporate performance scorecard, thereby influencing short and long-term incentive compensation for all employees and executives.

As part of our overall safety management processes, we fully investigate all incidents and near misses, and implement corrective actions, guided by our Fair Culture policy. We also communicate lessons learned across our business units to continuously improve our performance.

External verifications include Equitable Origin’s EO100™ Standard for Responsible Energy Development, for our West Pembina sites in Alberta, the Business Working Responsibly Mark for our Ireland Business Unit, and the AFNOR “Committed” label in our France Business Unit (the latter two are based on ISO 26000).

HSE Perception Survey

Each of our employees and contractors plays a critical role in our HSE performance, and in establishing and maintaining a safety-oriented workplace. We therefore conduct HSE Perception Surveys every three years, confidentially surveying our staff to learn about their perceptions of 10 overarching safety climate factors:

- Management Commitment
- Team Functioning
- Morale
- Supervisor Commitment
- Incident Outcomes
- Personal Responsibility for Safety
- Organizational Commitment
- Fair Culture
- Safety Procedures

The survey:

- Provides a snapshot of staff perceptions about how safety is being managed
- Tracks the health of our Safety Culture over time
- Encourages employees and contractors to participate in and contribute to safety programs and initiatives
- Communicates throughout Vermilion our key strengths and areas for improvement, and
- Feeds into the HSE Plan and focuses the organization on critical items, ensuring a practical program

To date, we have conducted surveys in 2013, 2016, 2019 and 2022. This provides the timeframe required to clearly understand the outcomes, and effectively plan and implement the actions required to respond to or address the findings.

All surveys received a staff response rate of over 85%, creating a solid baseline measure of staff perceptions of how we are managing safety.

In all four surveys, all factors received favourable scores (above 3.5/5), with particular strengths in personal responsibility for safety, and the commitment to safety at the management and supervisor levels. Staff identified opportunities for improvement as well, and we continue to use those learnings to identify focus areas.

The 2013 survey resulted in the implementation of our Fair Culture policy, in response to feedback that Vermilion's incident investigation and resolution process was not sufficiently clear.

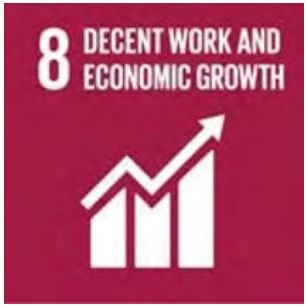
Other examples of actions taken as a result of the survey feedback include advancement of our Competency Programs and updates to our Event Management Practice.

The 2016 survey highlighted training and competency programs, along with communications, as areas where we could improve, including making HSE documents and procedures easier to find, and improving our incident management software. As a result, we began a project to identify alternatives for and selected a new Event and Environmental Management Information System (EEMIS).

The 2019 survey showed overall positive trending, while identifying areas to improve that included making our safety procedures easier for people to understand and use and additional focus on training and development, communication, and mental health. We successfully developed and implemented our new reporting software, and focused on communicating workplace and personal safety.

In 2021, our People and Culture department launched Vermilion's mental health and wellness program, including a business-wide, online mental health support program called Not Myself Today, which provides 24/7, confidential access to a wide range of education and resources for staff and leaders.

We are now implementing the detailed findings on communication and training from our 2022 survey, for use in the action planning process across the company.



Environment Dashboard

HSE: Everyone. Everywhere. Everyday.

For more information on climate-related environmental reporting, including emissions, commitments and progress, please see our TCFD section.

SDG	Target	Vermilion's Contributions
	6.1 Ensure the availability and sustainable management of water for all	We focus on water stewardship, both in our marine environments (6.6) and from a conservation perspective (6.4). We report on water metrics (6.3), and we participate in multi-stakeholder partnerships (6.1 & 17.17)
	7.2 Increase the share of renewable energy in the global mix	Vermilion is developing expertise in geothermal energy projects while also focusing on reducing energy consumption through infrastructure renewal in all of our business units.
	7.3 Reduce energy consumption	
	12.1 Ensure sustainable production patterns	Avoiding or mitigating the environmental, health and safety-related impact of our production processes is integral to Vermilion's approach to responsible and safe operations. We are incorporating sustainable development into our business strategy (12.1), striving for increased energy efficiency (12.2) and expanding our sustainability reporting (12.6).
	12.2 Achieve the sustainable management and efficient use of natural resources	
	12.6 Encourage companies to adopt sustainable practices and integrate sustainability information into their reporting cycle	
	13.1 Combat climate change	We are proactively identifying risks and opportunities, reporting on emissions and other key data, setting internal carbon prices, and working on target setting.
	14.1 Conserve and sustainably use the oceans for sustainable development	We comply with or exceed regulations regarding wastewater and marine environment management, proactively improving western Australia's capacity for oiled wildlife recovery.
	14.2 Sustainably manage marine and coastal ecosystems	
	15.1 Protect, restore and promote sustainable use of terrestrial ecosystems	Vermilion has environmental impact assessment procedures that comply with or exceed all regulations in our business units, and we proactively work to ensure our operations protect local biodiversity
	15.5 Take urgent action to reduce or halt biodiversity loss	

Our Approach to Environmental Stewardship

Protecting What's Important

The diversity and beauty of the regions in which we operate and live are daily reminders of the value of protecting the environment. To do so, we not only operate in compliance with all environmental regulations across all business units, but strive for continuous improvement in HSE and sustainability. In addition to continuing to build processes to meaningfully track and understand our sustainability impacts, we are committed, wherever feasible, to use processes that will reduce our environmental impact.

This is embodied in our sustainability strategy, which includes:

Water

We recognize water as a basic human right, and as a vital resource that is shared among many stakeholders in our communities. We are therefore committed to protecting both the supply and the quality of water sources in our areas of operation by:

- Proactively preventing harm and supporting healthy surface and groundwater bodies
- Reducing potable and freshwater usage to the lowest level practical, and
- Taking a lifecycle and circular economy approach to water, exploring opportunities to reuse and recycle products such as produced water

Asset Retirement

We are adapting our long-term Asset Retirement Obligation management to include revitalizing or reusing assets to benefit our environment and our communities.

Biodiversity

We are focusing on protecting the species and habitats around us by proactively identifying biodiversity risks and opportunities, and implementing associated plans.

Management

In addition to our HSE Management System and Risk Management process, we have established additional management tools and processes specific to environmental stewardship. 304-1 304-2 413-1

Environmental Impact Assessments

We conduct Environmental Impact Assessments and implement management plans as required by regulations in all business units, and wherever needed based on conditions in our operating locations. This includes, but is not limited to, the following examples:

Canada: We include a desktop review and environmental scouting report as part of our project development process. This identifies areas and species of concern. Over the years, this has helped us identify a Key Wildlife and Biodiversity Zone for ungulates such as deer, elk and moose. During the critical winter periods, when food sources are lower quality and less accessible due to cold temperatures and deep snow, these animals survive by, in part, minimizing their energy expenditures through reducing their movements in their winter ranges. We therefore ceased operations, including drilling, in this location between January 15 and April 30, to minimize disturbance during this critical period. In addition, we have identified various bird species, such as swans and sandhill cranes, which we have protected by moving our planned site.

France: In addition to completing EIAs, we collaborate with external consultants and experts to ensure that our activities support scientific research whenever possible. This resulted in a new species of marine worm being identified off the coast of France. Vermilion's role in providing both data and material were noted in a scientific paper that identified the worm, named Auchenoplax worsfoldi, which has now been added to the World Register of Marine Species.

The Netherlands: EIAs are part of the permitting process, and are carried out prior to an environment permit being granted for exploratory drilling and for production. In addition, we work closely with environmental experts to guide our activities to ensure that we do not disrupt or disturb wildlife migration, feeding or breeding patterns. In some cases, this means that we delay or reroute development. This includes our Diever-02 well site, where we delay pipeline construction and other activities annually to ensure we do not interfere with nesting birds.

Germany: EIAs are part of the permitting process. In 2020-21, the oil and gas industry in our region worked with the government to commit to drilling no new wells in water protection areas, which are designated areas to protect the groundwater. We are also part of a joint industry-government working

group that is addressing additional technical measures related to environmental and groundwater protection.

Central and Eastern Europe: We are evaluating exploration opportunities available on our land base. As we complete these assessments, we will present exploration activity plans to partners and authorities as well as public and community stakeholders. These plans will reflect our efforts to minimize the environmental and social impact of our activities. EIAs are a critical element of the acceptance and permitting process, and we will ensure that they are conducted in the most rigorous manner feasible.

Ireland: As part of the construction of the Corrib gas pipeline and terminal infrastructure, a detailed EIA was conducted; for new activities, an EIA screening is conducted by an independent expert. Should the screening identify that significant effects on the environment are likely, a full EIA is conducted. The original EIA resulted in a biodiversity action plan that spanned the years 2014 to 2019. This has resulted in a project design that has demonstrated a Net Positive impact for biodiversity by 2020, including the protection and monitoring of habitats and species, and a commitment to consultation with stakeholders and other interested parties. We are currently working within our second Biodiversity Action Plan (2021-2026) - highlights are included in our Biodiversity section.

Australia: We have developed a detailed environmental impact assessment of the marine environment around our operations on the northwest shelf of Australia's west coast, including our direct permit area and a wider surrounding area, where either planned or unplanned events may create impacts. In addition to analyzing the biodiversity of the area, current and traditional uses, and areas of significant environmental value and cultural heritage, we have conducted a risk assessment workshop that considers the regional environment and the local marine ecosystem. The resulting environmental plan ensures that our systems, practices and procedures meet the plan's defined performance outcomes and standards and all relevant legislative requirements. The commitments associated with these outcomes contribute to ensuring that the residual environmental risk associated with our operations is as low as reasonably practical. We have also developed a range of performance standards (controls) that will be implemented throughout the life of the Wandoo field to ensure the potential environmental impacts identified through the risk assessment are managed appropriately. In 2021, the latest revision to the Wandoo Facility Environment Plan (which can be found here) was accepted by NOPSEMA, the regulator.

United States: We conduct comprehensive EIAs in our US locations that include cultural and paleontological surveys prior to any ground disturbance. We are vigilant during construction, and committed to having paleontologists and other scientific experts on hand to ensure we not only meet all regulations, but also take care of fossils or other important items. In 2015, that's how we found a triceratops skull as crews started to build out one of our well pads. The skull was moved by experts to the Denver Museum of Nature and Science.

Project Development and Management

Our project management framework includes issues related to climate change and sustainability such as regulatory change, water use, emissions reduction and footprint reduction to reduce ecosystem fragmentation. We begin by ensuring compliance with regulatory requirements and standards, and alignment with Vermilion's economic assessment criteria at the investigation phase of the project. Other factors include:

- **Employee Engagement:** Staff feedback is taken into account by the groups responsible for managing emissions quantification and sustainability initiatives.
- **Financial optimization:** Emissions reductions and other environmental stewardship impacts are driven by the optimization activities in our business units, and identified at the project assessment stage for both new and existing construction. Added value and responsible, sustainable development of resources are primary investment drivers. The activities are typically identified by the in-country technical teams.
- **Multiple benefits potential:** Many initiatives that support Vermilion's operational excellence and stewardship also have the effect of reducing emissions and other environmental impacts, through the reduction of fuel, energy or water, or the protection of land and biodiversity. These benefits are identified during the investigation phase of a project assessment.

Our global technical teams collaborate on current and upcoming sustainability initiatives, and bring in technical expertise to augment project execution.

Measurement & Evaluation

Internal Approach: We assess this based on a framework of measurement, reporting and adjustment, including the following:

- A comprehensive climate and environmental risk matrix analysis,with key environmental performance indicators that we monitor monthly and report on annually
- Technology and process assessments, including operational and engineering reviews aimed at increasing efficiency, and reducing emissions and cost requirements
- Anticipated and actual legislative and regulatory change assessments, with potential impacts, and
- Emissions Long-Range Planning tool

External Approach – Regulatory and Reporting Framework: The following table illustrates key reporting and regulatory bodies under which we operate:

Location	Reporting Body	Actions
All Business Units	CDP Climate Change and CDP Water Security	We initiated reporting under CDP Climate in 2014, beginning with a base year of 2012, and CDP Water in 2020, with a base year of 2019.
All Business Units	Montreal Protocol	We have phased out Freon-22 in our C3 cooling plants in Netherlands to reduce the risk that this substance could be released.
Canada	Greenhouse Gas Reporting and National Pollutant Release Inventory reporting under the Canadian Environmental Protection Act	Federal Greenhouse gas reporting regulated by Environment and Climate Change Canada for facilities over 10,000 tonnes CO2e per year. Vermilion has around 10 facilities reporting into this regulation, dependent on facility production and activity levels.
Canada	Greenhouse Gas Pollution Pricing Act	Vermilion has opted-in to both the Alberta TIER program and to the Saskatchewan Carbon Tax output-based pricing system, which directly interact with the Federal GGPPA
Canada	Alberta's Directive 060 Methane Regulations Alberta's Directive 039 Alberta's Environmental Protection and Enhancement Act	Regulation aimed at reducing vented emissions from process equipment, tanks, and other field related sources, also requiring upgrades to low or no emission process equipment. Fugitive emission leaks are also addressed in this regulation for all production. Regulation directed at reducing and eliminating the release of benzene emissions from glycol dehydrators Regulates large facilities under a formal approval process, and outlines requirements for conservation, water management, substance release, and waste management
Canada	Saskatchewan's Directive PNG036 & PNG-017	Formerly Directive S-10, this provides regulatory requirements for reducing flaring, incinerating and venting of associated gas, including financial penalties for methane emissions in excess of defined limits.
Europe	European Union Emissions Trading Scheme	Our European operations meet the reporting threshold (total thermal rated input capacity greater than 20MW) only in Ireland. Under the revised EU ETS Directive in effect 2021-2030, it is anticipated that there will be an active market and consumers for the offset credits generated via our sustainability initiatives that may provide opportunities to generate certified energy reduction/offset credits.
France	Register and the Annual Reporting of Emissions and Transfers of Pollutants and Waste	We report operations water, waste and greenhouse gas (GHG) information annually.
France	Agreement to End Routine Flaring by 2030	Projects are being identified on an ongoing basis that will result in increased operational efficiency and a reduction in methane and VOCs once implemented.
Australia	National Greenhouse and Energy Reporting Act (2007)	We report under the robust emissions accounting required by this Act, and have examined three potential carbon taxation pricing scenarios and budgeted the costs associated with compliance. No carbon tax applies to Australian production at this time.
United States	Environmental Protection Act (EPA)	Vermilion's United States operations comply with the EPA requirements associated with stationary engines and holds permits to operate which includes emissions testing, inspections and triennial reporting requirements across our operation.

Water Stewardship

Environmental stewardship of the planet's water resources includes two key focus areas for Vermilion: protection of water bodies, including oceans, lakes and rivers; and increasing our water efficiency. We support this using key performance indicators on water use in the Performance Metrics section of this report and our participation in the CDP Water Security assessment.

Our Approach to Water Stewardship

Vermilion recognizes that water is a shared resource. We therefore take seriously our responsibility to protect the water bodies close to our operations, whether they are on the Bordeaux coastline or Parentis Lake in France, or off Australia's northwest shelf. Although freshwater use represents a relatively small percentage of our annual water withdrawal, water stewardship is a core element of our sustainability program. We take a location-specific approach, complying with or exceeding water and operating regulations in all of our business units. This includes assessing areas of potential water stress, identifying water-related risks and potential consequences, and protecting aquatic biodiversity. We also monitor water as a risk factor, understanding that a decreased water supply due to climate change, for example, would impact our operations. As a result, we emphasize:

- The efficient use of all water
- The prioritization of non-potable water over potable water, and
- The consideration of our communities and their concerns.

Identifying and Managing Risk

Vermilion uses our Enterprise Risk Management (ERM) System, with its Corporate Risk Register & Risk Matrix, to identify, assess & monitor new & emerging climate-related risks on an ongoing basis, updating the Register as needed but annually at minimum. We also use tools such as WRI Aqueduct and WWF Water Risk Filters to identify water stress in areas as it relates to our operations and value chain partners and ensure that the information is fed into operational development strategies to protect water bodies and increase water efficiency. We use regional government databases whenever available to us.

Based on our ERM system, our long-range planning and business need, we assess water-related risks that include:

- Water availability
- Water reporting and protection regulation changes by governments and regulators
- Water protection measures
- Reputational issues related to water protection and use

The results of our assessment annually feed into our risk / opportunity management process to ensure we have a sound data foundation to support responsible decisions. Detailed analysis of these risks, including potential impact, financial implications, management methods and cost of management, support our business strategy for managing water.

The majority of Vermilion's water withdrawals (84% in 2022) are produced water associated with conventional oil production, primarily in Canada. Through proactive water management, Vermilion is able to secure water for future activities, while minimizing risk and impacts. We prefer to use brackish rather than freshwater in our operations; however, the use of freshwater aquifers is unavoidable in some locations. The availability of freshwater, both now and in the future, is therefore considered important to our operational activities. While alternatives are available now and are expected to continue to be available based on government licensing of water supplies in our regions, there would be an economic and, potentially environmental (transport), impact should we need to seek sources other than our current options.

In addition to working within the existing regulatory frameworks in our operating areas and engaging with local, field-level environmental and fisheries officers with respect to water use and availability, Vermilion's surface land and community relations groups also actively engage with other stakeholders with respect to water-related matters. Landowner consultation is an integral part of all drilling programs and includes dialogue with respect to current water uses and vulnerabilities. Where practical, and particularly in agricultural areas, landowners are often engaged in the provision of freshwater to limit risk and facilitate mutual benefit. Open attendance (e.g. townhall) events are also routinely hosted by Vermilion's operations and community relations teams which provide a forum for stakeholder discussion and communication of water-related concerns.

Vermilion's field operations and joint-venture teams are also in regular communication with other industry operators, either through formal industry associations (e.g. CAPP) or ad hoc engagements, which

allows for a direct sharing of water-related activities and concerns, as well as identification of collaborative opportunities.

We require 100% of third-party contractors & sub-contractors to be HSE pre-qualified prior to commencing service work. This includes water-related issues, ranging from compliance with regulations to groundwater protection from spills. This helps ensure they have an HSE program in place that meets or exceeds our requirements. We observe & interact with our vendors on an ongoing basis to ensure that they are adhering to Vermilion's HSE practices, procedures & rules. This is essential because we operate in regions with strong regulatory approaches to water and we prioritize the safety & environmental protection of our communities. Our site & work procedures also provide strong oversight of staff and contractor activities. We also conduct a global supply chain risk assessment, analyzing risks based on geography, industry and operations, including climate, environmental and water policies, for suppliers with > $1MM spend.

Operationally and environmentally, we continue to work hard to establish the most efficient and sustainable ways of sourcing and reusing this critical resource. As the single largest component used in hydraulic fracturing operations, water is essential to developing many types of oil and gas reservoirs, particularly in North America. Our semi-conventional development activities are significantly lower frac intensive, however, requiring much lower volumes of water. [303]

Assessing Water Stress

Reflecting our activities as an upstream oil and gas producer, water is accessed within all of Vermilion's operational areas for various uses, including drilling, well completion (fracturing in North America only), voidage replacement, enhanced oil recovery and dust control.

As part of our corporate risk evaluation process, which prioritizes water, we recognize that several water stress assessment tools, including the Water Resources Institute (WRI) Aqueduct tool and World Wildlife Fund (WWF) Water Risk Filter, identify some of our operating areas as water stressed. However, based on our field-level observations and monitoring programs, regulatory communications and interactions with other industrial, agricultural and domestic water users, none of our operating areas are at this time deemed to be under water stress in the context of our operations.

Several factors are considered when evaluating water stress within our operating area, both in terms of water availability and the risk our operations may present to sensitive or region-critical water resources. In general, regulatory oversight of water use in all of our operated areas is well developed, with allocation or diversion licensing requirements that consider other water users and the capacity of the resource (surface and groundwater) to support the intended withdrawals. Regulatory authorizations for groundwater withdrawals commonly involve an assessment of aquifer yield as part of the licensing process. Longer-term (i.e. multi-year) diversion licenses typically include a requirement for ongoing aquifer monitoring to ensure that the withdrawal, or collective withdrawals of multiple users, is not adversely impacting the reservoir with time.

Authorizations for surface water withdrawals typically set limits with respect to maximum allowable drawdown and include additional provisions (e.g. inlet screening, access requirements, etc.) to mitigate risk to aquatic organisms and habitat. Limits with respect to the permitted withdrawal volumes and recovery rate are commonly stipulated in the withdrawal authorizations and are enforceable under regulation.

