



2020 - 2021

CORPORATE SUSTAINABILITY REPORT

CREATING SUSTAINABLE VALUE
FOR OUR SHAREHOLDERS
AND COMMUNITIES



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1. LETTERS TO OUR STAKEHOLDERS

Letter from Our CEO

Dear Stakeholders,

The last year challenged us all in many ways personally and professionally, while providing an unexpected opportunity to spend more time reflecting on what is important and how we can contribute to the greater good. In the face of adversity, the Range team executed our objectives while providing the world with the critical natural gas and natural gas liquids to power our modern lives.

The natural gas we produce is cleaner, more efficient, and produced with more transparency than ever before. When it comes to sustainability reporting, we recognize the significant importance of clear and honest communications. It is what Range's stakeholders have come to expect, and it is through this transparency that we hope to earn and preserve your trust as an industry leader in sustainability.

Performance

We are proud of the significant progress we have made over the last year. That progress would not have been possible without the steadfast dedication of our employees and contractors who overcame numerous challenges presented by the COVID-19 pandemic. A true testament to our team's deep commitment to employee safety and well-being, we acted quickly and proactively to protect our employees and contractors during unprecedented circumstances.

Protecting our employees and focusing on their well-being enabled the Range team to focus our efforts on accomplishing some remarkable feats in 2020. We reduced our overall greenhouse gas emissions by 50%, through innovation, efficient operations, and high-grading our asset base. In 2020, we completed the sales of our North Louisiana and conventional assets

which were responsible for 29% of the greenhouse gas emissions reduction for the year.

We continue to advance toward our short-term, medium-term, and long-term objectives specifically related to GHG emissions, keeping us on track to achieve our strategic goal of net zero GHG emissions by 2025, now expanded to include Scope 1 and Scope 2.

We also quickly recognized the impact of COVID-19 beyond our workplace and in our communities. The non-profits that so many of our neighbors lean on during hard times were struggling too. In response, we invested more than \$100,000 in 20 of our closest non-profit partners last spring to provide the funding they needed in order to bridge the gap created by the interruption of events and fundraising opportunities. This is in addition to the 516 hours of employee volunteer efforts and donations exceeding \$460,000.

Natural Gas Improving Lives

Now more than ever, natural gas is powering our lives and providing Americans with clean energy. We strongly believe that increased access to natural gas and natural gas liquids will help support a higher standard of living for other countries, especially emerging economies. Range's natural gas is part of the global solution to improving quality of life, and we understand that as an industry leader, we must continue to operate in a responsible and transparent manner. This includes providing our stakeholders, business partners, and communities with the information we disclose in our Corporate Sustainability Report.

The United States has continued to be a leader in CO₂ emissions reductions despite increasing the amount of energy consumed thanks to the expanded use of natural gas. Looking ahead, as the global economy rebounds and

continues to grow, natural gas will have a key role in manufacturing and providing our modern world with clean energy.

Beyond our net zero greenhouse gas emissions goal, we continue to be a leader in both public health and emission reduction efforts. For more than a year, we have been actively monitoring and sharing emissions data at a well site in Washington County to provide information to the public on a timely basis. In 2021, we also recently committed to a pilot program with Project Canary, participating in the TrustWell™ certification process that seeks to certify the Company's responsibly sourced natural gas (RSG).

We are proud of these commitments and achievements, none of which would be possible without our dedicated employees and contractors who drive our success every day. They are the ones finding solutions today that will benefit our world for years to come.