Should our ongoing monitoring and stakeholder engagement activities indicate that an acute or chronic water stress condition is evolving in any of our operating areas, we would further assess the risk presented to, and by, our operation and would implement appropriate mitigative measures. Depending on the area circumstances, this could include sourcing water from outside of a water- stressed area, switching to drilling fluid systems that do not require freshwater, implementation of additional risk management measures to monitor and safeguard vulnerable water resources (surface and groundwater) and, potentially, short or long-term suspension of operations within the water- stressed areas.

Water Management Plans

Overall, Vermilion's freshwater intensity is low compared to our peers; however, as part of our corporate water management plan, we have identified two regions where this intensity is either higher than other of our operations (Cazaux, France) or expected to increase over time (Mica, Canada).

Our water management plan for Cazaux includes a decision tree that ensures freshwater is the last option we use to increase waterflooding in the field, and a detailed impact assessment to ensure that aquifers produced for other freshwater needs are not impacted. We also audited our equipment to confirm the absence of leaks, along with our metering equipment, and our reservoir engineers carried out an efficiency and optimization study, to calculate exact volumes of water needed. In 2021, we were able to reduce the use of freshwater by 150,000m^3, through the installation of a new injection line that allowed

us to shut in two freshwater source well, and a saltwater reinjector. In 2023, we are developing a water management plan for our future Mica operations.

Groundwater Protection and Hydraulic Fracturing

We operate in accordance with strict regulations and Industry Recommended Practices (IRPs) that protect groundwater sources through exploration and production phases. For example, Petroleum Services Association of Canada's IRP #14 ensures that non-toxic, water-based drilling fluid is used when penetrating freshwater aquifers down to the government-established base of groundwater protection. Steel casing is then put into place and cemented in permanently to isolate the upper portion of the well while drilling to the final reservoir target.

In Alberta, the Cardium formation is Vermilion's shallowest development play that uses hydraulic fracturing practices to stimulate the formation. Here, as in our other areas of operation, we employ micro-seismic and computer modeling to ensure we are not contacting or impacting potable water aquifers through our activities. The micro-seismic events measured during hydraulic fracturing operations indicate the height and extent of the fracture system. This data tells us that a typical hydraulic fracture height in the Cardium interval is up to 100 metres. We also know that the Cardium interval is typically found at 1,750 metres below surface and the base of the deepest groundwater is at approximately 600 metres. We therefore maintain an approximate separation distance of 1,100 metres (1.1 km) of rock from the base of groundwater protection to the top of the hydraulic fracture.

Ensuring Containment: Flowback fluids are contained onsite in a closed system, where they are later treated and re-used, or disposed of at authorized facilities at the conclusion of a program. In addition to accessing current technology in our operations, Vermilion has been involved in trialing new and emerging technologies, and we have invested time and money in an effort to make them viable.

FracFocus disclosure: We publicly disclose all of the additives we use to FracFocus in Canada and the United States for 100% of our operations there, as well as via our regulatory submissions. We continue to work to decrease the required concentration of our additives and we work with our fracturing suppliers to source even better alternatives for future consideration.

Measurement and Evaluation

In all our operating areas, water use is highly regulated; adherence to regulatory requirements and industry best practices related to water use is monitored across all business units.

A full 100% of water volumes withdrawn and discharged are tracked for internal and external accounting, management and/or reporting purposes, using a combination of meters and volumetric calculations. The data is tracked and analzyed to facilitate regulatory reporting (as required) and internal governance and sustainability initiatives.

In total, 99% of Vermilion's water withdrawals are assessed for water quality parameters. Produced water is assessed to determine compatibility and treatment requirements with respect to future re-injection and to assess corrosivity in the context of asset integrity and management programs (e.g. pipelines). Freshwater used for drilling purposes (e.g., hydraulic fracturing or drilling fluid systems) is also assessed to ensure compatibility with the drilling formations and to determine additive requirements.

The water quality assessment may include routine chemistry parameters (pH, conductivity, major cations/anions, etc.), total and/or dissolved metals, hydrogen sulphide, and biological parameters for iron reducing and acid producing bacteria. The majority of the analyses are completed at accredited laboratories. Some parameters (e.g. temperature) may also be monitored in the field.

The majority of Vermilion's water withdrawals (84% in 2022) are produced water associated with conventional oil production. The majority of this (84% of our total 2022 discharge) is reinjected into the oil producing formations for voidage replacement or disposed via deep well injection. Lifecycle tracking of produced water is a regulatory and corporate obligation with defined accounting and reporting requirements.

In our offshore Australian operations, discharge occurs to seawater in accordance with a government authorization that mandates water quality and quantity, as well as monitoring and reporting requirements. This volume (28% of our total 2022 discharge) is metered as part of the process.

Approximately 1% of Vermilion's total water discharge is to third party wastewater treatment plants, disposal facilities and is either metered or determined by volumetric calculations on transfer.

Protecting Aquatic Biodiversity

The following projects are just a few examples of our water protection work.

Canada

Vermilion is currently engaged in a multi-industry, regulatory-driven initiative to assess water crossings on forested, Crown lands in Alberta. The objective is to identify and repair (or replace) crossings that may represent a potential barrier to fish passage or risk to fish habitat. The majority of crossings in our operating areas predate Vermilion's tenure.

As part of the program, Vermilion has completed a screening level assessment of crossings within our western Alberta region, and developed a staged, risk-based prioritization scheme for further assessment and remedial response. Remedial measures related to several crossings have been completed and the program remains ongoing.

France

In France, we are a member of the Regional Water Basin Committee in the Ambès region located on an estuary that leads to the Atlantic Ocean. This is one of six water basin committees in the country, and brings together private and public stakeholders to address the main priorities of the region's water policy and the protection of its natural aquatic environments. The committee was responsible for the creation of a master plan for water development and management (SDAGE), and is often referred to as the "Water Parliament" of the basin. 102-13

Inland, our operations on and near Parentis Lake are benefiting from our boat, the Pelican, which is used for our lake rounds. It has increased our presence and monitoring, offering a gain in intervention efficiency. From an environmental perspective, the engines meet the latest standards and regulations. This reduces fuel consumption and the boat's wake, thus offering greater respect for other lake users such as fishermen and sailors.

In addition, we have organized several Days of Caring through our community investment activities that see our staff caring for the lakes near our operations, clearing non-native invasive species from the shoreline, for example.

Australia

Like all facilities operating in Australian federal waters, Vermilion's Wandoo Facilities are required to have a Safety Case and Environment Plan that are assessed and accepted by the Regulator, NOPSEMA. The Safety Case and Environment Plan are objective- and evidence-based assessments requiring the Regulator to be satisfied that:

- The identified hazards and potential impacts are suitable for the facilities
- Hazards are assessed and managed to as low a level as reasonably practical, and
- A management system is in place to support and monitor implementation of hazard controls on a continual basis.

The Environment Plan requires review and resubmission at least every five years. It addresses the environmental impact from Operations, Well Construction and oil spill response. We undertook a comprehensive environmental risk and impact assessment for all our activities within the Wandoo Field. In addition, we maintain a detailed spill response plan, which is aligned to our spill hazards and operating environment, and review and test its capability requirements annually. NOPSEMA accepted our most recent plans in 2021.

- Wandoo Facility Environment Plan
- Oil Pollution Emergency Plan

The Regulator conducts regular inspections to confirm compliance.

As part of this work, we undertook offshore marine monitoring in late 2015 within the Wandoo Field. This included the characterization of the epifauna using a remotely operated vehicle (ROV), water sampling and sediment sampling to:

- Obtain data to support Wandoo discharge modelling and impact analysis
- Obtain additional baseline data for future impact assessments, and
- Establish environmental data to support asset retirement planning.

The ROV environmental monitoring survey revealed an ecosystem at Wandoo with a number of transient species, including turtles, sharks and rays, spotted at the base of our platforms. Corals, sponges, clams and molluscs cover the concrete structure.

The program was developed to identify Vermilion's potential impacts on the marine environment in order to achieve further improvements in environmental management if required. As a major stakeholder in the region, it is Vermilion's responsibility to the wider community to assist in maintaining the health of the regional environment.

Assessing the Potential of Rigs to Reefs

In Australia, there are no prescriptive rules on how offshore platforms should be decommissioned. The onus is on the titleholder (Vermilion) to provide an evidence-based risk assessment to demonstrate the proposed method is acceptable. Ideally, the evidence should be medium to long term in nature, independent and scientifically rigorous.

Conventionally, platforms would be removed from their ocean locations once production has ceased. However, given that many were constructed 30-40 years ago, they have become novel ecosystems, acting as artificial reefs, with the potential to support fully functioning ecosystems. Initially, primary producers and epifauna settle on the structure. As plants, corals and primary producers settle and grow, greater numbers of fish are attracted to food, shelter and spawning habitat.

The degree to which decommissioned platforms deliver ecological benefits, however, remains relatively unknown. Research on artificial reefs indicates that biodiversity value does vary between different types of structures, with factors that influence biodiversity similar to natural reefs: structure, depth relief, age and location.

We have therefore supported an independent scientific study conducted by the University of Western Australia (UWA) to test hypotheses on fish productivity around platforms (rigs), as it would provide relevant environmental information for our decommissioning assessments and be rigorously reviewed as part of thesis and scientific publications. We provided the logistics (vessels), monetary support and access to Wandoo waters for two campaigns a year.

Six campaigns have taken place, monitoring the Wandoo platform and its surrounding area on our behalf. Methods include deployment of seabed and mid-water baited remote underwater video systems; these identify fish gatherings in relation to distance from the platform. Existing remotely operated vehicle video data has also been incorporated to further define this novel ecosystem.

The study, published in February 2022 in Ecology and Evolution, found that the abundance and diversity of marine life at the Wandoo oil field were higher than they would have been pre-installation. Additionally, the fish community inhabiting the platform area was distinct from that of a nearby natural reef, with a novel ecosystem emerging at the platform.

The animals ranged from tiny baitfish to large minke whales, and included sharks, manta rays, sea snakes and turtles. Several species were observed exclusively at Wandoo, including rainbow runner, Malabar grouper and tawny nurse sharks.

Find the full study here.

Land Stewardship

We understand our responsibility to be careful stewards of the land. Throughout our operations, we focus on a systematic approach to caring for the land – from environmental assessments during our exploration activities, to wildlife and vegetation protection during production, to planning and implementing reclamation activities when drilling is complete.

Our business units take a proactive approach to understanding the assets we own and/or operate, to assess both associated risks and potential opportunities. This involves a team approach, in which staff from Operations, Asset Integrity, Facilities, Engineering and HSE come together to identify priority sites for review. This may result in improvements to our internal processes or technologies, and to external elements such as updating community signage. These reviews are benefitting from the ever-increasing power of mapping and imaging technology, and from traditional observation techniques such as aircraft surveillance of pipeline routes, along with the personal observations from our staff as they visit these sites.

The following examples represent just a few of the related activities that we undertake.

Reducing Impacts on Communities

As part of our approach to non-technical risk management, we carefully consider issues such as traffic, noise, dust, light, and flora/fauna impacts in our development and operations activities. We work with local residents and independent environmental groups to help reduce our impact. This includes early engagement with local communities through town hall sessions and other communications avenues to discuss our full development plans, and listen to any concerns, questions or feedback that is provided to help shape our plans. For more detail on our stakeholder engagement, see our About our Report and Communities sections.

Reducing Surface Footprint

Wherever possible, we reduce our footprint on the land by re-using existing well sites, flow lines and surface facilities to support development. This reduces the aerial impact of our operations and removes the need for the construction of new well sites or pipelines.

In Canada and the United States, we often employ the use of horizontal wells. Where sub-surface geometries are conducive, we program these wells from a single surface location or pad, with up to eight wells being drilled from a single location. Pad drilling reduces the aerial extent of the well site, surface facilities, pipelines and roads: a single vertical well may have a surface impact of approximately 1.7 hectares, while an eight-well pad surface impact is only about 0.5 hectares per well. We also use this horizontal approach in France, in the Neocomian, Champotran and Vulaines fields.

This reduction in surface footprint is amplified by the longer horizontal lengths of wells. In the past, one pad site would have developed about 20 sub-surface hectares (1,400 metres in horizontal length); today, we can develop 1,000 hectares from a single pad site (up to 3,000 metres of horizontal length).

Our Pembina stacked play in Canada has the added environmental benefit of being able to share surface infrastructure, such as roads, pipelines and processing facilities between several different geological plays. This higher well density reduces driving distances, and therefore emissions associated with development, monitoring and maintenance of wells. It also optimizes equipment and energy used during development and maintenance of productive reservoirs.

In The Netherlands we also re-use existing well sites and well bores, which reduces the need for constructing new sites or pipelines. In addition, all our lease sites are sealed with asphalt to isolate them from the groundwater table. We collect rainwater that falls on our lease sites in a series of berms, gutters and storage systems so we can confirm that it is safe to release back to the environment.

In Australia, our leading edge use of horizontal drilling and the re-use of existing well sites also reduces disturbance of the sea floor and impact on marine life.

Supporting Biodiversity

Wherever possible, we support local biodiversity efforts, from analyzing the marine environment off Wandoo to protecting ungulates such as deer and elk during critical winter months in Alberta. [304-1]

In Ireland, we released our 2021-2026 Corrib Biodiversity Action Plan (BAP) in 2021, following the successful implementation of the

earlier 5-year plan from 2014 to 2019 (extended through 2020 due to COVID-19). This work included ecological monitoring, wetland construction, habitat enhancement, species planting, and collaboration with ecological organizations.

As reported in the first BAP, in 2011 Corrib was chosen, amongst others, as a pilot case for the testing of the No Net Loss (NNL) and Net Positive Impact (NPI) principles for the Shell Group. The study was conducted by the Biodiversity Consultancy, which took all project elements into consideration and found that "without any existing NNL policy, best practice at Corrib has resulted in a project design which is predicted to be Net Neutral or Net Positive for biodiversity by 2020". This has been borne out by the positive effects from habitat enhancement and diversification measures that are already becoming evident, with, for example, wetland creation attracting a range of invertebrate species and leading to an increase in recorded bat species. Similarly, the extensive planting of native species of deciduous trees and shrubs planting is beginning to show positive effects in terms of observed invertebrate diversity.

In France, thanks to a request from a local beekeeper, honey is now harvested from our Saint-Méry battery site. Our site is a strategic location for beehives due to the presence of many fruit trees and acacias that are favourable to the proper development of the hives. The eight hives were placed in a small grove mainly composed of acacias, to position the bees as close as possible to flowers around which they can forage, thus optimizing the quantity and quality of the honey produced. The bee chosen is part of the "Buckfast" species, which is particularly hardy and renowned to be minimally aggressive. [304-2]

Also in France, Vermilion was honored to sign the Natura 2000 Charter in 2019 for the "Zones humides d'arrieres dunes des Pays de Born et de Buch" site in Gastes (Landes). This site includes a chain of large lakes and their main tributaries in Northern Landes and Southern Gironde. As part of our preparation for committing to Natura 2000, Vermilion replaced phytosanitary products with mechanical brushing and mowing to maintain our lakeside platforms in the region.

In Netherlands, we actively use ecological monitoring on our drill sites, including motion cameras and on-site personal inspections. This has confirmed that in recent drills, wildlife activities such as breeding were not disturbed for species including badgers, bats and various species of birds. This monitoring allowed us to proactively ensure habitat protection, including rescheduling work and mitigating light "scatter." Images from wildlife cameras at one of our locations can be found here; these include known species (roe deer, hare) but also less common winter visitors (foxes, stone martens, otter). These observations have been placed in the National Database of Flora and Fauna.

Via our partnership with the Ynnatura Foundation's (now Business Club foar It Fryske Gea) "Investing together in biodiversity" project, we have supported biodiversity improvements in industrial areas near Kootstertille, including a 5-km biodiversity trail, wildlife monitoring cameras, tree planting and flower and shrub beds that serve as "nectar pubs" for bees, butterflies and other insects.

In Australia, Vermilion led the effort to develop the regional oiled wildlife response capability necessary to effectively manage the impact of a large oil spill on wildlife. We funded the necessary equipment (a rapid response unit that would receive, assess and treat oiled wildlife) and training, created a register of wildlife responders, and developed "at call" capacity for support specialists. To enable all-industry access, we subsequently donated this equipment to the Australian Marine Oil Spill Centre, which is funded by the Australia Upstream and Downstream Industry group, which includes Vermilion. This initial investment and follow-up support from Vermilion has enhanced oiled wildlife response within Western Australia. While we hope there is never a reason to use this equipment, we are proud to have meaningfully increased the spill response capabilities of industry in our operating area. Please also see our Rigs to Reef project. [203-2 304-2]

Liquid Releases (Spills)

As part of Vermilion's Process Safety Management System, we actively strive to reduce environmental releases, or spills. We report on all spills (all liquid types including fresh water, produced water, emulsion, hydrocarbons) by both number of incidents and volume through our Performance Metrics. Our spills are generally contained within the infrastructure designed to prevent any releases or spills from reaching the environment. Our goal is to

recover as close to 100% of the released volumes as possible within the shortest time frame as possible.

In 2017, Vermilion achieved the lowest spill volume since we began recording in 2004. In 2020, as a result of the higher spill profile of the assets acquired from Spartan in southeast Saskatchewan, our spill metrics in the Canada Business Unit increased significantly. We have therefore developed a reduction management plan that included a program of assessment, prioritization and mitigation of our pipeline network, accelerating the installation of leak detection, and decommissioning pipelines, with an internal spill reduction target.

Asset Retirement Obligations

We are committed to ensuring the long-term environmental stewardship of the land on which we operate. This includes complying with regulatory requirements associated with the temporary or permanent closure of those operations – known in the oil and gas industry as the Asset Retirement Obligation (ARO), and also by the terms abandonment (when a well is permanently sealed and taken out of service) and reclamation (replacing the soil and vegetation).

Our timing for the permanent retirement of an asset is associated with the reserves that it still contains, our projections for the production of those reserves, and regulatory requirements. Our work includes assessing the condition of each asset, the work that needs to be done to properly shut down the asset (for example, plugging the well with concrete to provide a shield against further hydrocarbon migration to the surface), land reclamation work that would be needed around the asset, and the ability to leverage other ARO work in the area, as it can often be more economical to perform this work on several closely located assets at the same time.

In general, the site is assessed in comparison to the surrounding land to determine if it is currently and or projected to be of equivalent land capabilities. This includes a detailed review of site landscape (e.g. draining, erosion, stability, contour), vegetation (e.g. species, plant measurements, seed development, health), and soils (e.g. evidence of disturbance, topsoil and subsoil depths and textures, colour, consistency).

In 2022, we invested close to $24 million in abandonment and reclamation activities. This included our participation in the federally funded accelerated site closure programs in Alberta and Saskatchewan, through which we abandoned 103 wells.

Recycling Programs

Our Calgary head office building is certified LEED platinum, with our interior space certified to LEED gold. Recycling is a big part of how we manage our space. Our diversion programs place recycling, composting and non-recyclable bins in every kitchen. We've also stopped bringing in single-use cutlery and plates for catering, using the stock of cutlery and dishes in our kitchens instead.

The installation of ION water dispensers that provide both still and carbonated water in our Calgary office saved 81,501 bottles between May 2019 and December 2022.

Computer and other electrical equipment that's out of date is assessed by our Information Technology teams. We've donated usable but older mobile phones to non-profit organizations that can re-purpose them to support victims of domestic violence, for example, and older computer equipment to non-profits that specialize in giving the equipment new life.

Phones that can't be fixed in our Calgary office go to our partner, the Wilder Institute and Calgary Zoo, for their Gorilla on the Line Cellphone Recycling program. Recycling the phones reclaims substances such as coltan, lithium and even gold, and supports Gorilla SAFE programs to protect gorilla habitat in Africa.

Our Communities

Communities Dashboard

We focus our investments of time and resources on building shared value with our communities.

SDG	Target	Vermilion's Contribution
	1.2 Reduce at least by half in the proportion of people living in poverty.	**Homelessness and Poverty** 2022: Vermilion has been supporting the Linking Employment Abilities and Development (LEAD) program since 2019. Delivered at the Inglewood Opportunity Hub that provides barrier-free, easy to access services to over 4,000 youth annually, this specialized program provides vulnerable youth with the opportunity to get and maintain a job, while receiving individualized mental health support.
	2.1 End hunger and ensure access by all people to safe, nutritious and sufficient food.	**Homelessness and Poverty** Our funding focus on homelessness and poverty encompasses several programs that support ending hunger, including our Days of Caring: Canada 2022: Through our Healthy Start Program, we are ensuring children and youth at 10 schools in our operating areas have access to healthy, nutritious food, helping fuel their bodies and their minds. Ireland 2022: Our funding supported Comharchumann Forbatha Ionad Deirhile, which provides meals for vulnerable populations in the community.
	3.6 Halve global deaths and injuries from road traffic accidents.	**Health & Safety Promotion** Our Global Emergency Responder Program supports critical equipment and training needs for emergency medevac and similar services in all of our business units. In the Netherlands, for example, we are proud to support Nederlandse Hartstiching and their emergency responder AED project helping ensure people have access to emergency medical services.
	15.5 Action to reduce degradation of natural habitat, halt the loss of biodiversity and protect and prevent the extinction of threatened species.	**Environmental Stewardship** Our Global Environmental Stewardship Program supports community-based conservation initiatives. Through this program, our donations help protect the ecosystems and biodiversity that are important to the communities around our operational areas. In the Netherlands, we support The Ynnatura Foundation's project 'investing in biodiversity together', which aims to improve the habitat or industrial areas.
	17.17 Encourage and promote effective public, public-private and civil society partnerships.	**Celebrating our Cultures** We believe in partnering with our local communities to better understand their needs and how we can best support them, and to amplify the value of organizations within them. We have key community and civil society partnerships in each of our business units.

Commitments and Progress

2021 Target	2022 Target	2023 Target
Working to expand "investing in our communities" to showcase the wider positive economic impact that our operations have	Develop a social performance (non-technical risk) policy and strategy	Implement the Non-Technical Risk Policy in key regions
Extended to 2023 due to COVID-19 impacts	*100% achieved*	*In progress*

Give Back

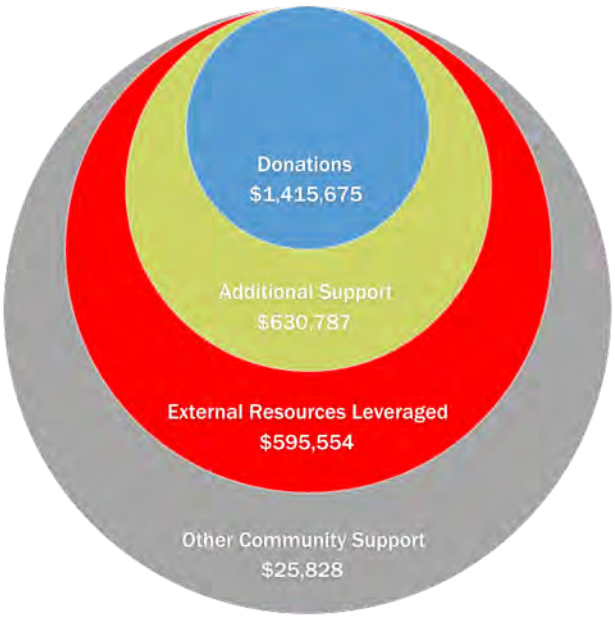
- Direct cash contribution: to non-profit and charitable organizations
- Additional support: in-kind support, such as materials and staff volunteering time during working hours
- External resources leveraged: staff donations and partner contributions
- Other: community support other than non-profit or charities

Give Time

- 152 grants
- 23,917 staff hours volunteered during non-working hours
- $109,535 in grants

Give Together

- 47 Days of Caring
- 1,543 staff hours during working hours supporting 39 organizations
- Value of $39,699 in cost savings to our partner organizations



COMMUNITY INVESTMENT IN 2022
$2,667,844

What our communities tell us about the program:

"We are honoured to have the special relationship that we do with you, Vermilion Energy, and your employees – many of whom we have welcomed to our sites on your Days of Caring. Your steadfast commitment to the communities where you work and live is inspiring and making children's mental health a priority speaks to your understanding that it affects every one of us. Thank YOU for helping us Never Give Up on anyone who struggles with mental health."
Bjorn Johansson, CEO, Wood's Homes

Our Approach to Human Rights

Protecting All in Our Communities

Our commitment to human rights as represented in the United Nations Declaration of Human Rights is formalized in our Code of Business Conduct and Ethics:

HUMAN RIGHTS, WORKPLACE CONDUCT AND SAFETY

Vermilion Energy is committed to respecting human rights in its business and operations as represented by the United Nations Universal Declaration of Human Rights and the Conventions of the International Labour Organization. All directors, officers, employees, contractors and suppliers must comply with all applicable human rights laws and regulations, and the Corporation's policies and standards, whichever are higher, with respect to human rights. To be clear, Vermilion will not tolerate human rights abuses within its own operations or in its supply chain. This extends to human rights as informed by the UN Guiding Principles on Business and Human Rights, including addressing risks of modern slavery, forced labour and child labour, while respecting rights related to freedom of association and collective bargaining.

a) Discrimination or harassment against any individual with respect to race, religion, age, gender (including pregnancy and childbirth), marital status, family status, sexual orientation, national or ethnic origin will not be tolerated. Furthermore, discrimination against any activity specifically protected under the Code of Conduct, such as expressing good faith opposition to prohibited discrimination or harassment, or participating in making a good faith complaint of discrimination or harassment will not be tolerated.

b) Employees are responsible for taking all reasonable and necessary precautions to ensure their own safety as well as that of their colleagues. Directors, officers and employees must comply with all applicable safety laws and policies, procedures

We are committed to working with our stakeholders, including our staff, suppliers, governments and communities to increase awareness of, prevent, identify and address human rights violations. In doing so, we are contributing directly to UN Sustainable Development Goal 8.7, which calls for "immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking."

Our Management Approach

We are taking a phased approach, with risk assessment and identification as the first two actions. This is formalized in our Modern Slavery Statement for our Australian operations, which can be found here. We are currently expanding this to apply to our global operations, in alignment with Canada's new Modern Slavery Act.

We have conducted a global human rights risk assessment for our business, analyzing risks based on geography, industry and our own business, including a mapping of our supply chain, to understand where and how modern slavery (including forced labour, child labour, human trafficking and discrimination) might occur within Vermilion and within our supply chain. Areas of risk based on the Global Slavery Index and the United Nations Global Compact include agriculture, construction, domestic work, hospitality and food services, and bulk oil carriers.

We address internal risks via clear policies and processes, including for recruitment (we highlight on our external website that we never ask job applicants to pay fees, for example) and Fair Culture (which establishes fair and consistent procedures to review, investigate, and resolve events and complaints, including related to discrimination and harassment).

Within our supply chain, we review all suppliers with which we spend more than $1 million annually, using a desk-based assessment of their public commitments to human rights, and the level of detail and external assurance within those commitments, including those related to Indigenous peoples, children, migrant labour, and contracted labour, along with policies and procedures regarding Health and Safety, Environmental Stewardship, Labour Standards, Anti-Corruption, and Sustainable Procurement.

In 2022, we also initiated a pilot project to evaluate human rights risks via sustainability data provided by suppliers to our Canada and US business units via a third-party questionnaire. This included policies and management related to human rights, social certifications, forced labour, modern slavery, hiring practices, migrant labour, Indigenous relations, child labour, security services training, labour rights, ethics and inclusion and diversity, along with HSE, emissions and environmental stewardship. Data can be found in our Environment Investment Performance Metrics.

Our Approach to Communities

We steward our operations and relationships to demonstrate our commitment to being a responsible producer and a valued and trusted neighbour and business partner. This includes:

- Transparency with respect to safe and environmentally responsible operations, including our potential impacts on local communities
- Maintaining strong, genuine relationships with our communities, with engagement based on respect, listening and openness, and
- Creating shared value focused on local economic and social development

Why This Matters

Our communities comprise a wide diversity of people and organizations, but they have one key thing in common: they care deeply about the safety, environmental stewardship and corporate citizenship that we bring to our local operations. At the same time, our people care deeply about their communities – whether we work or live there, these are the places we call home. Our Non-Technical Risk Management Policy enables us to identify the areas where the needs of our communities, our business and our people intersect, providing opportunities to offer support where it builds well-being for all.

Our Management

Non-technical risk is a concept that recognizes that organizations have a range of impacts on the communities, families and individuals where we live and work. Our Non-Technical Risk Management Policy, developed in 2022 and implemented in 2023, guides Vermilion as we seek to understand our impacts, how they affect our external stakeholders and our business, and how we manage them to enhance the positive, and mitigate or minimize the negative.

Identifying and understanding the stakeholders who influence our operations, and the issues that are important to them, helps us to manage risks and opportunities that contribute to Vermilion's ongoing operational and financial performance, and our long-term resilience.

The process of implementing this policy includes:

- Assessing our operating context and community concerns and issues
- Identifying and prioritizing our stakeholders
- Prioritizing issues based on stakeholder interest and influence
- Planning for issue management
- Addressing community investment
- Planning for stakeholder engagement
- Carrying out our stakeholder and issue-related plans
- Identifying and monitoring KPIs to evaluate the plan's success
- Adapting our plans as necessary

As part of our non-technical risk approach, we support the communities we serve through strategic investment in people and resources. We believe that local employment and local procurement in the countries and regions where we operate play an important role in building good relationships and contributing to the local economy and community. We seek to procure goods and services from local suppliers who meet the health, safety and environmental standards under which we operate. We also require that our suppliers comply with our core values with respect to human rights, labour standards, and business integrity.

Ways of Caring Program

Through our Vermilion Ways of Caring community investment program, we give back, we give time and we give together. This strategic approach to community investment exemplifies "The Vermilion Way" of getting things done – demonstrating leadership, embracing responsibility and achieving excellence. The program provides a global framework, with clearly identified priorities and activities, that can be customized for local needs within our business units.

Give Back

This represents our strategic funding initiatives, focused in four key investment areas:

- Homelessness & Poverty. We work with social investment agencies that support the most vulnerable in our community through measurable, impactful programs to break the cycle of poverty and homelessness, because we believe healthy, vibrant communities include all community members in their success.
- Health and Safety Promotion. We invest in results-oriented programs that enhance the wellbeing and safety of individuals and communities, sharing our approach to a health and safety culture that is fully integrated into every facet of Vermilion's operations.
- Environmental Stewardship. We partner with organizations that use science-based best practices to enhance environmental

conservation and education, contributing to healthy, resilient, sustainable communities today and in the future.
- Celebrating Vermilion's Cultures. We support the local cultures of our diverse locations to ensure that their traditions and contributions are recognized and preserved.

Give Time

We support the wide variety of not-for-profit and charitable organizations that our staff and their immediate families volunteer at outside of working hours, using a tiered volunteer grant approach: the greater the volunteer hours, the greater the donation to the organization. This allows us to directly support the causes and community organizations that mean the most to our people.

Give Together

We encourage our people to spend up to two days per year volunteering on company time as part of a team or larger Day of Caring project. These hands-on opportunities help us to put caring into action, building collaborative, trusted and genuine relationships between our people, our company and our communities.

Municipal Linkage Program

Vermilion's Netherlands Business Unit launched its Municipality Linkage Program (MLP) in 2016, to help us visibly support the communities where we are active. We have identified 12 municipalities that are priorities based on our operational activities. Within these locations, we connect with key stakeholders such as residents, community organizations and municipalities to help identify strategic community investment that we could consider funding: a community need and a local solution that helps to address it.

Projects supported by the MLP touch all pillars of Vermilion's community investment priorities, with the majority of funds spent on environmental stewardship, to support the energy transition - they include LED lighting (as in the pony club, below), solar panels and other sustainable renovations to help our communities improve energy efficiency and renewable energy.

The success of the MLP in 2022 included 15 projects, organizations in 13 municipalities, and €116,412 in support. Since its inception in 2016, this program has invested more than €1 million in municipalities in and around our operations.

Measurement

Funding Metrics

Vermilion has developed a funding model that links our community investment budget to key business performance metrics over a rolling average of the past three years. This is applied globally to the entire budget, and then by business unit to establish local budgets. This helps to provide stable funding for community investment over time by levelling out one-time changes in annual revenue and production, and directly linking company activities with investment in our communities.

People Metrics

We connect our community investment work directly with our staff satisfaction metrics through our confidential, third-party-conducted Great Place to Work® people survey. This is carried out through quantitative responses to the specific question "I feel good about the ways we contribute to the community" and through qualitative comments received in the open-ended survey questions.

In addition, we use anonymous staff surveys to develop community investment activities (such as proposing and choosing organizations for our Days of Caring and activities for our Ways of Caring fundraising campaign) and to assess their success and potential for continuous improvement.

Performance Metrics

We use various metrics on the spectrum between Inputs, Outputs and Outcomes to measure the results of our strategic community investment funding, with an increasing emphasis on working with our community partners to establish the means and support to measure outcomes:

- Inputs: the value of our funding, staff volunteering (inside and outside working hours) and external resources leveraged
- Outputs: the scope of support provided (such as numbers of meals or workshops) and the number of people impacted by programs that we support
- Outcomes: the measurable impacts of the support we provide, including Social Return on Investment

As an example of outcomes measurement, our flagship partnership with the YW of Calgary (the Skills Training Centre project that provided 20-week construction training courses for women facing barriers to achieving viable employment) included a study into its Social Return on Investment. Our external consultant found that an SROI ratio of $4.65 of value created per $1 invested was a conservative estimate of the ongoing future value of the Centre's services.

In addition to the Great Place to Work® survey metrics, we report the

value of our community investments following the London Benchmarking Group's standard "circles" of investment to reflect our total contribution:

- Direct cash contribution: our donations to non-profit and charitable organizations
- Additional direct support: adds in-kind support, such as donations of materials for Days of Caring and staff volunteering during working hours
- External resources leveraged: adds value of staff and our partner contributions

Evaluation and Adjustment

We use these metrics with additional information on our community investment program and activities as part of Vermilion's senior management team review and subsequent reports to the Board of Directors.

We adjust our funding and activities as needed, but on an annual basis at minimum. We identify and contribute to best practices as they develop, increase communication to staff to promote specific initiatives, and respond to changing needs within specific business units.

Our Approach to Indigenous Relations

Vermilion is committed to demonstrating the deep respect we have for our Indigenous hosts and neighbours, their traditional culture, connection to the landscape and ways of knowing.

This includes the critical work of reconciliation, in which we are guided by:

- The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), and
- Call to Action 92 from the Truth & Reconciliation Commission's 2015 report.

As a result of meaningful discussions with the First Nations and Métis communities with whom we consult, we have established three priorities:

- Consultation based on building respectful relationships
- Creating shared economic value
- Offering reflective learning opportunities for our staff

This work includes our respect for the cultural heritage and traditional knowledge of Indigenous peoples. Where applicable, we seek their support for site visits prior to development, and are committed to understanding the importance of traditional use lands and mitigating our impact on them, including avoiding sites of cultural significance.

We employ archeological specialists on our developments. Should we identify a potential site with cultural or archeological content, we stop work, notify the regulatory authorities, and reach out to the First Nations and Métis communities for whom the location is traditional lands for further guidance. If the cultural heritage site is confirmed, we are guided by the Indigenous knowledge keepers on next steps: for example, preserving or avoiding the site, and ensuring access by the Indigenous community is maintained.

Over the past several years, we have provided our staff with opportunities to learn about the history of Indigenous Peoples in Canada, particularly the need for reconciliation, along with celebrations of Indigenous culture. We have worked with Indigenous learning providers to bring these to our staff on days of significance, including National Indigenous Peoples Day, National Day for Truth and Reconciliation, and Moose Hide Campaign Day. We also have a section on our intranet dedicated to learning more, with resources and connections to formal learning courses and to the First Nations and Métis communities with which we consult.

As part of our Vermilion Ways of Caring community investment program, we support Indigenous peoples where we live and work and are committed to building positive relationships.

In 2022, our contributions helped First Nations and Métis communities in Northeast British Columbia, Alberta and Saskatchewan celebrate cultural events such as Treaty Days, Powwows, music festivals and community dinners. We also made investments in two key long-term partnerships.

Tse' k'wa Heritage Society

We are proud to support Tse'k'wa, an archaeological site located near Fort St. John in Treaty 8 Territory. The archaeological site is managed by Tse'K'wa Heritage Society, a collaboration from Doig River, Prophet River and West Moberly First Nations.

Our support helped fund accessibility improvements including upgraded trails and wheelchair ramp as well as universally designed facilities. Tse'k'wa was designated a National Historic Site in 2019 for its archaeological and cultural significance of the Dane-zaa people.

Indspire

We are honored to partner with Indspire to support the Building Brighter Futures: Bursaries, Scholarships and Awards program. Beginning in 2023, our two Vermilion Energy Indigenous Student awards open to First Nations, Metis and Inuit students near our operational areas to apply for funding to help cover tuition, childcare, cultural support, and travel to enable them to pursue their education goals.

Volunteering Around the World

With COVID-19 restrictions easing, we welcomed opportunities to gather team members and give together, also known as our Days of Caring. We planned as many outdoor activities as possible to protect the health and safety of our staff and community partners. We also launched our global Month of Caring initiative, when many of our business units hold Days of Caring.

North America

Canada: Saskatchewan

We participated in a variety of volunteer activities, including mowing grass and planting flowers for seniors in Estevan, maintenance work at Gateway Golf Club in North Portal, painting the gazebo at Woodlawn Regional Park and repair work at the Expressway Family Centre. We also held Days of Caring at Bow Valley Park and the Carlyle Gymnastics Club.

Canada: Drayton Valley

We participated in many rewarding events, including year-end BBQs to support local schools and the Early Childhood Development Centre, cooking and socializing with seniors in Delburne, constructing cars for kids with disabilities through Variety Alberta, and supporting students to develop music skills through the Highwood Lions Music Festival.

Canada: Calgary

Activities included helping our Flagship Partner, Inn from the Cold, with cleaning and organizing as they prepared to move into their new location. We also helped with landscaping at the Wood's Homes Vermilion Energy Family Centre and resumed our monthly meal service volunteering with the Drop-in Centre.

USA: Colorado

We supported Food for Thought, an organization that works to eliminate childhood hunger, with volunteers helping assemble PowerSacks that contain two meals of non-perishable food to feed a family of four over the weekend.

Europe

Hungary: Budapest

We helped the Hungarian Food Bank Association, located in Budapest, with a food drive to purchase food supplies and prepare lunch for 120 people who are experiencing homelessness and poverty.

Croatia: Zagreb

We worked with the Volunteer Centre Zagreb at the Laduč children's home. where we cared for the lawn and flower garden, and whitewashed and cleaned the surroundings.

Germany: Schönewörde

2023 began with a Day of Caring in the forest of Schönewörde, where groups of volunteers cleared and cleaned nesting boxes that mimic and support the natural hollows of a bird's environment, providing comfortable and safe place to rest in and raise their young. Together, our volunteers took over the maintenance/cleaning for the 12th time, and they plan to return next year!

France

It was a busy year in France: we helped make sure cyclists taking part in a race through Blandy stayed safe, we helped to clean bank and marshes in the Lake Environment of Born, improving the local environment for all to enjoy, and we gathered toys and supplies to help families in need have a festive holiday.

Ireland: Mayo County

The Belmullet Tidal Pool has been part of the community's cultural and social heritage for over 40 years. Over time, algae build up that need to be removed, so our dedicated group of volunteers keep busy scrubbing and cleaning.

Key Community Investment Partnerships

Vermilion focuses our strategic approach on long- term investments that make a measurable and significant difference for our communities. Wherever possible, our partnerships go beyond funding to include staff time and other support for the organizations. This is reflected in the partnership matrix that we have developed that provides a consistent framework to assess potential projects. The matrix also includes alignment with one or more of our key pillars, sound organizational governance, long-term impact, benefits to stakeholders, potential for multi-sector collaboration, volunteering opportunities, capacity building potential, and measurability.

Tackling Homelessness and Poverty

Inn from the Cold

In September 2022, Inn from the Cold and HomeSpace opened the doors of Neoma, an affordable housing complex that provides social support and resources to help families break the cycle of homelessness and build a brighter future.

We are proud of our flagship investment, committing $1.2 million over 7 years, to support the transitional shelter, named the Vermilion Energy Family Floor. The shelter provides relief and support for vulnerable families and children who are no longer able to stay in their current house and have nowhere else to turn. Families staying at the shelter are provided with healthy meals and snacks, and child and youth programming to help families move towards housing independence.

The building, a previously vacant office tower, was constructed using a trauma-informed design to help families overcome obstacles and feel safe and a sense of belonging.

Stichling Present – Flagship Partner Netherlands

Stichting Present has been Vermilion's social partner in the Netherlands since 2019. To help people and communities flourish, they focus on supporting people who live in loneliness or poverty or with poor health. In addition to a financial contribution, in 2022, more than 150 volunteer hours were spent by our employees helping with projects such as gardening, shopping and putting together Christmas packages

St. Bartholomew's House

Vermilion has supported St. Bartholomew's House in Perth since 2009, an organization that helps people who are homeless or at risk of homelessness achieve positive life outcomes. It offers a variety of crisis and transitional programs to help people build the connections, skills and confidence to live productive, independent lives in the community and break the cycle of homelessness. Through St. Bart's, Vermilion's funding invests in essential facilities and services that will help transform the lives of some of the city's most vulnerable people.