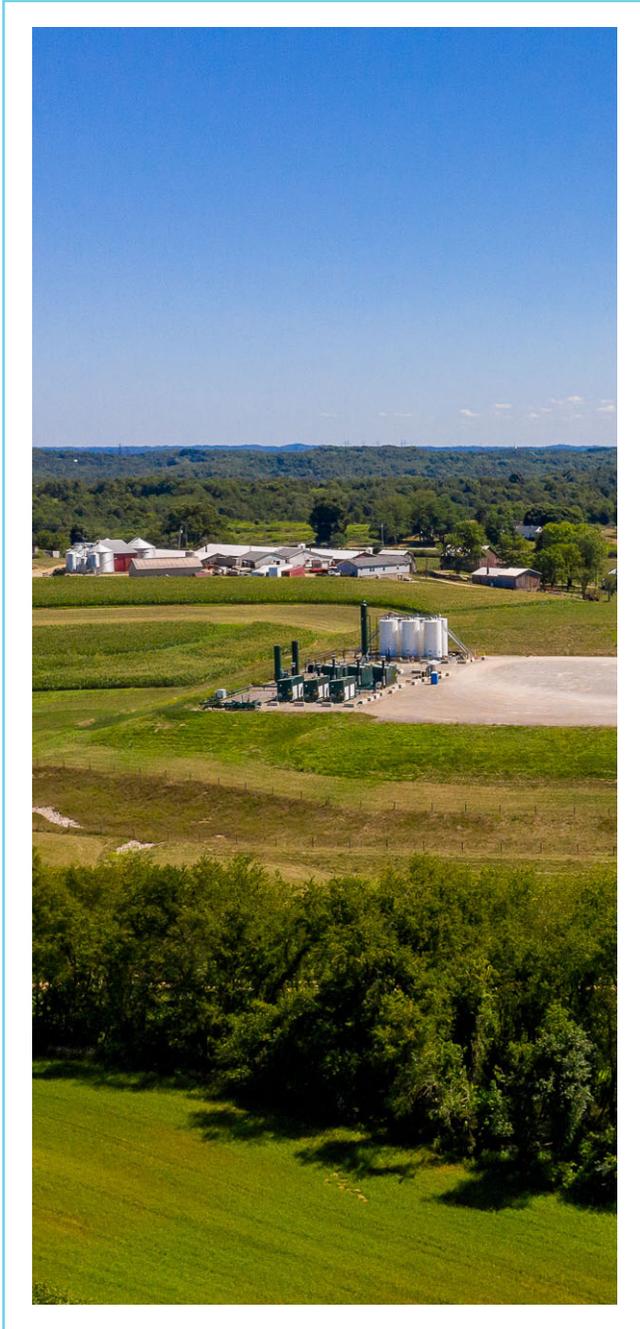
At Range, we will continue to hold ourselves accountable to the sustainability-related goals we set for ourselves and we look forward to building on our progress in the years ahead.

Sincerely,

Jeff Ventura



Letter from Our Board of Directors



Dear Stakeholders,

Range Resources' commitment to achieving sustainable performance remains steadfast. The Board, along with Senior Management, are focused on appropriately responding to the increasing and evolving Environmental, Social, and Governance risks and opportunities. We recognize ESG is not a one-size-fits-all exercise and believe that Range's history and strong culture make it well positioned to continue to achieve sustainable results.

We understand key initiatives are influenced by the industry, where you operate, and expectations set by your stakeholders. It is imperative that our sustainability program remains transparent, honest, and focuses on matters of strategic importance, all while being responsive to our stakeholders and shareholders. We are excited to continue the dialogue on these topics to refine and improve our ESG program, while ensuring objectives align with what is best for the Company and most importantly, the hardworking employees.

ESG and Safety Committee

As Board members, we take an active and engaged role in monitoring the Company's sustainability performance. Earlier this year, the Board of Directors formed a dedicated committee to review workplace safety matters and ESG risks and opportunities. The Committee will provide oversight in expanding current ESG efforts and communicating measurable results related to these initiatives.

Although members of the Board of Directors have been involved in these efforts for years, the act of formalizing this committee will bolster the Board's oversight of specific ESG and safety initiatives that are of strategic importance to Range and critical to its long-term success.

This new structure only provides more opportunities for the board, management, and employees to better collaborate on important objectives and goals. For every data point within this report, there is a backstory that brings to life how Range's employees are finding new ways to improve essential processes or coming up with innovative solutions to overcome challenges.