Our contributions have supported the Lime Street social housing facility and a social inclusion officer for older women at the Kensington Street Accommodation Service, who coordinates activities and outings that positively contribute to the health and wellbeing of the residents.

Wood's Homes

Our partnership with Wood's Homes began in 2013 and continues strong today - 10 years later. The Vermilion Energy Family Centre remains an important centre with resources to support children going through mental health crises while providing families with knowledge of community services to better support their family.

In 2022, we renewed our support with another three-year commitment to the LEAD program that helps youth ages 15-29 gain valuable skills through meaningful and supportive employment opportunities. Students participating in this program add valuable work experience to their resume and learn financial literacy and leadership skills helping them find and maintain employment.

Northeast British Columbia

With the expansion of our Canadian operations in 2022, we are focusing on communities in Fort St. John, Dawson Creek and surrounding areas. At the South Peace Child Development Centre in Dawson Creek, we supported the installation of a new playground fence to help keep children safe while spending time outside. We also helped the Child Development Centre of Fort St. John to repair the roof on their building.

Calgary Drop-In and Rehab Centre

We are proud of our 10 year partnership with the Drop-in Centre in Calgary to provide support to vulnerable adults at risk of or experiencing homelessness.

The meal support provides nutritious food for those going through a difficult time, helping them meet their most basic needs and find stability, and we complement the monthly lunch with staff volunteers who serve the meal.

We also supported the Drop-in centre by helping with donation sorting and organizing, providing DI clients with basic needs at a time when they need it most.

United Way of Calgary and Area

United Way brings together all areas of community – business, government, academia, school boards and others – to address social issues at the root cause and to develop long-term solutions. Vermilion has been contributing to United Way since 1996 and organizing an annual workplace campaign since 1998. United Way recognized our efforts with a 2020 Community Impact Workplace Excellence Award.

We've contributed nearly $4.7 million to support local non-profit organizations and social programs through the United Way. In 2022, our employee-led campaign returned to many in-person events while hosting some virtual events, and raised over $200K, with staff participating through pledging, events and contests. This will provide more than 91 Calgarians access to basic needs, including food and shelter, ensure more than 62 children and youth are empowered and successfully transition to adulthood, or connect more than 180 Calgarians to necessary resources to support their well being

Camp fYrefly, supporting 2SLGBT+ Youth

Respect is one of our core values. We actively support the right of all those who work with us to a workplace free of discrimination and harassment, including on the basis of sexual orientation. Extending this to community investment is important to us, and we have made a three-year funding commitment to support Camp fYrefly: a summer camp and leadership retreat designed to help 2SLGBTQ+ youth grappling with finding their true identity build confidence and resilience. Camps take place in northern and southern Alberta with workshops and activities that balance different types of programs, from art to health to education, and Indigenous knowledge while prioritizing community building and relationships.

The Family Place – Weyburn, Saskatchewan

The Family Place is an early childhood education centre whose mission is to improve the quality of life for children and families in Weyburn and surrounding area. Vermilion is a longstanding supporter having supported the Mini-Go preschool program as well as various Days of Caring. As our flagship partnership in Saskatchewan, we are excited to provide funding annually for their the creation of a new outdoor space named the Vermilion Greenspace.

Food for Thought – United States

This Denver charity has a mission to fill the weekend hunger gap for children and their families with PowerSacks: nutritious and easy-to-make meal-kits. PowerSacks are assembled and delivered to Denver schools for children to bring home, which help feed their families over the weekend. Our donation will help feed a classroom for an entire school year.

Health and Safety Promotion, and our Global Emergency Responder Program

Nothing is more important to Vermilion than the safety of our staff, our contractors and our communities, which is why this is also part of our Ways of Caring. Our Global Emergency Responder Program supports this commitment by investing in emergency response organizations that serve the communities where we work and live. Our donations help fund equipment and other high-priority needs for these non-profit and charitable organizations, which are dedicated to keeping our communities and our people safe.

STARS Air Ambulance - Canada

Every day, STARS takes care of some of the sickest and most critically-injured patients in Western Canada. This translates to thousands of people every year who rely on STARS to get them to hospitals safely, where they can access the advanced care they need. STARS is already an operational partner as their dispatch centre manages our Emergency Call Centre.

Alberta Wildfires - 2023

In the spring and early summer of 2023, our operations in central and northwestern Alberta were impacted by an early and significant wildfire season. Although our facilities were largely untouched, many of our communities - and our families - were evacuated from their homes for several weeks. To help the communities get back on their feet, we made donations to the Drayton Valley Community Fund and the Edson Food Bank, and we matched employee donations to any non-profit or charity supporting the wildfire response.

La Protection Civile Essonne et Seine-et-Marne - France

The civil protection associations are an important part of our communities, as they provide volunteer first aid teams for a wide range of community gatherings such as music festivals and sporting events, along with critical emergency operations after natural disasters. Our partnership with the Civil Protection Association in Seine & Marne has allowed the purchase of three tents that will be used for community events and needs.

Weston County Fire Protection District, Newcastle Fire Department, Weston County Sheriff Search & Rescue - USA

The Weston County Fire Protection District, a local community volunteer fire department, is close to our Wyoming operations, and relies on donors to support firefighter training, trucks and protective equipment. In addition to three fire stations, the District places wildland engines at strategic rural locations to provide quicker responses to wildfires.

Dutch Heart Foundation – Netherlands

Vermilion began supporting the Dutch Heart Foundation in 2020, in its bid to provide help within six minutes of someone's cardiac arrest. Our support has so far provided for eight Automated External Defibrillation (AED) packages for communities near our operations including, Sonnega, Wolvega, Burgum, Eernewoude and Koostertille, and will also support training people to use the AEDs and become potential lifesavers.

Fire Brigades - Germany

We provide donations to local fire brigades to purchase essential equipment to help ensure they have the resources to to support communities in an emergency. We believe that supporting the next generation and helping children learn about fire safety is important, so we also support the children's fire department.

Enniskillen Wellness Center – Saskatchewan

We were pleased to support the community of Enniskillen, which was in need of a wellness centre so that local community members wouldn't need to travel out of town for appointments and a place where the ambulance could be housed.

Association des Jeunes Sapeurs-Pompiers de Gironde

During the wildfires in the Gironde and Landes forests in 2022, production at our Cazaux battery was impacted. Our team worked very closely with the volunteer firefighters; thanks to their quick response time, the Cazaux depot suffered minimal damage. Most of the firefighters are volunteers, so our donations help ensure they have the equipment and resources to keep community members safe.

Global Environmental Stewardship Program

As an energy company, we have a responsibility to the wider community to support the health of our environments – it's why we selected Environmental Stewardship as one of four funding areas within Ways of Caring, our community investment program. It's also why we chose that pillar to establish Vermilion's second global community investment program. Through this program, our donations will help protect the ecosystems and biodiversity that are important to the communities around our operational areas.

Nature Conservancy Canada

Protecting the land, biodiversity and habitat of the wild spaces is important and that's why in 2022, we renewed our commitment to working with the NCC to support property stewardship work near our operation areas in Alberta. Our donation and volunteer time will help protect these threatened areas by controlling invasive species, installing tree cages, cleaning trails and conducting wildlife surveys. We are proud to protect the places we call home.

Biodiversity Database - Ireland

Vermilion funded a monitoring program to assess the condition of the populations of Vertigo snail species within their Special Areas of Conversation. This study was performed in conjunction with the Bord na Móna and the National Parks and Wildlife Services, as well as Ballina-based River Moy Search and Rescue (who perform work protecting the marine environment).

While the vertigo snail was not found, several other unique snail species were located. The results of the survey work will be maintained in the National Biodiversity Database that will allow useful comparison during repeat visits, aid the conservation of the sites by providing management recommendations, and assess the condition of the sites for six-year EU reporting.

Generationenhilfe Jung und Alt e. V. - Germany

We worked with Generationshilfe Jung und Alte e.V. on their orchard project to preserve fruit trees while protecting the habitat of bees and other insects and providing opportunities for children and the community to experience nature.

The Wilder Institute / Calgary Zoo

Vermilion began a partnership with the Wilder Institute/Calgary Zoo for the 2014/2015 school year, providing a donation to support the Vermilion Energy Empty Backpack Program. Through this program we are helping to ensure that learning opportunities which are so vital to a well-rounded education and critical to our future are available to all Calgary's school children, regardless of financial or family circumstance.

We have continued this support and during the 2021/2022 school year, the Wilder Institute/Calgary Zoo facilitated 138 Vermilion Energy Empty Backpack programs, inspiring 2,999 students.

Through hands-on activities and up close and personal encounters with animals, the Wilder Institute/Calgary Zoo is connecting audiences of all ages with nature and inspiring actions for wildlife conservation.

In 2023, the program gained a new name - The Vermilion Energy Zoo Explorers Program. This name will better promote inclusivity while still continuing to provide opportunities for students from underserved schools with the chance to explore and learn about the wonderful world of wildlife.

Tree Canada

Beginning in 2019, we partnered with Tree Canada to support the National Greening Program and Partners in Planting Program to increase the tree cover and reforest areas in need to help contribute to healthy, resilient and sustainable communities.

We renewed our committed in 2022 by providing a donation to support the National Greening Program, which will plant 4,560 trees and sequester an equivalent of 912tCO2e. Volunteer time in 2023 through a Day of Caring will see us planting approximately 150 native trees along the shoreline in Fish Creek Park in Calgary, including Balsam poplar, willows and western birch, contributing to a healthy urban forest.

Stichting Ynnatura – Netherlands

Since 2021, Vermilion has been involved in the project 'Investing in biodiversity together' in collaboration with the Ynnatura Foundation, local municipalities and other organizations. The project aims to increase the variety of plants and animals on the Westkern industrial estates near Kootstertille and Skûlenboarch. Wildlife cameras have been installed and so far, have shown roe deer, stone martens, foxes, and geese who visit the area.

Celebrating Vermilion's Cultures

Drayton Valley Community Foundation

For the past two years, Vermilion has contributed to the Drayton Valley Bike Race and Ride Annual Fundraiser in Drayton Valley, called the DV100. This race runs from Drayton Valley to Lodgepole, Cynthia, Rocky Rapids, and back to Drayton Valley to promote physical fitness and the beautiful countryside of Alberta.

The DV100 raises funds to support programs, charities and students pursuing their education goals. An incredible team of Vermilion volunteers were there to lend a hand giving out water and snacks, as well as with the BBQ.

Cultural Event – Croatia

Since entering Croatia in 2019, we have invested in locally significant events such as the Lipovljani Meetings. This cultural event in Sisak-Moslavina County is celebrated for its many cultural and arts programs.

Alameda Recreation Board – Saskatchewan

The small town of Alameda is located in southeast Saskatchewan. As in many small Canadian towns, its community ice rink is a central gathering place – whether local residents and neighbours are competing in events such as hockey, figure skating or curling, or cheering on a local team. Our contribution helped the community make the required upgrades to the mechanical equipment in order to ensure a safe and enjoyable experience for all.

Drayton Valley Brazeau Snow Club - Alberta

The Drayton Valley Brazeau Snow Club provides locals with an affordable and fun, family activity to enjoy the beautiful, winter season. The volunteer-run ski hill has been operating since 1965 to provide families with opportunities to experience winter activities such as skiing and tubing. Our contribution helped ensure the equipment was maintained for a safe and enjoyable winter season.

Cazaux Olympique Football Club - France

During the fires of 2022, the Football Club's house, next to our Cazaux battery, was destroyed by the flames. Our donation will help with the reconstruction of this building, ensuring the popular sport of soccer that's an important part of the cultural traditions of France remains strong.

Scholarship Program - Ireland

The Third Level Scholarship program was launched in 2007, and has helped over 200 young people achieve their academic goal of attending third level education. Students have graduated into a range of successful careers including, engineering, law, medicine and the sciences. This year, Vermilion will award 16 Scholarships to students in their first year of study

World of Work Program - Ireland

As an active member of the Schools' Business Partnership, Vermilion and other local businesses aim to positively impact educational inclusion in Ireland. Each year we host students in their second year of secondary school at the Bellanaboy Gas terminal in Mayo. The program provides students with exposure to a "day in the life" of different disciplines working at Vermilion and discussions on a range of careers.

Vermilion Energy Bursary - Saskatchewan

Our bursary supports two adult students transitioning into full-time post-secondary programs through Southeast College, preferably in electrician, office administration or industrial mechanic programs - which also offer excellent recruitment opportunities for our operations.

Charles W. Berard Undergraduate Scholarship

Vermilion set up the Charles W. Berard Undergraduate Scholarship in Natural Resources and Environmental Law in 2009 to pay tribute to the life, work and memory of Charlie Berard, a dear friend to many at Vermilion, and our corporate secretary from 1997-2009. Each year, a scholarship of approximately $5,000 is awarded to a continuing undergraduate student entering third year in the Faculty of Law at the University of Calgary with a demonstrated interest in Natural Resources & Environmental Law. A key part of the criteria is a candidate who best demonstrates leadership and support to the community, and alignment to Vermilion's core values of Excellence, Trust, Respect and Responsibility. .

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International Sustainability Standards Board - Sustainability Accounting Standards Board

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	Scope 1 flaring & venting	EM-EP-110a.2	Substantial	Reported as flared, vented and fugitive emissions	PM - Energy & Emissions
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Community Relations	Processes to manage rights & interests	EM-EP-210b.1	Full		16, 88-##
	Non-technical delays	EM-EP-210b.2	Full	No delays outside regulatory processes	
Workforce Health & Safety	TRIF, fatalities, NMFR, Training	EM-EP-320a.1	Substantial	All reported except near miss frequency rate	PM - Safety
	Management systems - safety culture	EM-EP-320a.2	Full		72, 75
Reserves & CAPEX	Reserve sensitivity to carbon pricing	EM-EP-420a.1	Partial	Emissions long-range planning tool incorporates planned production to 2030 including carbon pricing	32
	CO2 emissions in proved reserves	EM-EP-420a.1	None	Not yet tracked	
	Investment in renewable energy	EM-EP-420a.3	Full		PM - Energy & Emissions
	CAPEX strategy discussion	EM-EP-420a.4	Substantial	TCFD Strategy section - Risks & Opportunities	25
Ethics & Transparency	Reserves in TI CPI 20 lowest countries	EM-EP-510a.1	Full	No reserves in countries with 20 lowest rankings	
	Management system	EM-EP-510a.2	Full		51
Legal & Regulatory	Positions on E&S factors	EM-EP-530a.1	Full		45
Critical Incident Risk	Process Safety events	EM-EP-540a.1	Full		PM-Asset Integrity
	Management systems	EM-EP-540a.2	Full		63
Activity Metric	Production of oil and gas	EM-EP-000.A	Full	Annual Reports + Sustainability Report	PM-Energy & Emissions

Performance Metrics

	2018	2019	2020	2021	2022	Context	GRI/SASB
ACTIVITY METRICS: OPERATIONS AND RESERVES							
Number of operations (operated business units)	8	8	8	8	8		102-7
Production – total: boe/d based on financial control	87,270	100,357	95,190	85,408	85,187		EM-EP-000.A
Production – crude oil: bbls/d	39,182	47,902	43,421	38,143	37,530		EM-EP-000.A
Production - NGLs: bbls/d	6,366	7,984	8,937	8,325	7,961		EM-EP-000.A
Production – natural gas: mmcf/d	250	267	257	234	238		EM-EP-000.A
Annual Production - Operated facility throughput: boe	29,440,819	44,680,354	42,202,207	36,865,352	35,634,107	Use for intensity calculations	EM-EP-000.A
Total proved + probable reserves, gross: mboe	488,145	501,233	466,603	481,007	522,790		GRI 11
Number of offshore sites (producing net wells)					23	Australia and Ireland	EM-EP-000.B
Number of terrestrial sites (producing net wells)					2,836	All other BUs	EM-EP-000.C

MATERIAL TOPIC	2018	2019	2020	2021	2022	Context	GRI/SASB
COMMUNITY INVESTMENT (Donations)							EM-EP-210b.1
Direct community investment total: a+b below ($ thousands)	1,587	1,837	1,447	1,162	2,046	100% non-profit/charitable organizations	201-1
Canada	908	1,179	838	608	1,433	Includes project costs	201-1
France	155	174	160	116	115		201-1
Netherlands	277	153	111	238	210		201-1
Germany	68	131	88	53	78		201-1
Ireland	70	104	118	124	150		201-1
Central & Eastern Europe	4	3	61	5	7	Two one-time significant investments in 2020	201-1
Australia	88	75	68	-	4		201-1
United States	17	18	2	18	49		201-1
COMMUNITY IMPACT (Donations plus other investment)							
Operations with local community engagment programs %	100	100	100	100	100	All business units	413-1
Total community impact for non-profits or charities: a+b+c below $	2,159,245	2,297,436	1,750,279	1,822,962	2,642,017	400+ community groups supported	413-1
a. Direct company-driven donations $	1,097,602	1,096,683	890,311	742,461	1,415,675	Based on LBG circles of corporate giving	413-1
b. Additional direct support (e.g. in kind, employee hours, volunteer grants) $	489,698	740,385	557,029	420,057	630,787	Includes project-specific costs & program management costs	413-1
c. External resources leveraged (e.g. staff, partner, government matching) $	571,945	460,368	302,939	660,444	595,554	2021+: Includes % of partner contributions to Municipal Linkage Program in Netherlands (2021 restated in 2022), joint venture partner contributions (Ireland) and staff matching (United Way)	413-1
Other direct investment in our communities (e.g. commerical initiatives beyond non-profit/charity) $	-	59,330	20,706	48,654	25,828	Event sponsorships, research support	413-1
Employee Volunteering Outside Working Hours: Volunteer Grant Program							
Vermilion donations $	76,137	139,872	97,572	31,585	109,535	100% non-profit/charitable organizations	413-1
Employee hours #	15,595	29,338	20,993	29,165	23,917		413-1
Employee Volunteering During Working Hours: Days of Caring							
Events #	23	51	19	7	47		413-1
Organizations supported #	17	41	18	6	39	100% non-profit/charitable organizations	413-1
Employee hours #	2,022	3,021	640	110	1,543		413-1
Individuals supported #	36,490	54,090	29,983	11,144	11,495		413-1
Cost savings to community $	49,875	84,477	14,510	10,591	39,699		413-1
Community investment categorized via Business for Societal Impact							
Charitable Giving (Volunteer Grants, Payroll Matching, Days of Caring hours) %				42	24%		413-1
Community Investment (Flagship partnerships, Global Emergency Responder Program, Global Environmental Stewardship Program, program management) %				52	73%		413-1
Commercial Initiatives (Event Sponsorships, Research) %				6	3%		413-1
				100	100%		413-1

	2018	2019	2020	2021	2022	Context	GRI/SASB
ECONOMIC IMPACT							
Gross petroleum and natural gas sales: $M	**1,678,117**	**1,689,863**	**1,119,545**	**2,079,761**	**3,476,394**		201-1
Canada	671,172	828,070	569,191	901,775	1,344,284		201-1
France	360,602	326,699	182,292	279,263	365,431		201-1
Netherlands	165,916	112,857	65,575	295,723	562,857		201-1
Germany	82,449	57,312	34,210	131,935	481,260		201-1
Ireland	205,150	104,274	58,446	214,425	324,345	2019: First full year of Corrib operatorship	201-1
Central & Eastern Europe	3,630	797	1,933	1,211	10,797		201-1
Australia	150,733	184,490	141,452	143,014	221,187		201-1
United States	38,465	75,364	66,446	112,415	166,233		201-1
Operating costs, excludes transportation, royalties and G&A: $M	**357,014**	**440,078**	**417,251**	**413,022**	**489,034**		201-1
Canada	177,499	242,790	218,596	215,387	240,899		201-1
France	54,690	61,281	57,128	52,147	57,588		201-1
Netherlands	26,681	32,125	32,410	35,269	45,903		201-1
Germany	23,048	24,970	20,732	27,149	41,523		201-1
Ireland	15,366	12,431	15,232	14,889	16,580	2019: First full year of Corrib operatorship	201-1
Central & Eastern Europe	110	301	464	441	1,691	As per Annual Report: CEE and Corp combined	201-1
Australia	53,199	49,810	54,581	50,748	57,478		201-1
United States	6,421	16,370	18,108	16,992	27,372		201-1
Employee wages and benefits: $M	**174,831**	**201,581**	**207,390**	**187,591**	**193,707**	Permanent staff; does not include contractors	201-1
Canada	93,750	109,468	117,878	99,741	107,079	CBU and Corporate	201-1
France	23,733	22,103	21,165	20,149	20,780		201-1
Netherlands	15,080	15,049	16,623	15,815	16,841		201-1
Germany	6,846	5,929	5,368	4,824	5,419		201-1
Ireland	1,809	14,981	15,071	15,405	15,408	2019: First full year of Corrib operatorship	201-1
Central & Eastern Europe	1,171	1,638	1,116	1,137	1,186	CEE	201-1
Australia	26,016	23,950	20,304	24,036	19,704		201-1
United States	6,426	8,462	9,865	6,484	7,290		201-1
Dividends declared and shares repurchased: $M	**388,111**	**427,311**	**90,067**	**0**	**117,428**	Dividends suspended in 2020; reinstated in 2022	201-1
Interest payments: $M	**72,759**	**81,377**	**75,077**	**73,075**	**82,858**		201-1
Taxes paid: $M	**43,577**	**52,230**	**14,341**	**45,854**	**449,330**		201-1
Canada	513	406	(71)	(1,522)	223,979	Canada + EU Solidarity Contribution/Windfall Tax	201-1
France	15,084	21,431	141	(9,120)	29,889		201-1
Netherlands	16,561	(3,961)	(3,774)	46,567	150,647		201-1
Germany	0	0	0	0	31,513		201-1
Ireland	0	0	0	0	0		201-1
Central & Eastern Europe	0	0	0	0	0		201-1
Australia – includes PRRT and corporate taxes	11,419	34,354	18,045	9,929	13,302		201-1
United States	0	0	0	0	0		201-1
Royalties paid: $M	**152,167**	**163,666**	**106,554**	**186,122**	**306,017**		201-1
Canada	84,696	94,079	54,961	113,651	196,005		201-1

	2018	2019	2020	2021	2022	Context	GRI/SASB
France	46,781	43,895	32,069	37,666	40,353		201-1
Netherlands	3,181	1,469	444	873	512		201-1
Germany	6,626	5,264	990	2,847	21,232		201-1
Ireland	0	0	0	0	0		201-1
Central & Eastern Europe	813	253	644	338	3,488	As per Annual Report: CEE and Corp combined	201-1
Australia	0	0	0	0	0	See PRRT and taxes above	201-1
United States	10,070	18,706	17,446	30,747	44,427		201-1
Investment in our Communities (also see communities metrics): $M	**1,587**	**1,907**	**1,447**	**1,162**	**2,046**		201-1
Canada	908	1,249	838	608	1,433	Includes corporate program costs	201-1
France	155	174	160	116	115		201-1
Netherlands	277	153	111	238	210		201-1
Germany	68	131	88	53	78		201-1
Ireland	70	104	118	124	150	2019: First full year of Corrib operatorship	201-1
Central & Eastern Europe	4	3	61	5	7		201-1
Australia	88	75	68	-	4		201-1
United States	17	18	2	18	49		201-1
Direct economic value distributed: $M	**1,190,046**	**1,368,150**	**912,127**	**906,826**	**1,640,420**	Total: operating costs through community investment above	201-1
Economic value distributed in Canada	357,366	447,992	392,202	427,865	769,395		201-1
Economic value distributed in France	140,443	148,884	110,663	100,958	148,725		201-1
Economic value distributed in Netherlands	61,780	44,835	45,814	98,762	214,113		201-1
Economic value distributed in Germany	36,588	36,294	27,178	34,873	99,765		201-1
Economic value distributed in Ireland	17,245	27,516	30,421	30,418	32,138	2019: First full year of Corrib operatorship	201-1
Economic value distributed in CEE	2,098	2,195	2,285	1,921	6,372		201-1
Economic value distributed in Australia	90,722	108,189	92,998	84,713	90,488		201-1
Economic value distributed in US	22,934	43,556	45,421	54,241	79,138		201-1
Economic value distributed: dividends, share repurchase & interest	460,870	508,688	165,144	73,075	200,286	Dividends suspended in 2020; reinstated in 2022	201-1
ARO (asset retirement obligations) settled: $M	15,765	19,442	14,278	28,525	37,514		201-1

MATERIAL TOPIC	2018	2019	2020	2021	2022	Context	GRI
GOVERNANCE							
Ratio of annual total compensation of highest-paid individual to median annual total compensation all permanent employees	41.3	39.5	29.1	29.2	19.0	Compensation includes base salary, short & long term incentive plans & allowances (e.g., holiday pay); not broken down by highest paid individual per country due to privacy regulations	102-38
Ratio of % change in CEO compensation to % change in employee median compensation	17:1	(2:1)	(3:1)	(1:1)	(1.27):1	Executive structure changed 2020, 2022, 2023 as per Information Circulars	102-39
ETHICS							
Requests for advice on ethical behaviour via corporate secretary	0	0	0	0	0		102-17
Concerns expressed via whistleblower line	0	5	3	1	4	All concerns were reviewed; 3 were investigated	102-17,102-34
Violations of rights, including those of Indigenous peoples	0	0	0	0	0		411-1
Legal actions regarding anti-competitive behaviour	0	0	0	0	0		206-1
Fines for non-compliance with laws & regulations ($)	0	0	0	0	0		206-1,307-1,419-1
Political donations, financial or in-kind ($)	0	80	0	0	0	2019: tax receipt received for attendance at a community dinner that was also a political fundraiser; internal guidance and training updated to specify non-attendance at such events	415-1
ANTI-CORRUPTION							
% of operations assessed for risks related to corruption	100	100	100	100	100	Using Transparency International Corruption Perception Index	205-1
% proved + probable reserves: countries with 20 lowest rankings					0	Using Transparency International Corruption Perception Index	EM-EP-510.1
# of governance body communicated to on anti-corruption	10	10	9	9	10	Annual conduct policy acknowledgement	205-2
% of governance body communicated to on anti-corruption	100	100	100	100	100	Annual conduct policy acknowledgement	205-2
# of employees communicated to on anti-corruption	553	730	746	716	740	Annual conduct policy acknowledgement	205-2
% of employees communicated to on anti-corruption	99	100	100	100	100	Regional breakdown not required due to high coverage	205-2
# of contractors communicated to on anti-corruption	265	326	215	232	230	Annual conduct policy acknowledgement	205-2
% of contractors communicated to on anti-corruption	99	100	100	100	100	Regional breakdown not required due to high coverage	205-2
% of business partners communicated to on anti-corruption	100	100	100	100	100	Business partners defined as joint venture partners	205-2
# of governance body trained on anti-corruption	10	10	9	9	10		205-2
% of governance body trained on anti-corruption	100	100	100	100	100		205-2
# of employees and contractors trained on anti-corruption	266	301	41	68	86	New hire onboarding plus position-specific, in-depth training; 2019+ decrease reflects lower new hire numbers	205-2
% of employees and contractors trained on anti-corruption	26	29	4	7	9%		205-2
Confirmed incidents of corruption	0	0	0	0	0		205-2

Material Topic	2017	2018	2019	2020	2021	2022	Context	GRI/SASB
OVERALL STAFF DEMOGRAPHICS								
Total staff (employees + contractors) (FTEs) Employees = permanent; Contractors = fixed-term contracts	**685**	**1023**	**1055**	**972**	**949**	**970**	Full time = 0.8 - 1 FTE Part time = 0.1 - 0.79 FTE	102-7
Staff by gender (all staff)								
Male	484	736	759	711	690	704		
% of male staff	71%	72%	72%	73%	73%	73%		
Female	201	287	296	261	259	266		
% of female staff	29%	28%	28%	27%	27%	27%		
Staff by employment contract & gender (all staff)								102-8
Employees (Male)	360	488	580	542	519	537		
Employees (Female)	146	210	243	204	197	203		
Total Employees	**506**	**698**	**823**	**746**	**716**	**740**		
Contractors (Male)	124	248	179	169	171	167		
Contractors (Female)	55	77	53	57	62	63		
Total Contractors	**179**	**325**	**232**	**226**	**233**	**230**		
Staff by employment type & gender (all staff)								102-8
Full-time (Male)	454	703	727	662	653	689		
Full-time (Female)	175	250	259	228	225	255		
Part-time (Male)	30	33	32	49	37	15		
Part-time (Female)	26	37	37	33	34	11		
Staff by region and gender (all staff)							% of total worforce	102-8
Australia - Male	72	71	66	61	66	77		
Australia - Female	20	11	12	11	11	12		
Total Australia	**92**	**82**	**78**	**72**	**77**	**89**	9%	
Canada - Male	168	335	355	323	311	315		
Canada - Female	102	165	169	141	147	153		
Total Canada	**270**	**499**	**524**	**460**	**458**	**468**	48%	
France - Male	163	113	105	108	100	95		
France - Female	50	53	53	51	45	43		
Total France	**166**	**166**	**158**	**159**	**145**	**138**	14%	
Central & Eastern Europe - Male	7	8	11	10	10	10		
Central & Eastern Europe - Female	2	3	5	6	6	6		
Total Central & Eastern Europe	**9**	**11**	**16**	**16**	**16**	**16**	2%	
Germany - Male	31	36	40	32	31	31		
Germany - Female	6	8	9	7	7	6		
Total Germany	**37**	**44**	**49**	**39**	**38**	**37**	4%	
Ireland - Male		75	66	64	63	65		
Ireland - Female		23	22	22	23	23		
Total Ireland		**98**	**88**	**86**	**86**	**88**	9%	
Netherlands - Male	84	82	92	91	86	85		
Netherlands - Female	16	14	12	13	10	14		
Total Netherlands	**100**	**96**	**104**	**104**	**96**	**99**	10%	
United States - Male	6	16	24	22	23	26		

Material Topic	2017	2018	2019	2020	2021	2022	Context	GRI/SASB
United States - Female	5	11	13	10	10	9		
Total United States	**11**	**27**	**38**	**32**	**33**	**35**	4%	
Percentage of workers defined as self-employed	**5%**	**11%**	**7%**	**8%**	**7%**	**6%**		102-8
Significant variations in employment numbers (e.g. seasonal changes)	**None**	**None**	**None**	**None**	**None**	**None**		102-8
Percentage of employees covered by collective bargaining agreements	**31%**	**23%**	**18%**	**20%**	**20%**	**20%**	Zero sites where collective bargaining is at risk	102-41, 407-1
DETAILED EMPLOYEE DEMOGRAPHICS - by Age and Gender	Regional breakdown available by request						Broken down by region 2013-20; streamlined 2021	401-1,405-1
Total employees by age and gender (#)							Male age not reported: 49; Female age not reported: 17	
Male under 30	34	50	69	56	37	52		
Female under 30	10	17	19	14	11	22	<30: 7%	
Male 30-50	234	332	380	369	353	421		
Female 30-50	90	133	146	134	124	148	30-50: 66%	
Male over 50	92	106	116	117	129	182		
Female over 50	46	60	60	56	62	79	>50: 27%	
New hires by age and gender (#)								
Male under 30	10	26	37	6	6	8		
Female under 30	1	9	13	2	2	8		
Male 30-50	21	109	70	17	14	38		
Female 30-50	6	52	24	2	10	19		
Male over 50	9	16	10	3	3	8		
Female over 50	1	16	3	1	6	5		
Total new hires	**48**	**228**	**157**	**31**	**41**	**86**		
Turnover by age and gender (#)								
Male under 30	2	4	9	5	11	1		
Female under 30	1	2	3	2	3	1		
Male 30-50	15	18	28	27	30	20		
Female 30-50	8	10	12	17	16	13		
Male over 50	14	13	10	16	8	12		
Female over 50	4	9	11	8	5	11		
Total turnover	**44**	**56**	**73**	**75**	**73**	**58**		
Turnover by age and gender (%)								
Male under 30	0.4%	0.7%	1.2%	0.6%	1.5%	0.1%		
Female under 30	0.2%	0.3%	0.4%	0.3%	0.4%	0.1%		
Male 30-50	3.0%	3.0%	3.7%	3.4%	4.1%	2.7%		
Female 30-50	0.4%	0.4%	0.4%	0.5%	0.5%	0.4%		
Male over 50	2.8%	2.2%	1.3%	2.0%	1.1%	1.6%		
Female over 50	0.8%	1.5%	1.4%	1.0%	0.7%	1.5%		
Total Global Turnover Rate	**8.7%**	**9.3%**	**9.6%**	**9.8%**	**10.0%**	**8.0%**	Turnover based on average annual headcount	
Net employment creation, permanent employees	**4**	**171**	**84**	**-44**	**-32**	**28**	May not be exact match to Row 12 due to changes in contractor status during the year	401-1
PARENTAL LEAVE (maternity, paternity, parental)								401-3

Material Topic	2017	2018	2019	2020	2021	2022	Context	GRI/SASB
Proportion of employees entitled to parental leave %	100	100	100	100	100	100	All employees eligible for parental leave for birth or adoption aligned with local legislation	
Number of male employees who took parental leave	7	6	5	5	16	10	Employees whose leave began in 2022	
Number of female employees who took parental leave	6	7	9	10	7	4	"	
Total number of employees who took parental leave	**13**	**13**	**14**	**15**	**23**	**14**	"	
Number of male employees returned after parental leave	7	6	5	5	15	10/10	Returned from leave as expected or early in 2022	
Number of female employees returned after parental leave	5	7	8	9	6	5/5	"	
Total number of employees returned after parental leave	**12**	**13**	**13**	**14**	**21**	**15/15**	"	
Rate of male employees who returned after parental leave	100%	100%	100%	100%	94%	100%	"	
Rate of female employees who returned after parental leave	83%	100%	90%	93%	86%	100%	"	
Retention: # of male employees 12 months after parental leave	6	6	5	5	8/9	15/16	Remained 12 months after their return date	
Retention: # of female employees 12 months after parental leave	2	5	7	8	5/6	5/6	"	
12-month retention rate: male employees	86%	100%	83%	100%	89%	94%	"	
12-month retention rate: female employees	66%	100%	100%	100%	83%	83%	"	
WOMEN IN LEADERSHIP - PERMANENT EMPLOYEES								
Number of women in all leadership roles (Team Lead and above)	21	32	28	30	31	27		
% of women in all leadership roles	**16**	**19**	**16**	**17**	**17**	**15**		
Number of women in executive roles (Vice President and above)					2	2	2021: first year of reporting	
% of women in executive roles					**17%**	**18%**	2022: 11 executive roles (VP+) total; 2021 12 VP+	
TRAINING AND EDUCATION - PERMANENT EMPLOYEES								404-1
Hours of Training - Male	6,888	10,105	12,687	8,905	6,629	13,036	Includes mandatory, compliance training vs	
Hours of Training - Female	1,638	2,918	2,927	1,363	1,790	2,763	MOI KPI, which does not	
Total Hours of Training	**8,526**	**13,023**	**15,614**	**10,268**	**8,419**	**15,799**	2020-21: Reduced training due to COVID	
Average Hours of Training per employee - Male	19	21	22	16	13	24		
Average Hours of Training per employee - Female	11	14	13	6	9	14		
Average Hours of Training	**17**	**19**	**20**	**14**	**12**	**21**		
Administration Staff Hours of Training - Male	391	684	531	510	251	1,647		
Administration Staff Hours of Training - Female	877	1,427	1,388	610	516	1,465		
Production Staff Hours of Training - Male	6,497	9,422	12,156	8,395	6,378	11,390		
Production Staff Hours of Training - Female	391	1,491	1,539	753	1,274	1,298		
Administration Staff Average Hours of Training - Male	5	9	6	6	3	17		
Administration Staff Average Hours of Training - Female	8	11	9	4	4	11		
Production Staff Average Hours of Training - Male	23	23	26	18	15	25		
Production Staff Average Hours of Training - Female	24	19	25	14	22	22		
Hours of Training - all staff, including contractors with HSE/emergency response training					13,864	19,889		
PERFORMANCE AND CAREER DEVELOPMENT - PERMANENT EMPLOYEES								404-3
Male employees with annual performance/career review	95%	100%	98%	97%	100%	100%		
Female employees with annual performance/career review	94%	97%	95%	90%	95%	98%		
Total employees with annual performance/career review	**92%**	**99%**	**97%**	**95%**	**99%**	**99%**		

OCCUPATIONAL HEALTH AND SAFETY	2018					2019					2020					2021					2022					Context	GRI/SASB
SYSTEM COVERAGE																										F Fatality LT Lost time RW Restricted Work MA Medical Aid	EM-EP-320a.1
& workers covered by OHS mangaement system					100					100					100					100					100	Our HSE management system covers all workers	403-1
% of workers represented by HSE committees					100					100					100					100					100	Every worker is represented by HSE	403-1
Workers with high risk of occupation-related disease					0					0					0					0					0		403-3
Hours of training: health, safety & emergency response					NT					NT					5839					9,415					10,215	Permanent and fixed term staff	403-5
Average hours of training / staff & fixed term contractors					NT					NT					58.4					94.2					10.5		403-5
TRIFR, STAFF & INDEPENDENT CONTRACTORS/VENDORS																											
Total recordable injury frequency per 200,000 hours					**0.94**					**1.15**					**1.15**					**1.11**					**0.73**		403-9
Total recordable injury frequency per 1,000,000 hours					**4.72**					**5.77**					**5.75**					**5.54**					**3.65**		403-9
INJURY RATES, STAFF (PERMANENT & FIXED TERM)																											
Types of injury – all staff (permanent and fixed term)	F	LT	RW	MA	Total	F	LT	RW	MA	Total	F	LT	RW	MA	Total	F	LT	RW	MA	Total	F	LT	RW	MA	Total		403-9
Canada	0	0	0	1	1	0	0	1	0	1	0	0	0	3	3	0	0	1	1	2	0	0	1	1	2	Update: Corporate+Canada combined: 2018 to 2022	
France	0	0	0	1	**1**	0	2	0	1	**3**	0	1	0	0	**1**	0	2	0	0	2	0	0	0	0	**0**		
Netherlands	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	0	0	0	1	0	**1**		
Australia	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	**0**		
United States	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	**0**		
Germany	0	0	1	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	1	1	2	0	0	0	0	**0**		
Central and Eastern Europe	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	**0**		
Ireland	0	0	0	0	**0**	0	0	0	1	**1**	0	0	0	0	**0**	0	1	0	0	1	0	1	0	0	**1**		
Injury rate – all staff					**0.0000010**					**0.0000014**					**0.0000021**					**0.0000013**					**0.0000007**	Injuries relative to total workforce hours	403-9
Canada					0.0000010					0.0000016					0.0000043					0.0000024					0.0000030	Update: Corporate+Canada combined: 2018 to 2022	
France					0					0.0000101					0.0000036					0.0000072					0.0000000		
Netherlands					0.000000					0.0000000					0.0000000					0.0000000					0.0000100		
Australia					0					0.0000000					0.0000000					0.0000000					0.0000000		
United States					0					0.0000000					0.0000000					0.0000000					0.0000000		
Germany					0					0.0000000					0.0000000					0.0000299					0.0000000		
Central and Eastern Europe					0					0.0000000					0.0000000					0.0000000					0.0000000		
Ireland					0					0.0000067					0.0000000					0.0000067					0.0000067		
LTIFR - all staff, per 1 million hours worked					**0.00**					**1.39**					**0.69**					**1.93**					**0.73**		403-9
TRIFR - all staff, per 1 million hours worked					**1.43**					**3.48**					**2.75**					**4.51**					**2.92**	2020 data change - formula correction	
Total Workforce Hours, all staff					**2,102,880**					**1,435,976**					**1,454,292**					**1,553,092**					**1,369,691**		403-9
Canada					1,015,040					642,776					700,804					844,545					665,422	Update: Corporate+Canada combined: 2018 to 2022	
France					343,200					298,289					278,440					278,776					262,835		
Netherlands					199,680					111,117					121,236					95,700					100,157		
Australia					170,560					92,200					54,611					52,686					66,535		
United States					56,160					50,969					58,216					51,080					44,282		
Germany					91,520					76,493					70,225					66,871					58,016		
Central and Eastern Europe					22,880					15,080					21,400					13,920					22,160		
Ireland					203,840					149,052					149,360					149,514					150,284		
Absentee rate – all staff					**0.014**					**0.015**					**0.013**					**0.014**					**0.019**	2016: absentee days for S&LTD &sick leave / total days available for all permanent staff; 2020+: days refined to exclude paid time off eg vacation, parental leave	403-9
INJURY RATES, INDEPENDENT CONTRACTORS/VENDORS					**2018**					**2019**					**2020**					**2021**					**2022**		
Types of injury - independent contractors	F	LT	RW	MA	Total	F	LT	RW	MA	Total	F	LT	RW	MA	Total	F	LT	RW	MA	Total	F	LT	RW	MA	Total		403-9
Canada	0	1	3	7	**11**	0	3	3	10	**16**	0	0	0	8	**8**	0	2	4	3	9	0	0	8	1	9		
France	0	4	1	3	**8**	0	1	0	3	**4**	0	3	1	1	**5**	0	3	2	0	5	0	1	0	2	3		
Netherlands	0	0	0	0	**0**	0	0	1	0	**1**	0	0	0	0	**0**	0	0	0	1	1	0	1	0	0	1		
Australia	0	1	0	0	**1**	0	0	0	0	**0**	0	0	2	0	**2**	0	0	0	1	1	0	0	2	0	2		
United States	0	0	0	0	**0**	0	2	0	0	**2**	0	0	0	1	**1**	0	0	2	0	2	0	0	1	1	2		
Germany	0	0	2	0	**2**	0	2	0	0	**2**	0	5	1	0	**6**	0	0	1	0	1	0	1	0	0	1		
Central and Eastern Europe	0	0	0	0	**0**	0	1	0	0	**1**	0	0	0	0	**0**	0	0	0	1	1	0	0	0	0	0		
Ireland	0	0	0	0	**0**	0	0	1	0	**1**	0	0	0	1	**1**	0	0	0	0	0	0	0	0	0	0		