Industry Leadership in Sustainability

Incorporating feedback from our stakeholders and striving to do the right thing has always been part of the culture at Range. This is a continuing part of the culture and has long been embraced at the highest organizational levels, guiding our sustainability efforts and making sustainability a fundamental business priority. Transparently reporting our sustainability initiatives and creating the ESG and Safety Committee are simply natural extensions of our ongoing progress. In order to continue that progress, we must strive as a Company to maintain the focus and dedication that has made Range's commitment to sustainability such an organizational success.

The Company is now positioned as an industry leader thanks to strong leadership and the integration of crucial feedback from our shareholders and stakeholders. We are proud of the fact that, throughout our sustainability journey, Range has pioneered industry best practices across ESG topics, particularly as it relates to our environmental transparency.

This approach has pushed the Company to be a leader in emissions and public health disclosures. We believe there is true sustainable value in providing data to help stakeholders better understand modern shale gas development. For this reason, Range voluntarily launched and maintains the Ambient Air Monitoring Program, which is being conducted at an active well site in Washington County. More recently, Range entered into a pilot program with Project Canary, utilizing the Canary X continuous monitoring technology, and committed to participate in the TrustWell™ certification process that seeks to certify the Company's responsibly sourced natural gas (RSG).

Significant advancements like these are the result of goalsetting, innovation, accountability and, most importantly, a commitment to sustainability throughout the entire organization. We look forward to building on the progress we have made in the years ahead.



Sincerely,

A handwritten signature in black ink that reads "Greg G. Maxwell". The signature is written in a cursive, flowing style.

Greg G. Maxwell

Chairman of the Board of Directors

2. ABOUT RANGE RESOURCES

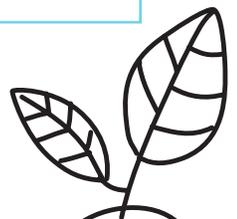


Range Resources Corporation is a leading U.S. independent natural gas and NGL producer with operations focused in stacked-pay projects in the Appalachian Basin. We hold high our commitment to delivering value to our customers, communities, and shareholders, and we have demonstrated that commitment for more than 40 years by continuously improving, meeting, and exceeding industry standards.

Industry-leading sustainability practices are intrinsic to our business, and we have made impactful contributions to advance sustainable business practices and engineering solutions for the industry, leading to continuously improved environmental performance. Examples include Range's pioneering of large-scale water recycling in shale development, which, in 2009, made us the first Company to achieve

nearly 100 percent water reuse levels. Then in 2010, we voluntarily disclosed the composition of our hydraulic fracturing fluids on a per-well basis. We were the first Company to do so, and we provided that information publicly online.

More recently, we developed and published our [Environmental Policy](#), which formalized the Range team's strong culture of environmental stewardship and natural resource conservation. Examples of this commitment to sustainability can be seen in the selection of our well sites, minimization of land disturbance, implementation of lower emissions equipment, and investment in an energy-efficient CNG fueled vehicle fleet. We are routinely identifying ways to enhance our operations to ensure we are delivering the greatest value.



OUR CORE VALUES

Day-in and day-out, decisions we make as a business are guided by our core values – *Performance, Innovation, Integrity, and Transparency*. With these values as the backbone of our corporate culture, we work tirelessly to act as a responsible steward – to our employees, communities, and other stakeholders who rely on us.

We are a results-driven Company focused on delivering value to our shareholders, customers, partners, and local communities. To advance performance improvements, every Range employee is expected and empowered to continuously identify opportunities aimed at further enhancing our development, safety, and environmental goals.