OCCUPATIONAL HEALTH AND SAFETY	2018		2019		2020		2021		2022		Context	GRI/SASB
Injury rate – independent contractors		**0.0000069**		**0.0000066**		**0.0000071**		**0.0000060**		**0.0000039**	Injuries relative to total independent contractor hours	403-9
Canada		0.0000066		0.0000061		0.0000046		0.0000060		0.0000039	Note update to 2020 and 2021 injury rates	
France		0.0000155		0.0000080		0.0000136		0.0000101		0.0000055	Note update to 2020 and 2021 injury rates	
Netherlands		0.0000000		0.0000073		0.0000000		0.0000040		0.0000051	Note update to 2021 injury rate	
Australia		0.0000149		0.0000000		0.0000162		0.0000069		0.0000079		
United States		0.0000000		0.0000053		0.0000023		0.0000073		0.0000031		
Germany		0.0000355		0.0000155		0.0000612		0.0000143		0.0000083		
Central and Eastern Europe		0.0000000		0.0000233		0.0000000		0.0000028		0.0000000		
Ireland		0.0000000		0.0000054		0.0000033		0.0000000		0.0000000		
LTIFR - independent contractors: per 1 million hours worked		**1.88**		**2.19**		**2.47**		**1.50**		**0.64**		
TRIFR - independent contractors: per 1 million hours worked		**6.88**		**6.57**		**7.09**		**6.02**		**3.86**		403-9
Contractors Hours Worked		**3,199,011**		**4,110,146**		**3,242,477**		**3,323,443**		**4,659,720**		
Canada		1,662,745		2,635,979		1,756,793		1,488,752		2,333,677	Contracted hours updated for 2019, 2020 and 2021	
France		517,335		500,172		367,150		494,200		545,840		
Netherlands		261,312		136,735		110,449		249,585		194,828		
Australia		67,224		105,783		123,762		145,620		254,509		
United States		262,399		374,882		438,992		274,397		645,219		
Germany		56,266		128,811		97,970		70,056		119,865		
Central and Eastern Europe		75190		42,857		47,836		357,844		343,460		
Ireland		296540		184,928		299,525		242,989		222,322		
Absentee rate – independent contractors		**N/T**		**N/T**		**N/T**		**N/T**		**N/T**	Current system does not track contractor absentee days	403-9

MATERIAL TOPIC - ASSET INTEGRITY & SPILLS (RELEASES)	2018	2019	2020	2021	2022	CONTEXT	GRI/SASB
Annual Production - Annual Report figure, financial control: boe	31,853,185	36,630,232	34,839,540	31,173,190	31,093,255		
Annual Production - Annual Report minus non-operated volumes (CDP): boe	28,712,829	36,604,811	34,723,518	31,154,575	31,058,580	**2018: excludes ~11 months non-op from IBU**	
Annual Production - Operated facility throughput including third-party volumes: boe	29,440,819	44,708,966	42,202,207	36,865,352	35,634,107	**Use for intensity calculations to ensure numerator/denominator alignment**	
ASSET INTEGRITY AND PROCESS SAFETY	**2018**	**2019**	**2020**	**2021**	**2022**		**GRI 11**
Number of Tier 1 process safety events	**0**	**0**	**0**	**0**	**1**	**0.16 per 1,000,000 employee + contractor hours worked (per Safety Metrics)**	**EM-EP-540a.1**
Canada	0	0	0	0	0		
France	0	0	0	0	0		
Netherlands	0	0	0	0	0		
Australia	0	0	0	0	0		
United States	0	0	0	0	1		
Germany	0	0	0	0	0		
Central and Eastern Europe - Hungary	0	0	0	0	0		
Ireland	0	0	0	0	0		
Number of Tier 2 process safety events	**96**	**162**	**89**	**61**	**N/A**	**Recalibration of Tier 2 definition in progress 2022-2023**	**GRI 11**
SPILLS (RELEASES)	**2018**	**2019**	**2020**	**2021**	**2022**	**All spills, including < 1 bbl or 0.16m3, and those contained behind impermeable secondary containment; Units switched from m3 to bbl in 2020 IAW SASB; Zero spills in Arctic**	**EM-EP-160a.2**
Number of significant spills, defined as included in financial statements due to resulting liabilities	**0**	**0**	**0**	**0**	**0**	**No significant spills requiring reporting in financial statements 2012-2022**	**306-3**
Total number of all spills	**268**	**456**	**420**	**371**	**387**		**306-3**
Canada	159	281	280	244	250		
France	61	51	50	46	35		
Netherlands	18	35	26	36	24		
Australia	10	8	8	9	15		
United States	6	63	38	27	39		
Germany	14	7	8	6	7		
Central and Eastern Europe - Hungary and Croatia	0	0	0	0	1		
Ireland	0	11	10	3	16		
Volume of all spills: bbl	**4,858**	**9,377**	**16,375**	**3,216**	**6,401**	**Breakout into hydrocarbon, produced water and other began in 2019**	**306-3**
Canada	4,630	7,667	15,825	2,971	4,494		
France	95	541	195	76	243		
Netherlands	75	39	65	74	18		
Australia	1	54	0	1	5		
United States	48	1,068	242	90	1,503		
Germany	9	7	46	4	137		
Central and Eastern Europe - Hungary and Croatia	0	0	0	0	0		
Ireland	0	3	1	0.1	1		
Volume of spills - Hydrocarbon Liquids: bbl		**469**	**1,226**	**258**	**2,146**		**EM-EP-160a.2**
Canada		340	962	192	1,793		
France		30	164	38	168		
Netherlands		0	5	1	1		
Australia		15	0	1	3		
United States		81	94	25	180		
Germany		0	0	0	0.3		
Central and Eastern Europe - Hungary and Croatia		0	0	0	0		

MATERIAL TOPIC - ASSET INTEGRITY & SPILLS (RELEASES)	2018	2019	2020	2021	2022	CONTEXT	GRI/SASB
Annual Production - Annual Report figure, financial control: boe	31,853,185	36,630,232	34,839,540	31,173,190	31,093,255		
Annual Production - Annual Report minus non-operated volumes (CDP): boe	28,712,829	36,604,811	34,723,518	31,154,575	31,058,580	**2018: excludes ~11 months non-op from IBU**	
Annual Production - Operated facility throughput including third-party volumes: boe	29,440,819	44,708,966	42,202,207	36,865,352	35,634,107	**Use for intensity calculations to ensure numerator/denominator alignment**	
Ireland		2	1	0.1	0.8		
Volume of spills - Produced Water: bbl		**8,763**	**14,908**	**2,886**	**4,063**		
Canada		7,289	14,668	2,775	2,699		
France		460	31	38	66		
Netherlands		19	19	8	2		
Australia		2	0	0	2		
United States		986	148	65	1,173		
Germany		6	42	0	121		
Central and Eastern Europe - Hungary and Croatia		0	0	0	0		
Ireland		0	0	0	0.2		
Volume of spills - Other: bbl		**145**	**241**	**72**	**192**		
Canada		38	195	4	2		
France		50	0	0	9		
Netherlands		20	41	64	15		
Australia		36	0	0	0		
United States		0	0	0	150		
Germany		0	5	3	16		
Central and Eastern Europe - Hungary and Croatia		0	0	0	0		
Ireland		0	0	0	0		

MATERIAL TOPIC: ENERGY & EMISSIONS	2018	2019	2020	2021	2022	CONTEXT	GRI/SASB
Methodology Note: all energy and emissions data, unless specifically noted otherwise, are based on operational control at the battery level.							
Annual Production - Annual Report figure, financial control: boe	31,853,185	36,630,232	34,839,540	31,173,190	31,093,255		
Annual Production - Annual Report minus non-operated volumes as referenced in CDP submissions: boe	28,712,829	36,604,811	34,723,518	31,154,575	31,058,580	**2018: excludes ~11 months non-op from IBU**	
Annual Production - Operated facility throughput including third-party volumes: boe	29,440,819	44,680,354	42,202,207	36,865,352	35,634,107	**Use for energy and emissions intensity calculations to ensure numerator/denominator alignment**	
ENERGY	**2018**	**2019**	**2020**	**2021**	**2022**		
Scope 1: Energy consumption within organization, non-renewable (natural gas, propane liquid, diesel fuel and vehicle fuel): GJ	**4,132,866**	**5,554,821**	**5,172,331**	**4,806,111**	**4,388,587**		**302-1**
Canada	2,809,879	3,592,038	3,223,562	2,907,176	2,496,328		
France	0	0	3,143	6,280	12,839		
Netherlands	60,390	72,585	73,037	74,841	70,352		
Australia	864,934	722,623	843,308	813,213	815,819		
United States	199,893	204,576	111,857	78,669	63,807		
Germany	120,844	135,350	108,675	112,212	101,099		
Central and Eastern Europe - Hungary and Croatia	2,932	9,236	5,119	16,544	0		
Ireland	73,996	818,413	803,630	797,175	828,343		
Energy intensity ratio Scope 1: GJ/boe	**0.14**	**0.12**	**0.12**	**0.13**	**0.12**		**302-3**
Scope 2: Energy consumption outside organization, non-renewable (electricity): GJ	**1,403,021**	**2,077,646**	**1,232,392**	**1,049,524**	**1,243,976**	**1 MWh = 3.6 GJ**	**302-2**
Canada	750,356	1,352,186	1,117,288	973,345	1,125,289		
France	623,641	679,640	60,296	16,762	40,973	2020, 2021 and 2022 reflect renewable energy breakout	
Netherlands	0	0	0	0	0	Guarantees of Origin green electricity 2017-2022; electricity consumed 2022 = 80,382 MWh	
Australia	669	587	383	463	476		
United States	10,969	30,803	45,119	45,273	52,198		
Germany	17,369	11,592	6,853	13,470	24,814	2020, 2021 and 2022 reflect renewable energy breakout	
Central and Eastern Europe - Hungary and Croatia	17	0	229	210	227		
Ireland	0	2,838	2,224	0	0	All purchased electricity from renewable fuels in 2021 & 2022; electricity consumed 2022 = 533.8 MWh	
Energy intensity ratio Scope 2: GJ/boe	**0.05**	**0.05**	**0.03**	**0.03**	**0.03**		**302-3**
Energy intensity ratio Scope 1+2: GJ/boe	**0.19**	**0.17**	**0.15**	**0.16**	**0.16**	**2014+: operated battery energy use/operated battery production**	**302-3**
Renewable energy	**2018**	**2019**	**2020**	**2021**	**2022**		
Total amount invested in renewable energy, CAD	**$1,306,667**	**$446,778**	**$568,182**	**$2,887,512**	**$1,771,725**		
Canada	$391,000	$220,000	$230,000	$2,461,000	$696,080	Assorted solar including DCET, pump retrofits, leak detection and remote monitoring	
France	$312,000	$190,000	$270,000	$388,455	$800,508	4 geothermal from produced water projects; turbine pilot; hydrogen research	
Netherlands	$603,667	$36,778	$68,182	$23,680	$215,379	Harlingen biogas project	
Australia	$0	$0	$0	$0	$0		
United States	$0	$0	$0	$0	$0		
Germany	$0	$0	$0	$0	$0		
Central and Eastern Europe - Hungary and Croatia	$0	$0	$0	$0	$49,758	Solar panels and batteries for Ceric and Berak wellsites; operational in 2024	
Ireland	$0	$0	$0	$14,377	$10,000	Hydrogen research	
Renewable energy investment: % of capital expenditure	**0.3**	**0.1**	**0.2**	**0.8**	**0.5**		
Renewable energy GHG emissions avoided: tCO2e	**24,566**	**24,623**	**18,993**	**18,635**	**19,349**		
Renewable energy generated by source (actual energy content transferred): MWh	**77,088**	**77,095**	**59,330**	**58,004**	**59,197**		**302-1**
Canada	0	7	11	19	53		
France	77,088	77,088	59,319	57,985	59,144	Tom d'Aqui greenhouses/ Eco-neighborhood Arcachon / Turbines VBH2 / Fleur de Vie Vic Bilh/ Condorcet	
Netherlands	0	0	0	0	0		

MATERIAL TOPIC: ENERGY & EMISSIONS	2018	2019	2020	2021	2022	CONTEXT	GRI/SASB
Methodology Note: all energy and emissions data, unless specifically noted otherwise, are based on operational control at the battery level.							
Annual Production - Annual Report figure, financial control: boe	31,853,185	36,630,232	34,839,540	31,173,190	31,093,255		
Annual Production - Annual Report minus non-operated volumes as referenced in CDP submissions: boe	28,712,829	36,604,811	34,723,518	31,154,575	31,058,580	**2018: excludes ~11 months non-op from IBU**	
Annual Production - Operated facility throughput including third-party volumes: boe	29,440,819	44,680,354	42,202,207	36,865,352	35,634,107	**Use for energy and emissions intensity calculations to ensure numerator/denominator alignment**	
Australia	0	0	0	0	0		
United States	0	0	0	0	0		
Germany	0	0	0	0	0		
Central and Eastern Europe - Hungary and Croatia	0	0	0	0	0		
Ireland	0	0	0	0	0		
EMISSIONS	**2018**	**2019**	**2020**	**2021**	**2022**		**GRI**
Percentage of total emissions under emissions-limiting regulations		**91%**	**89%**	**87%**	**100%**	**All BUs operate in regions under some form of emissions limiting regulations: e.g. EU ETS, carbon taxes, carbon pricing, methane regulations, etc.**	**EM-EP-110a.1.4**
Scope 1 gross direct GHG emissions: tonne	**742,175**	**858,823**	**793,203**	**648,337**	**616,184**		**EM-EP-110a.2 305-1**
CO_2 Scope 1 emissions (excluding CH4 and N2O): tonne	**456,817**	**555,687**	**531,078**	**466,472**	**416,262**	**Hydrofluorocarbons, Perfluorocarbons, Sulfur hexafluride, VOCs, particulates not tracked**	**305-1**
Canada	300,947	374,495	354,167	283,298	241,688		
France	61,169	64,419	56,764	65,665	62,414		
Netherlands	15,198	11,403	8,393	6,803	5,035		
Australia	46,587	42,024	50,209	50,627	46,476		
United States	19,152	15,409	13,253	11,949	12,909		
Germany	9,710	4,069	7,262	6,408	6,111		
Central and Eastern Europe - Hungary and Croatia	285	2,260	357	1,146	0		
Ireland	3,769	41,608	40,673	40,576	41,628		
Methane: tCO2e	**284,762**	**302,027**	**261,051**	**180,987**	**199,123**		**GRI 11.1.5**
Canada	241,279	258,500	216,739	144,005	168,345		
France	10,197	8,499	8,752	8,009	6,932		
Netherlands	5,318	4,018	5,215	3,265	2,983		
Australia	16,961	18,601	21,373	18,655	11,112		
United States	1,468	3,981	4,436	4,739	4,684		
Germany	9,101	7,492	3,284	1,763	4,438		
Central and Eastern Europe - Hungary and Croatia	384	244	656	1.2	0		
Ireland	54	692	597	550	628		
Methane as a % of total Scope 1 direct GHG emissions	**38**	**35**	**33**	**28**	**32**		**EM-EP-110a.1.3**
Nitrous Oxide (N_2O): tCO2e	**596**	**1,109**	**1,073**	**878**	**799**		**305-2**
Canada	378	465	505	290	310		
France	107	547	428	462	361		
Netherlands	22	7	28	12	10		
Australia	82	68	90	104	96		
United States	5	16	18	3	19		
Germany	2	1	4	4	4		
Central and Eastern Europe - Hungary and Croatia	0	5	0	3	0		
Ireland	0	0	0	0	0		
Scope 1 GHG emissions intensity, oil and gas production: tCO2e/boe	**0.025**	**0.019**	**0.019**	**0.018**	**0.017**	**2014+: operated battery Scope 1 emissions/operated battery production**	**305-4**
Total Scope 2 GHG emissions: tCO2e	**173,847**	**288,345**	**247,144**	**214,778**	**218,839**		**305-2**
Canada	160,369	269,349	222,010	194,319	192,833		
France	11,444	6,808	8,628	2,661	6,617		

MATERIAL TOPIC: ENERGY & EMISSIONS	2018	2019	2020	2021	2022	CONTEXT	GRI/SASB
Methodology Note: all energy and emissions data, unless specifically noted otherwise, are based on operational control at the battery level.							
Annual Production - Annual Report figure, financial control: boe	31,853,185	36,630,232	34,839,540	31,173,190	31,093,255		
Annual Production - Annual Report minus non-operated volumes as referenced in CDP submissions: boe	28,712,829	36,604,811	34,723,518	31,154,575	31,058,580	**2018: excludes ~11 months non-op from IBU**	
Annual Production - Operated facility throughput including third-party volumes: boe	29,440,819	44,680,354	42,202,207	36,865,352	35,634,107	**Use for energy and emissions intensity calculations to ensure numerator/denominator alignment**	
Netherlands	0	0	0	0	0		
Australia	130	114	73	88	90		
United States	787	10,231	14,425	13,856	15,088		
Germany	1,090	1,575	1,735	3,845	4,200		
Central and Eastern Europe - Hungary and Croatia	1	0	11	10	11		
Ireland	25	268	262	0	0		
Scope 2 GHG emissions intensity: tCO2e per boe	**0.006**	**0.006**	**0.006**	**0.006**	**0.006**	**2014+: operated battery Scope 2 emissions/operated battery production**	**305-4**
Scope 1+2 GHG emissions intensity: tCO2e per boe	**0.031**	**0.026**	**0.025**	**0.023**	**0.023**	**2014+: operated battery Scope 1+2 emissions/operated battery production**	**305-4**
Scope 3 Gross other indirect GHG emissions: tCO2e	**12,408,270**	**14,188,122**	**13,226,527**	**11,631,963**	**11,682,455**		**305-3**
Biogenic CO_2 Scope 3 emissions	0	0	0	0	0		305-3
Purchased goods and services					79,047	Categories previously publicly reported in CDP Climate annual submissions; added to this report in 2022	
Capital goods					45,917		
Fuel and energy-related activities not included in Scope 1 or 2					197,814		
Upstream transportation and distribution					109,222		
Waste generated in operations					6,649		
Business travel					3,401		
Employee commuting					1,020		
Downstream transportation and distribution					55,671		
Processing of sold products					600,529		
Use of sold products	11,311,601	12,937,168	12,176,323	10,624,199	10,584,186		305-3
Emissions of ozone-depleting substances	**0**	**0**	**0**	**0**	**0**		**305-6**
NOx: tonne	**29**	**2,136**	**1,190**	**977**	**1,579**		**EM-EP-120a.1 305-7**
Canada	Not Tracked	1,912	1,011	818	1,193	From NPRI reporting	
France	22	51	45	50	46		
Netherlands	7	2	4	2	2		
Australia	Not Tracked	171	131	104	336		
United States	Not Tracked	Not Tracked	Not Tracked	Not Tracked	Not Tracked		
Germany	Not Tracked	Not Tracked	Not Tracked	2	2		
Central and Eastern Europe - Hungary and Croatia	Not Tracked	Not Tracked	Not Tracked	Not Tracked	0		
Ireland	Not Tracked	Not Tracked	Not Tracked	Not Tracked	Not Tracked		
SO2: tonne	**736**	**2,488**	**2681**	**2219**	**1871**		**EM-EP-120a.1 305-7**
Canada	198	1,800	1,935	1,360	1,059	From 2022 NPRI reporting, SO2 recalculated based on measured H2S	
France	538	682	737	851	803		
Netherlands	0	0	0	0	0		
Australia	-	-	1	1	1		
United States	-	5	8	7	8		
Germany	-	-	-	-	-		
Central and Eastern Europe - Hungary and Croatia	-	-	-	-	0		
Ireland	-	-	-	-	-		
Volatile Organic Compounds (VOCs) (non-methane): tonne		**68**	**145**	**621**	**938**	**Volatile organic compounds that participate in atmospheric photochemical reactions; excludes carbon monoxide, carbon dioxide and methane**	**EM-EP-120a.1 305-7**