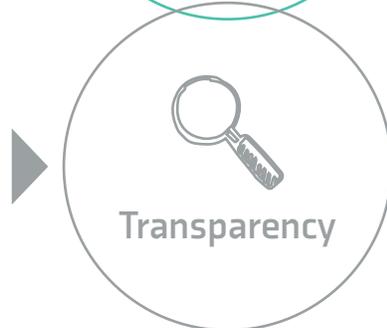
Range has a long and clear record of pioneering innovative solutions reflected in industry and regulatory standards. These efforts include our leadership on voluntary disclosures and the pioneering of water recycling and reuse technologies, which reduce both consumptive water needs and local truck traffic. This eye toward continuous innovation allows our operations to become safer and more cost-effective.



Transparency and accountability to our shareholders, while supporting greater employee, community, and partner confidence and engagement, is at the core of our culture. We actively work to ensure Range stakeholders have insight into our operations, as well as our contributions to the economy, the environment, and the communities where we operate. We solicit actionable input, implement recommendations from stakeholders, and always seek opportunities to further improve.



Our performance is driven by the Company's commitment to act with integrity in everything we do, from principled business decision-making to community partnerships. We are deeply connected with the communities we serve and work every day to operate in a manner that meets or exceeds the expectations of our stakeholders.



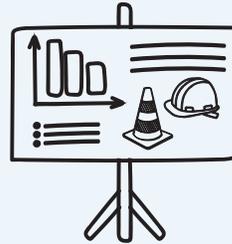
3. REPORT HIGHLIGHTS

Goal: Net Zero



GHG Scope 1 and Scope 2 Emissions by 2025

Range has expanded our emissions goal by committing to net zero Scope 1 and Scope 2 GHG emissions by 2025. The [EPA](#) defines Scope 2 emissions as indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling.

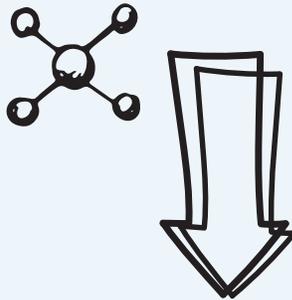


Range employees completed

1,800 hours

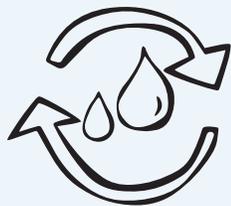
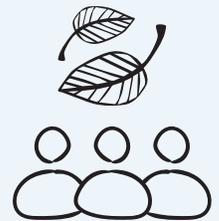
of safety-related training

Reduced methane emission intensity by **86%** (vs. 2017)



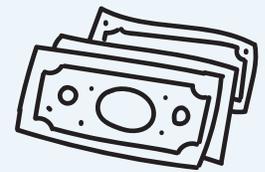
Created our **ESG & Safety Committee,**

formalizing our existing board oversight of ESG



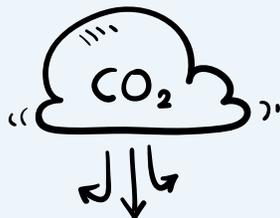
Recycled **148%** of our produced water and flowback volume through our water sharing program

Invested **\$460,000** into our communities, including over \$100,000 in a Community COVID-19 Stimulus Package



Decreased reported equipment leak emissions by **more than 66%**

as a result of increased frequency of LDAR surveys from semi-annual to quarterly (vs. 2019).



2020 Finalist for Observer-Reporter's **Best Place to Work**



4. OUR APPROACH TO REPORTING

Building on our long history of implementing cutting-edge sustainable business practices, our inaugural 2018 Corporate Sustainability Report was our first formal step to providing detailed external insight into the Company's approach, achievements, and goals in our management of environmental, social, and governance issues.

In line with our commitment to continuing our sustainability evolution, our third Sustainability Report covers a broader and deeper set of topics, which we consider material for our business and our stakeholders. We are also deepening Range's track record of proactive communications which includes our long-standing disclosures on our Company website and ongoing industry-leading initiatives. The disclosures in this report go through an internal review, further reflecting our commitment to accurate and transparent reporting.

Reporting Guidance

To develop this Sustainability Report, we considered multiple best practice sustainability reporting standards and frameworks, which include guidelines and recommendations by the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and IPIECA's (formerly known as the International Petroleum Industry Environmental Conservation Association).

Issue-specific guidelines were also taken into account to provide an even deeper level of reporting on key areas for Range Resources, such as climate change. Our climate change disclosure is guided by the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and other reporting frameworks. In 2021, we also responded to the Carbon Disclosure Project (CDP) Climate Change and Water Security Questionnaires, a further reflection of our commitment to transparency in our sustainability reporting and following industry-leading standards.

In Appendix A of this report, we include indices that map our disclosures with the GRI, the SASB standards, the IPIECA guidelines, and the TCFD framework.

Continuous Evolution and Transparency

In line with our enhanced disclosures, we remain focused on improving our processes and procedures for tracking, monitoring, and measuring our performance in relation to the sustainability factors that are relevant and important for both our Company and our industry.

As part of this commitment, our goal is to be proactive with our stakeholders in sharing the progress we are making toward our sustainability goals, which we consider a crucial element of our business strategy.

TO RANGE STAKEHOLDERS,

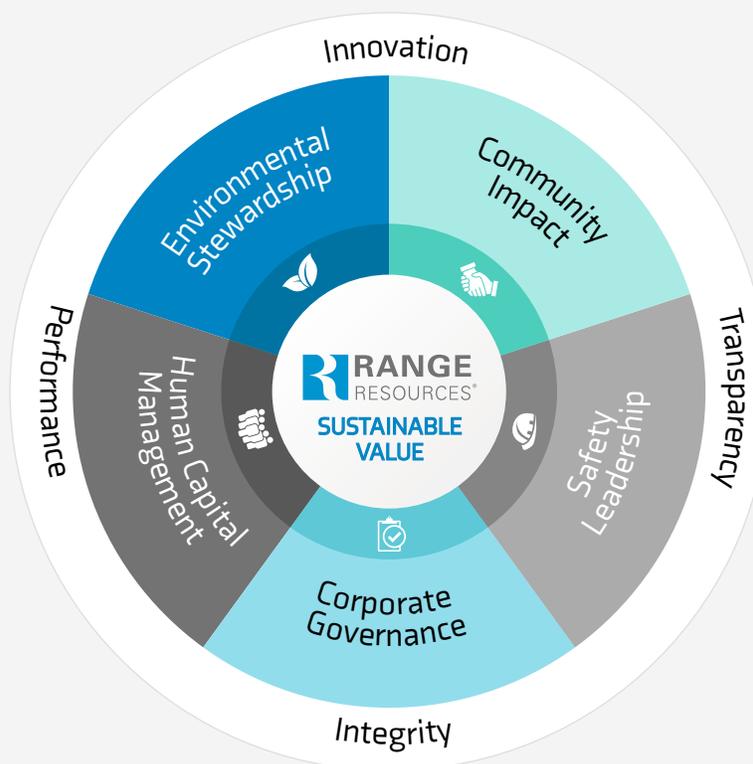
This report is a reflection of Range's commitment to direct communication, transparency, and engagement. Contained in these pages are qualitative and quantitative measures of our performance, as it relates to environmental, social, and governance issues.



We trust you will see the guidance you have provided over time reflected in this report. At Range, we continue to assess stakeholder guidance and incorporating it into our ESG initiatives. It is through these continuous evolutions that we grow as a Company and best serve the interests of all of our stakeholders.



5. OUR APPROACH TO SUSTAINABILITY



At Range, we view sustainability as a confluence of long-term economic value creation paired with good stewardship of the environment and society. Good governance, sustainable environmental practices, and social responsibility serve as fundamental principles enhancing long-term economic value creation for our Company. We are committed to investing in programs and initiatives that both serve the environment and our stakeholders, while also creating long-term economic benefits on behalf of our shareholders.