MATERIAL TOPIC: ENERGY & EMISSIONS	2018	2019	2020	2021	2022	CONTEXT	GRI/SASB
Methodology Note: all energy and emissions data, unless specifically noted otherwise, are based on operational control at the battery level.							
Annual Production - Annual Report figure, financial control: boe	31,853,185	36,630,232	34,839,540	31,173,190	31,093,255		
Annual Production - Annual Report minus non-operated volumes as referenced in CDP submissions: boe	28,712,829	36,604,811	34,723,518	31,154,575	31,058,580	**2018: excludes ~11 months non-op from IBU**	
Annual Production - Operated facility throughput including third-party volumes: boe	29,440,819	44,680,354	42,202,207	36,865,352	35,634,107	**Use for energy and emissions intensity calculations to ensure numerator/denominator alignment**	
Canada		68	Not Tracked	138	455	From NPRI reporting	
France		Not Tracked	128	181	225		
Netherlands		Not Tracked	13	19	11		
Australia		Not Tracked	Not Tracked	Not Tracked	Not Tracked		
United States		Not Tracked	Not Tracked	278	245		
Germany		Not Tracked	4	5	3		
Central and Eastern Europe - Hungary and Croatia		Not Tracked	Not Tracked	Not Tracked	0		
Ireland		Not Tracked	Not Tracked	Not Tracked	Not Tracked	Ireland is below the regulatory reporting threshold for NMVOC	
Particulate Matter (PM10): tonne						**Airborne finely divided solid or liquid material with an aerodynamic diameter ≤ 10 micrometers**	**EM-EP-120a.1 305-7**
Canada		125	219	9	106	From NPRI reporting	
France		Not Tracked	3	2	2		
Netherlands		Not Tracked	Not Tracked	Not Tracked	Not Tracked		
Australia		Not Tracked	8	12	13		
United States		Not Tracked	Not Tracked	Not Tracked	Not Tracked		
Germany		Not Tracked	Not Tracked	Not Tracked	Not Tracked		
Central and Eastern Europe - Hungary and Croatia		Not Tracked	Not Tracked	Not Tracked	0		
Ireland		Not Tracked	Not Tracked	Not Tracked	Not Tracked		
FLARING AND VENTING	**2018**	**2019**	**2020**	**2021**	**2022**		**EM-EP-110a.2**
Volume of flared hydrocarbon: e3m3/yr	**69,906**	**78,962**	**83,116**	**66,563**	**58,260**	**Note that all flared volumes are reported, not just continous flares**	**11.1.5**
Canada	45,455	55,526	62,108	42,144	36,437		
France	21,261	20,123	17,797	20,456	17,377		
Netherlands	201	235	236	287	250		
Australia	788	1,351	1,413	1,688	1,722		
United States	1,858	780	1,379	1,713	2,172		
Germany	289	23	31	58	218		
Central and Eastern Europe - Hungary and Croatia	32	763	0	0	0		
Ireland	22	161	152	206	84		
Volume of continuously vented hydrocarbon: e3m3/yr	**12,318**	**14,222**	**9,758**	**10,441**	**10,064**		**11.1.5**
Canada	9,447	11,424	6,968	8,442	8,622		
France	847	729	765	696	634		
Netherlands	260	62	189	66	58		
Australia	1,097	1,390	1,446	1,158	597		
United States	25	48	45	24	74		
Germany	617	526	275	21	47		
Central and Eastern Europe - Hungary and Croatia	21	11	37	0	0		
Ireland	3	33	33	33	33		
Flaring/Venting Intensity based on production: e3m3/boe	**0.0028**	**0.0021**	**0.0022**	**0.0021**	**0.0019**	**2012-2013: operated battery flaring and venting/operated and financial production** **2014+: operated battery flaring and venting emissions/operated battery production**	**11.1.5**
Hydraulic Fracturing						**Hydraulic fracturing used in Canadian and US operated production**	
Percentage of global production from hydraulic fracturing	40	42	37	49	51	% is approximate based on 100% frac'd in US, estimated 73% in Canada, and 0% in Europe and Australia	
Percentage of public disclosure of hydraulic fracturing fluids						**All fracturing fluids are disclosed through FracFocus**	

MATERIAL TOPIC: ENERGY & EMISSIONS	2018	2019	2020	2021	2022	CONTEXT	GRI/SASB
Methodology Note: all energy and emissions data, unless specifically noted otherwise, are based on operational control at the battery level.							
Annual Production - Annual Report figure, financial control: boe	31,853,185	36,630,232	34,839,540	31,173,190	31,093,255		
Annual Production - Annual Report minus non-operated volumes as referenced in CDP submissions: boe	28,712,829	36,604,811	34,723,518	31,154,575	31,058,580	**2018: excludes ~11 months non-op from IBU**	
Annual Production - Operated facility throughput including third-party volumes: boe	29,440,819	44,680,354	42,202,207	36,865,352	35,634,107	**Use for energy and emissions intensity calculations to ensure numerator/denominator alignment**	
Canada		100	100	100	100		EN-EP-140a.3
United States		100	100	100	100	No proprietary blends used	
Enhanced Oil Recovery from Carbon Capture and Storage						**Based on non-operated production**	
Volume of oil and NGLs produced from CCS ops: bbls/d, equity basis	2,321	2,045	2,098	1,753	1,784	Weyburn Carbon Capture and Storage project: non-operated	
CCS ops percentage of total (global) oil and NGLs produced: equity basis	5	4	4	4	4	Global oil & NGLs 2022 Equity/Financial Control: 45,491 bbl/d Global oil & NGLs 2021 Equity/Financial Control: 46,468 bbl/d Global oil & NGLs 2020 Equity/Financial Control: 52.538 bbl/d	

MATERIAL TOPIC: ENVIRONMENTAL INVESTMENT & SUPPLY CHAIN	2018	2019	2020	2021	2022	CONTEXT	GRI/SASB
Annual Production - Annual Report figure, financial control: boe	31,853,185	36,630,232	34,839,540	31,173,190	31,093,255		
Annual Production - Annual Report minus non-operated volumes (CDP): boe	28,712,829	36,604,811	34,723,518	31,154,575	31,058,580	**2018: excludes ~11 months non-op from IBU**	
Annual Production - Operated facility throughput including third-party volumes: boe	29,440,819	44,708,966	42,202,207	36,865,352	35,634,107	**Use for intensity calculations to ensure numerator/denominator alignment**	
INVESTMENT IN ENVIRONMENTAL PROTECTION	**2018**	**2019**	**2020**	**2021**	**2022**		
Total environmental protection investment: $CAD	**$44,149,540**	**$55,393,529**	**$55,100,067**	**$58,357,203**	**$61,857,935**		
Canada	$18,136,607	$24,419,157	$22,676,290	$31,029,562	$34,294,129		
France	$10,624,294	$11,531,615	$16,830,423	$11,673,948	$11,355,080		
Netherlands	$7,683,371	$11,432,724	$8,017,014	$9,823,706	$8,591,943		
Australia	$787,939	$1,512,341	$2,009,973	$728,905	$1,684,495		
United States	$2,469,513	$1,050,959	$710,428	$533,852	$1,589,982		
Germany	$850,680	$1,013,264	$502,695	$556,673	$956,980		
Central and Eastern Europe - Hungary and Croatia	$66,879	$0	$2,925	$991,806	$711,836		
Ireland	$3,530,258	$4,433,469	$4,350,320	$3,018,750	$2,673,491		
Waste disposal, emissions treatment, remediation	**$17,138,106**	**$24,943,941**	**$25,668,622**	**$18,605,389**	**$20,848,095**		
Canada	$4,087,067	$9,504,433	$6,702,516	$7,014,897	$8,687,308		
France	$3,311,501	$5,560,217	$9,996,283	$5,601,357	$5,696,398		
Netherlands	$3,594,031	$4,975,903	$4,760,879	$2,391,442	$1,842,105		
Australia	$380,624	$392,383	$240,390	$138,168	$566,375		
United States	$2,094,305	$192,859	$81,722	$84,476	$376,750		
Germany	$73,440	$284,843	$75,678	$174,047	$705,542		
Central and Eastern Europe - Hungary and Croatia	$66,879	$0	$2,925	$565,737	$683,667		
Ireland	$3,530,258	$4,033,303	$3,808,229	$2,635,264	$2,289,951		
Prevention and environmental management costs	**$11,135,296**	**$14,704,369**	**$15,780,459**	**$9,503,646**	**$10,005,530**		
Canada	$7,151,105	$9,603,658	$8,980,255	$5,812,518	$5,810,794		
France	$670,348	$811,168	$1,644,063	$1,247,458	$1,139,960		
Netherlands	$2,236,031	$1,689,806	$1,788,745	$807,726	$721,916		
Australia	$407,315	$1,119,958	$1,769,583	$590,737	$1,118,120		
United States	$375,207	$858,100	$628,705	$259,206	$551,593		
Germany	$295,290	$221,513	$427,017	$358,098	$251,438		
Central and Eastern Europe - Hungary and Croatia	$0	$0	$0	$44,418	$28,169		
Ireland	$0	$400,166	$542,091	$383,486	$383,540		
Discharge of Abandonment	**$15,876,138**	**$15,745,220**	**$13,650,986**	**$30,248,169**	**$31,004,310**		
Canada	$6,898,435	$5,311,067	$6,993,519	$18,202,148	$19,796,026		
France	$6,642,445	$5,160,230	$5,190,078	$4,825,133	$4,518,722		
Netherlands	$1,853,309	$4,767,015	$1,467,390	$6,624,538	$6,027,922		
Australia	$0	$0	$0	$0	$0		
United States	$0	$0	$0	$190,170	$661,640		
Germany	$481,950	$506,907	$0	$24,529	$0		
Central and Eastern Europe - Hungary and Croatia	$0	$0	$0	$381,650	$0		
Ireland	$0	$0	$0	$0	$0		
Canadian federal funding leveraged through Abandonment and Reclamation work					$16,733,522		
Fines for environmental non-compliance	**$0**	**$0**	**$0**	**$0**	**$0**		**307-1**
SUPPLY CHAIN	**2018**	**2019**	**2020**	**2021**	**2022**		
Number of new vendors that we pre-qualified using HSE criteria				**208**	**73**		
Canada				159	166		

MATERIAL TOPIC: ENVIRONMENTAL INVESTMENT & SUPPLY CHAIN	2018	2019	2020	2021	2022	CONTEXT	GRI/SASB
Annual Production - Annual Report figure, financial control: boe	31,853,185	36,630,232	34,839,540	31,173,190	31,093,255		
Annual Production - Annual Report minus non-operated volumes (CDP): boe	28,712,829	36,604,811	34,723,518	31,154,575	31,058,580	**2018: excludes ~11 months non-op from IBU**	
Annual Production - Operated facility throughput including third-party volumes: boe	29,440,819	44,708,966	42,202,207	36,865,352	35,634,107	**Use for intensity calculations to ensure numerator/denominator alignment**	
France				10	24		
Netherlands				0	0	No new vendors in 2022	
Australia				8	3		
United States				20	30		
Germany				4	7		
Central and Eastern Europe - Hungary and Croatia				3	4		
Ireland				4	5		
% of new vendors screened (pre-qualified using health, safety and environmental criteria)		**100**	**100**	**100**	**100**	**All new contractors require HSE pre-qualification to access Vermilion sites**	**S&P Global**
Canada				100	100		
France				100	100	New 2022 vendors working on Vermilion sites, not material vendors	
1197				n/a	n/a	No new vendors in 2022	
Australia				100	100		
United States				100	100		
Germany				100	100		
Central and Eastern Europe - Hungary and Croatia				100	100		
Ireland				100	100		
Number of vendors that we qualify (new vendors), inspect and work with (existing vendors) to improve performance on HSE matters		**361**	**948**	**1,042**	**1,197**	**New reporting in 2019**	**S&P Global**
Canada		108	717	754	816		
France		15	70	87	160	Vendors working on Vermilion sites with HSE Prevention Plan	
Netherlands		10	10	10	10		
Australia		6	6	25	28		
United States		178	121	141	142		
Germany		38	18	6	7		
Central and Eastern Europe - Hungary and Croatia		2	2	15	29		
Ireland		4	4	4	5		
% of existing vendors that we inspect and work with to improve performance on HSE matters							
Canada				100	100		
France				37	64	160 existing vendors of 221 vendors on Vermilion sites with HSE Prevention Plan	
Netherlands				100	100		
Australia				100	100		
United States				100	100		
Germany				100	100		
Central and Eastern Europe - Hungary and Croatia				100	100		
Ireland				100	100		

MATERIAL TOPIC - WASTE	2018	2019			2020			2021			2022			CONTEXT	GRI/SASB
Annual Production - Annual Report figure, financial control: boe	31,853,185			36,630,232			34,839,540			31,173,190			31,093,255		
Annual Production - Annual Report minus non-operated volumes (CDP): boe	28,712,829			36,604,811			34,723,518			31,154,575			31,058,580	2018: excludes ~11 months non-op from IBU	
Annual Production - Operated facility throughput including third-party volumes: boe	29,440,819			44,708,966			42,202,207			36,865,352			35,634,107	Use for intensity calculations to ensure numerator/denominator alignment	
WASTE	**2018**	**2019**			**2020**			**2021**			**2022**			**Waste disposal data based on direct confirmation or information provided by the waste disposal contractor**	**GRI**
		Hazardous	**Non-Hazardous**	**Total**	**Hazardous**	**Non-Hazardous**	**Total**	**Hazardous**	**Non-Hazardous**	**Total**	**Hazardous**	**Non-Hazardous**	**Total**	**2019+ reporting breaks out hazardous and non-hazardous waste**	
Waste by type and disposal method - Total: metric tonne	**151,230**	**17,637**	**118,483**	**136,120**	**19,973**	**74,107**	**94,079**	**16,224**	**138,050**	**154,273**	**20,948**	**121,207**	**142,155**		**306-3**
Canada	56,140	8,010	70,667	78,677	8,927	57,550	66,477	11,081	98,163	109,245	3,087	79,848	82,935		
France	4,505	1,384	2,589	3,972	619	1,754	2,372	319	224	543	517	1,145	1,662		
Netherlands	58,003	7,694	0	7,694	9,693	0	9,693	4,179	98	4,277	12,652	177	12,829		
Australia	665	89	465	554	163	156	319	453	123	576	234	83	316		
United States	28,578	0	37,753	37,753	0	14,539	14,539	0	38,895	38,895	0	26,577	26,577		
Germany	602	304	2,201	2,505	296	18	315	110	373	483	4,406	81	4,487		
Central and Eastern Europe - Hungary and Croatia	877	0	0	0	0	0	0	0	0	0	0	11,926	11,926		
Ireland	1,860	156	4,808	4,965	274	91	365	81	174	255	53	1,370	1,423		
Reuse: metric tonne	**585**	**0**	**11**	**11**	**0**	**4**	**4**	**0**	**14**	**14**	**0**	**22**	**22**		**306-4**
Canada	0	0	0	0	0	0	0	0	0	0	0	0	0		
France	0	0	0	0	0	0	0	0	0	0	0	0	0		
Netherlands	562	0	0	0	0	0	0	0	0	0	0	0	0		
Australia	23		11	11	0	4	4	0	4	4	0	4	4	Wooden pallets	
United States	0	0	0	0	0	0	0	0	0	0	0	0	0		
Germany	0	0	0	0	0	0	0	0	10	10	0	18	18		
Central and Eastern Europe - Hungary and Croatia	0	0	0	0	0	0	0	0	0	0	0	0	0		
Ireland	0			0	0	0	0	0	0	0	0	0	0		
Recycling: metric tonne	**49,422**	**1,150**	**5,078**	**6,228**	**1,617**	**1,882**	**3,498**	**1,444**	**437**	**1,881**	**2,458**	**2,626**	**5,084**		**306-4**
Canada	13	0	42	42	0	45	45	9	4	13	15	0	15		
France	305	139	46	185	223	1,727	1,950	16	209	225	65	1,084	1,150		
Netherlands	48,956	1,005	0	1,005	1,357	0	1,357	1,414	78	1,491	2,372	154	2,526		
Australia	143	2	71	73	5	60	65	3	85	88	4	41	45		
United States	0	0	136	136	0	0	0	0	5	5	0	22	22		
Germany	0	0	2	2	0	0	0	0	18	18	0	21	21		
Central and Eastern Europe - Hungary and Croatia	0	0	0	0	0	0	0	0	0	0	0	0	0		
Ireland	5	4	4,781	4,785	32	49	81	2	39	42	2	1,304	1,306		
Recovery, including energy recovery: metric tonne	**301**	**289**	**3**	**292**	**47**	**14**	**61**	**194**	**19**	**213**	**367**	**10**	**376**		**306-4**
Canada	0	0	0	0	0	0	0	0	0	0	0	0	0		
France	0	0	0	0	0	0	0	0	0	0	0	0	0		
Netherlands	0	137	0	137	2	0	2	194	9	203	106	10	116		
Australia	0			0	0	0	0	0	0	0	0	0	0		
United States	0	0	0	0	0	0	0	0	0	0	0	0	0		
Germany	301	152	3	155	45	14	59	0	10	10	260	0	260		
Central and Eastern Europe - Hungary and Croatia	0	0	0	0	0	0	0	0	0	0	0	0	0		
Ireland	0			0	0	0	0	0	0	0	0	0	0		
Incineration: metric tonne	**1,374**	**2,122**	**46**	**2,168**	**850**	**64**	**914**	**1,005**	**141**	**1,146**	**873**	**158**	**1,031**		**306-5**
Canada	0	0	0	0	0	0	0	0	0	0	0	0	0		
France	1,042	1,244	16	1,260	388	18	406	303	15	318	451	61	512		
Netherlands	23	573	0	573	7	0	7	528	12	540	305	14	319		
Australia	0	0	0	0	0	0	0	0	0	0	0	0	0		
United States	0	0	0	0			0	0	0	0	0	0	0		
Germany	301	152	3	155	238	4	242	95	5	100	66	42	108		
Central and Eastern Europe - Hungary and Croatia	0	0	0	0	0	0	0	0	0	0	0	0	0		
Ireland	8	153	27	180	217	42	259	79	110	189	51	41	92		
Deep well injection: metric tonne	**51,514**	**7,272**	**77,670**	**84,942**	**9,446**	**41,496**	**50,942**	**9,345**	**93,832**	**103,177**	**11,151**	**68,320**	**79,471**		**306-5**
Canada	15,365	1,683	41,262	42,945	2,672	28,563	31,235	9,325	61,569	70,894	885	48,557	49,442		

MATERIAL TOPIC - WASTE	2018	2019			2020			2021			2022			CONTEXT	GRI/SASB
Annual Production - Annual Report figure, financial control: boe	31,853,185			36,630,232			34,839,540			31,173,190			31,093,255		
Annual Production - Annual Report minus non-operated volumes (CDP): boe	28,712,829			36,604,811			34,723,518			31,154,575			31,058,580	**2018: excludes ~11 months non-op from IBU**	
Annual Production - Operated facility throughput including third-party volumes: boe	29,440,819			44,708,966			42,202,207			36,865,352			35,634,107	**Use for intensity calculations to ensure numerator/denominator alignment**	
France	0	0	0	0	0	0	0	0	0	0	0	0	0		
Netherlands	8,462	5,589		5,589	6,774	0	6,774	21	0	21	6,451	0	6,451		
Australia	0	0	0	0	0	0	0	0	0	0	0	0	0		
United States	27,687	0	36,408	36,408	0	12,933	12,933	0	32,263	32,263	0	19,763	19,763		
Germany	0	0	0	0	0	0	0	0	0	0	3,815	0	3,815		
Central and Eastern Europe - Hungary and Croatia	0	0	0	0	0	0	0	0	0	0	0	0	0		
Ireland	0	0	0	0	0	0	0	0	0	0	0	0	0		
Landfill: metric tonne	**41,397**	**365**	**34,082**	**34,447**	**376**	**28,857**	**29,233**	**1,039**	**34,249**	**35,289**	**804**	**15,514**	**16,318**		**306-5**
Canada	35,979	222	29,175	29,397	205	28,750	28,955	540	33,892	34,432	274	15,455	15,729		
France	3,151	0	2,527	2,527	8	8	16	0	0	0	0	0	0		
Netherlands	0	56	0	56	5	0	5	49	0	49	40	0	40		
Australia	499	87	383	470	158	92	250	450	33	483	230	37	267		
United States	891	0	17	17	0	8	8	0	13	13	0	22	22		
Germany	0	0	1,980	1,980	0	0	0	0	311	311	260	0	260		
Central and Eastern Europe - Hungary and Croatia	877	0	0	0	0	0	0	0	0	0	0	0	0		
Ireland	0	0	0	0	0	0	0	0	0	0	0	0	0		
On-site storage: metric tonne	**0**	**334**	**1,405**	**1,739**	**1,587**	**1,341**	**2,928**	**1,989**	**6,659**	**8,648**	**3,382**	**3,260**	**6,642**		**306-5**
Canada	0	0	0	0	0	0	0	0	0	0	0	0	0		
France	0	0	0	0	0	0	0	0	0	0	0	0	0		
Netherlands	0	334	0	334	1,549	0	1,549	1,974	0	1,974	3,378	0	3,378		
Australia	0	0	0	0	0	0	0	0	0	0	0	0	0		
United States	0	0	1,192	1,192	0	1,341	1,341	0	6,614	6,614	0	3,235	3,235		
Germany	0	0	213	213	13	0	13	15	20	35	5	0	5		
Central and Eastern Europe - Hungary and Croatia	0	0	0	0	0	0	0	0	0	0	0	0	0		
Ireland	0	0	0	0	25	0	25	0	25	25	0	25	25	NORM waste	
Other – Oilfield Waste Processing: metric tonne	**6,637**	**6,105**	**188**	**6,293**	**6,050**	**449**	**6,499**	**1,208**	**2,698**	**3,905**	**1,913**	**31,298**	**33,211**		**306-2**
Canada	4,783	6,105	188	6,293	6,050	192	6,242	1,208	2,698	3,905	1,913	15,836	17,749		
France	6	0	0	0	0	0	0	0	0	0	0	0	0		
Netherlands	0	0	0	0	0	0	0	0	0	0	0	0	0		
Australia	0	0	0	0	0	0	0	0	0	0	0	0	0		
United States	0	0	0	0	0	257	257	0	0	0	0	3,536	3,536		
Germany	0	0	0	0	0	0	0	0	0	0	0	0	0		
Central and Eastern Europe - Hungary and Croatia	0	0	0	0	0	0	0	0	0	0	0	11,926	11,926		
Ireland	1,848	0	0	0	0	0	0	0	0	0	0	0	0		
Weight of hazardous waste shipped internationally: metric tonne	**90**	**206**		**206**	**270**	**0**	**270**	**147**	**0**	**147**	**57**	**0**	**57**		**306-5**
Canada	0	0		0	0		0	0		0	0		0		
France	0	0		0	0		0	0		0	0		0		
Netherlands	69	0		0	0		0	0		0	0		0		
Australia	0	0		0	0		0	0		0	0		0		
United States	0	0		0	0		0	0		0	0		0		
Germany	0	0		0	0		0	0		0	0		0		
Central and Eastern Europe - Hungary and Croatia	0	0		0	0		0	0		0	0		0		
Ireland	20	206		206	270		270	147		147	57		57		
DRILL MUD AND CUTTINGS	**2018**	**2019**			**2020**			**2021**			**2022**				**GRI 11**
Drill mud & cuttings produced using <u>non-aqueous</u> drilling fluid, onshore disposal to controlled sites: tonne	**14,970**			**14,710**			**17,184**			**12,549**			**11,694**		
Canada	14,212			9,311			17,184			11,881			10,622		
France	758			854			0			0			0	No drilling activities in FBU	

MATERIAL TOPIC - WASTE	2018	2019		2020		2021		2022		CONTEXT	GRI/SASB
Annual Production - Annual Report figure, financial control: boe	31,853,185		36,630,232		34,839,540			31,173,190		31,093,255		
Annual Production - Annual Report minus non-operated volumes (CDP): boe	28,712,829		36,604,811		34,723,518			31,154,575		31,058,580	**2018: excludes ~11 months non-op from IBU**	
Annual Production - Operated facility throughput including third-party volumes: boe	29,440,819		44,708,966		42,202,207			36,865,352		35,634,107	**Use for intensity calculations to ensure numerator/denominator alignment**	
Netherlands	0		885		0			668		905		
Australia	0		0		0			0		0		
United States	0		0		0			0		0		
Germany	0		0		0			0		168		
Central and Eastern Europe - Hungary and Croatia	0		3,660		0			0		0		
Ireland	0		0		0			0		0	No drilling activities in IBU	
Non-Aqueous drilling fluid re-used at another location (i.e. recovered and transported invert): m3	**2,182**		**0**		**0**			**0**		**1,944**		
United States	0		0		0			0		1,944		
Drill mud & cuttings produced using aqueous drilling fluid, onshore disposal to controlled sites: tonne	**9,754**		**12,391**		**5,872**			**11,016**		**12,745**		
Canada	4,837		5,689		5,088			6,890		5,777		
France	3,148		2,527		0			0		0		
Netherlands	0		250		43			1,167		585		
Australia	0		0		0			0		0		
United States	891		0		0			289		0		
Germany	0		3,925		0			289		1,251		
Central and Eastern Europe - Hungary and Croatia	877		0		742			2,671		5,132		
Ireland	0		0		0			0		0		
Drill mud & cuttings produced using aqueous drilling fluid, disposal at Vermilion controlled location: tonne	**8,620**		**16,110**		**17,389**			**20,398**		**17,856**		
Canada	6,648		14,918		16,048			12,830		11,756		
France	0		0		0			0		0		
Netherlands	0		0		0			0		0		
Australia	1,972		0		0			0		2,865		
United States	0		1,192		1,341			7,568		3,235		
Germany	0		0		0			0		0		
Central and Eastern Europe - Hungary and Croatia	0		0		0			0		0		
Ireland	0		0		0			0		0		
Verification / Certification												**S&P Global**
Sites where waste data is third-party verified												
Canada					Yes			Yes		Yes		
France					Yes			Yes		Yes		
Netherlands					Yes			Yes		Yes		
Ireland					No			Yes		Yes		
Sites where waste management is ISO 14001 certified												
Canada					Yes			Yes		Yes	Waste contractor is ISO14001 certified	
Australia					Yes			Yes		Yes	Waste contractor is ISO14001 certified	
Germany					Yes			Yes		Yes	Waste contractor is ISO14001 certified	
Ireland					Yes			Yes		Yes	Waste contractor is ISO14001 certified	
Sites where hazardous waste management is HAZWOPER certified												
Ireland					Yes			Yes		Yes		

MATERIAL TOPIC: WATER, INCLUDING PRODUCED WATER	2018	2019	2020	2021	2022	CONTEXT	GRI/SASB
Annual Production - Annual Report figure, financial control: boe	31,853,185	36,630,232	34,839,540	31,173,190	31,093,255		
Annual Production - Annual Report minus non-operated volumes (CDP): boe	28,712,829	36,604,811	34,723,518	31,154,575	31,058,580	**2015-2016: excludes non-op volumes from GBU & IBU; 2017: excludes non-op from IBU; 2018: excludes ~11 months non-op from IBU**	
Annual Production - Operated facility throughput including third-party volumes: boe	29,440,819	44,708,966	42,202,207	36,865,352	35,634,107	**Use for water intensity calculations to ensure numerator/denominator alignment**	
WATER WITHDRAWALS	**2018**	**2019**	**2020**	**2021**	**2022**		
Total water withdrawal including produced water: ML	**43,041**	**70,158**	**67,202**	**65,605**	**62,602**	**Until 2018, the production and re-use of produced water was reported separately from water withdrawn from other sources. For 2019+, reporting aligned with CDP's definitions & informed by GRI 303 (2018) and SASB EM-EP-140a.1 and 2; included conversion from m3 to ML (ML = m3/1000)**	**EM-EP-140a.1 303-3**
Canada	17,833	39,234	34,852	31,638	30,580		
France	15,730	14,863	13,903	13,709	12,982		
Netherlands	46	25	25	15	13		
Australia	8,795	15,270	17,386	18,912	17,500		
United States	108	326	384	302	393		
Germany	526	397	628	1,005	1,109		
Central and Eastern Europe - Hungary and Croatia	1.1	3.9	1.6	0.9	2.5		
Ireland	2	36	24	24	23.1		
Total water withdrawal excluding produced water: ML	**767**	**7,009**	**8,248**	**9,590**	**9,763**	**Approximately 85% of water withdrawal is produced water**	**303-3**
Canada	113	187	141	154	334		
France	625	494	581	420	420		
Netherlands	27	11	5	5	7		
Australia	0	6,189	7,398	8,949	8,992		
United States	0	106	109	51	0.32		
Germany	0	3	1.7	0.7	1.0		
Central and Eastern Europe - Hungary and Croatia	1.1	3.9	1.6	0.9	2.5		
Ireland	2	16	12	9	7.8		
Total Water Withdrawal including produced water, by source							
Surface/Freshwater, including rainwater, wetlands, rivers, lakes: ML	**16**	**44**	**12**	**124**	**312**	**Total dissolved solids <10,000mg/L**	**EM-EP-140a.1**
Canada	16	40	12	124	312	2021 increase offset by reduction in renewable groundwater; 2022 increase due to new Mica operations	
France	0	0	0	0	0		
Netherlands	0	4	0	0	0		
Australia	0	0	0	0	0		
United States	0	0	0	0	0		
Germany	0	0	0	0	0		
Central and Eastern Europe - Hungary and Croatia	0	0	0	0	0		
Ireland	-	0	0	0	0		
Surface/Brackish water, including oceans: ML	**213**	**198**	**7,398**	**8,949**	**8,992**	**Total dissolved solids >10,000mg/L**	
Australia	213	6,189	7,398	8,949	8,992	Only applicable in Australia	
Groundwater - renewable: ML	**700**	**622**	**691**	**436**	**425**	**Generally shallower groundwater resources that can be replenished/recharged within ~50 years**	**EM-EP-140a.1**
Canada	82	128	116	22	13		
France	618	494	575	414	412		
Netherlands	1	0	0	0	0		
Australia	0	0	0	0	0		
United States	0	0	0	0	0		
Germany	0	0	0	0	0		
Central and Eastern Europe - Hungary and Croatia	0	0	0	0	0		
Ireland	0	0	0	0	0		
Groundwater - non-renewable, excluding produced water: ML	**47**	**106**	**109**	**50**	**0**	**Generally deeper groundwater resources that have negligible recharge within ~50 years**	

MATERIAL TOPIC: WATER, INCLUDING PRODUCED WATER	2018	2019	2020	2021	2022	CONTEXT	GRI/SASB
Annual Production - Annual Report figure, financial control: boe	31,853,185	36,630,232	34,839,540	31,173,190	31,093,255		
Annual Production - Annual Report minus non-operated volumes (CDP): boe	28,712,829	36,604,811	34,723,518	31,154,575	31,058,580	**2015-2016: excludes non-op volumes from GBU & IBU; 2017: excludes non-op from IBU; 2018: excludes ~11 months non-op from IBU**	
Annual Production - Operated facility throughput including third-party volumes: boe	29,440,819	44,708,966	42,202,207	36,865,352	35,634,107	**Use for water intensity calculations to ensure numerator/denominator alignment**	
United States	47	106	109	50	0		
Groundwater - non-renewable, produced water: ML	**42,274**	**63,148**	**58,955**	**56,016**	**52,838**	**Includes formation water, flow-back water and condensation water**	
Canada	17,720	39,047	34,711	31,484	30,246		
France	15,105	14,370	13,322	13,289	12,562		
Netherlands	20	14	20	9	7		
Australia	8,795	9,082	9,988	9,963	8,508		
United States	108	221	275	251	393	2022 includes third-party produced water volumes (East Finn, Kissack, Tall Grass)	
Germany	526	395	626	1,004	1,108		
Central and Eastern Europe - Hungary and Croatia	0	0	0	0	0		
Ireland	0	20	12	15	15.3		
Third-party sources - Municipal water supplies or utilities: ML	**51**	**49**	**38**	**29**	**35**		**EM-EP-140a.1**
Canada	15	19	13	7	9		
France	7	0	6	6	8		
Netherlands	26	8	5	5	7		
Australia	0	0	0	0	0		
United States	0	0	0	0	0		
Germany	0.1	2.2	1.2	0.7	1.0		
Central and Eastern Europe - Hungary and Croatia	1.1	3.9	1.6	0.9	2.5		
Ireland	2	16	12	9	7.8		
Total Freshwater Withdrawal = renewable groundwater + surface water + third party potable sources: ML	**767**	**715**	**741**	**590**	**772**		**EM-EP-140a.1 303-3**
Total freshwater intensity: ML/operated boe	**0.000026**	**0.000016**	**0.000018**	**0.000016**	**0.000022**	**Freshwater defined as surface/freshwater + groundwater renewable + third-party sources**	
Water sources significantly affected by water withdrawal: #	**0**	**0**	**0**	**0**	**0**	**Sustained inability to meet human &/or ecological requirements of availability, quality or accessibility**	**303-1**
Water recycled and reused = reduction in water use: ML	**0**	**0**	**0**	**0**	**0**		**303-1**
Water recycled and reused: %	**0%**	**0%**	**0%**	**0%**	**0%**	**Based on water withdrawals excluding produced water**	**303-3**
WATER DISCHARGE	**2018**	**2019**	**2020**	**2021**	**2022**	**Effective 2019, water discharge is reported in alignment with CDP definitions for destinations**	**303-4**
Total water discharge all destinations, including produced water: ML		**70,158**	**67,203**	**65,603**	**62,599**		
Canada		39,234	34,847	31,638	30,580		
France		14,863	13,903	13,709	12,982		
Netherlands		25	25	13	10		
Australia		15,270	17,386	18,912	17,500		
United States		326	384	302	393	2022 includes third-party produced water volumes (East Finn, Kissack, Tall Grass)	
Germany		397	630	1,005	1,109		
Central and Eastern Europe - Hungary and Croatia		3.9	3.9	0.9	2.5		
Ireland		36	24	24	23.1		
Total water discharge excluding produced water: ML	**8,896**	**6,484**	**8,248**	**9,168**	**9,760**		
Canada	15	181	136	154	334		
France	0	0	581	420	420		
Netherlands	58	20	5	3	4		
Australia	8,795	6,189	7,398	8,949	8,992		
United States	0	51	109	51	0.3		
Germany	0	2.6	4.0	0.7	1.0		
Central and Eastern Europe - Hungary and Croatia	0	3.9	3.9	0.9	2.5		

MATERIAL TOPIC: WATER, INCLUDING PRODUCED WATER	2018	2019	2020	2021	2022	CONTEXT	GRI/SASB
Annual Production - Annual Report figure, financial control: boe	31,853,185	36,630,232	34,839,540	31,173,190	31,093,255		
Annual Production - Annual Report minus non-operated volumes (CDP): boe	28,712,829	36,604,811	34,723,518	31,154,575	31,058,580	**2015-2016: excludes non-op volumes from GBU & IBU; 2017: excludes non-op from IBU; 2018: excludes ~11 months non-op from IBU**	
Annual Production - Operated facility throughput including third-party volumes: boe	29,440,819	44,708,966	42,202,207	36,865,352	35,634,107	**Use for water intensity calculations to ensure numerator/denominator alignment**	
Ireland	28	36	12	9	7.8		
Surface/Freshwater, including rainwater, wetlands, rivers, lakes: ML		**0**	**0**	**0**	**0**		
United States		0	0	0	0.18		
Surface/Brackish water, including oceans: ML		**15,272**	**17,386**	**18,912**	**17,500**		
Australia		15,270	17,386	18,912	17,500		
Ireland		2	0	0	0	No produced water discharged offshore in 2020, 2021 or 2022	
Groundwater - renewable: ML		**3**	**2**	**11**	**65**		
Canada		3.3	2.3	11	65		
France		0	0	0	0		
Netherlands		0	0	0	0		
Australia		0	0	0	0		
United States		0	0	0	0		
Germany		0	0	0	0		
Central and Eastern Europe - Hungary and Croatia		0	0	0	0		
Ireland		0	0	0	0		
Groundwater - non-renewable, excluding produced water: ML		**0**	**109**	**32**	**0**		
United States		0	109	32	0		
Groundwater - non-renewable, produced water: ML		**54,592**	**48,910**	**46,005**	**44,275**		**EM-EP-140a.1**
Canada		39,053	34,681	31,442	30,207		
France		14,863	13,322	13,289	12,562		
Netherlands		5	6	0	6		
Australia		0	0	0	0		
United States		276	275	270	393	2022 includes third-party produced water volumes (East Finn, Kissack, Tall Grass)	
Germany		395	626	1,004	1,108		
Central and Eastern Europe - Hungary and Croatia		0	0	0	0		
Ireland		0	0	0	0		
Third-party facilities - Municipal or Private: ML		**289**	**792**	**643**	**759**		
Canada		178	165	184	308		
France		0	581	420	420		
Netherlands		20	19	13	4		
Australia		0	0	0	0		
United States		51	0.5	0.5	0.3		
Germany		2.2	1.7	0.7	1.0		
Central and Eastern Europe - Hungary and Croatia		3.9	1.6	0.9	2.5		
Ireland		34	24	24	23		
Other - Water still in storage - NL only		**0**	**0**	**2**	**3**		
Water bodies significantly affected by discharges of water	**0**	**0**	**0**	**0**	**0**	**Defined as sustained inability to meet human &/or ecological requirements of availability, quality, accessibility**	**306-5**
Volume and % of produced water by disposal method:							
Reused: % and volume	**0**	**0**	**0**	**0**	**0**		**GRI 11.6.5**
Recycled: %	**0**	**0**	**0**	**0**	**0**		**GRI 11.6.5**
Recycled - volume: ML	**1**	**0**	**0**	**0**	**0**		**GRI 11.6.5**
Canada	0	0	0	0	0		
France	0	0	0	0	0		

MATERIAL TOPIC: WATER, INCLUDING PRODUCED WATER	2018	2019	2020	2021	2022	CONTEXT	GRI/SASB
Annual Production - Annual Report figure, financial control: boe	31,853,185	36,630,232	34,839,540	31,173,190	31,093,255		
Annual Production - Annual Report minus non-operated volumes (CDP): boe	28,712,829	36,604,811	34,723,518	31,154,575	31,058,580	**2015-2016: excludes non-op volumes from GBU & IBU; 2017: excludes non-op from IBU; 2018: excludes ~11 months non-op from IBU**	
Annual Production - Operated facility throughput including third-party volumes: boe	29,440,819	44,708,966	42,202,207	36,865,352	35,634,107	**Use for water intensity calculations to ensure numerator/denominator alignment**	
Netherlands	0	0	0	0	0		
Australia	0	0	0	0	0		
United States	0	0	0	0	0		
Germany	1	0	0	0	0		
Central and Eastern Europe - Hungary and Croatia	0	0	0	0	0		
Ireland	0	0	0	0	0		
Reinjected: %	**79**	**86**	**83**	**82**	**84**		**GRI 11.6.5**
Reinjected - volume: ML	**33,450**	**54,037**	**48,840**	**46,028**	**44,274**		**GRI 11.6.5**
Canada	17,728	39,047	34,711	31,484	30,207		
France	15,105	14,370	13,222	13,289	12,562		
Netherlands	9	5	6	0	6		
Australia	0	0	0	0	0		
United States	83	221	275	251	393	2022 includes third-party produced water volumes (East Finn, Kissack, Tall Grass)	
Germany	526	395	626	1,004	1,107		
Central and Eastern Europe - Hungary and Croatia	0	0	0	0	0		
Ireland	0	0	0	0	0		
Hydrocarbon discharged within produced water: tonnes	**70**	**73**	**117**	**99**	**68**	**Refers to discharges to surface water or renewable (shallow) groundwater**	**EM-EP-140a.3**
Canada	0	0	0	0	0		GRI 11.6.5
France	0	0	0	0	0		GRI 11.6.5
Netherlands	0	0	0	0	0		GRI 11.6.5
Australia	70	73	117	99	68.1		GRI 11.6.5
United States	0	0	0	0	0		GRI 11.6.5
Germany	0	0	0	0	0		GRI 11.6.5
Central and Eastern Europe - Hungary and Croatia	0	0	0	0	0		GRI 11.6.5
Ireland	0	0	0	0	0		GRI 11.6.5
Annual Water Consumption: ML		**0**	**0**	**0**	**0**	**Total water withdrawals - total water discharges**	**303-5**
Percentage of workers with fully-functioning, safely managed WASH (water, sanitation and hygiene facilities)		**100**	**100**	**100**	**100**	**New data reported beginning in 2019 to align with CDP**	**CDP**