Our long-term strategy and planning in environmental management and other initiatives have both direct and

indirect positive economic results that we see in our daily operations. By implementing a leak detection program and methane emissions reduction initiatives, for example, we grow revenue from gas that is not lost to the atmosphere but sold to our customers. Similarly, our water management program and investments in pipelines to transport water result in reduced emissions, less truck traffic, and significant cost savings from water reuse. Our strong safety culture protects Range's employees and contractors, leading to operational efficiency and continuous worksite progress. Furthermore, our environmental

stewardship and our social responsibility equip us to deepen relationships with our communities, investors, and business partners, improving our access to commercial opportunities and the sustainability of our business. The following sections of this report outline the progress and achievements we have made against the core pillars of our sustainability strategy.

This strategy, which is focused on achieving sustainable value for all of our stakeholders, is approved by our Board of Directors and is closely overseen by Range's leadership team. In line with our commitment to ESG, in May of 2021, we added a committee to our Board that is specifically dedicated to ESG. Our newly formed ESG and Safety Committee will provide oversight in expanding our ESG efforts, measuring results, and delivering sustainable value to shareholders. We also implement a rigorous management process that begins at the highest levels of our Company to ensure we are successfully and responsibly executing on our commitments.

- **Corporate Governance:** Range and its Board of Directors are committed to implementing sound, transparent corporate governance principles that strengthen confidence and trust with our stakeholders.
- **Safety Leadership:** We operate in a safe, compliant, and ethical manner by upholding the highest standards. At Range, we engrain safety into our culture and work diligently every day to protect the safety of our employees, contractors, and the public.
- **Environmental Stewardship:** We believe that being committed stewards of the environment is critical in our industry. We are contributing to broader emission reduction goals by leveraging new technologies to develop clean-burning natural gas and incorporating sustainable practices into our operations. We work to meet or exceed the expectations of our stakeholders and regulatory requirements, and we continuously seek improvement to guidelines and procedures.
- **Community Impact:** We are deeply committed to the communities in which we live and work. This commitment begins within the walls of our Company, starting with the safety and well-being of our employees, and extends to the people and places that surround us.

- **Human Capital Management:** Our employees are at the heart of everything we do at Range. To support the greatest level of transparency, we believe in an open-door approach, offering multiple avenues of communication and engagement between employees, managers, senior leadership, and our Human Resources Department. Diversity and inclusion, employee engagement, training opportunities, employee benefits, and philanthropy are important elements of our human capital efforts at Range.



6. CORPORATE GOVERNANCE



To effectively manage risk and create sustainable long-term value, Range has developed an effective corporate governance framework. That framework is supported by our Corporate Governance Guidelines, Certificate of Incorporation, By-Laws, Board Committee Charters, and our Code of Business Conduct and Ethics. These governing documents are publicly available on [our website](#).

Our Board of Directors

The oversight of our governance framework largely rests with our Board of Directors, which is responsible for a variety of topics, including: acting in the best interests of the Company and its shareholders by overseeing Senior Management, providing guidance in the development of the corporate strategy and policies, reviewing and approving major corporate decisions, and assisting the Company in setting and achieving its objectives.

Per NYSE listing standards, our guidelines require that the Board be at least majority independent. In practice, we have exceeded that benchmark, maintaining a board structure whereby all members of the Board, except for one member of Senior Management, have been independent directors.

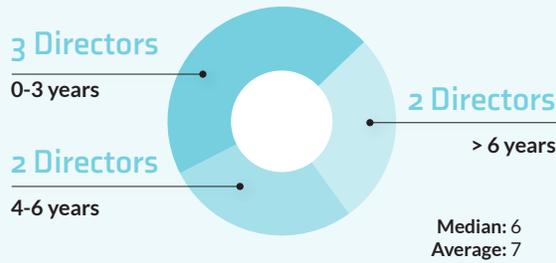
Our Board is a collection of qualified individuals who have excelled in their respective areas of expertise and meet high personal and professional standards. Bringing a diverse set of skills and experiences to the Board, our directors include individuals with backgrounds in executive management, leadership, finance, financial reporting, policymaking, geoscience and engineering, expertise in the oil and gas industry, and risk management.

Figure 6.1

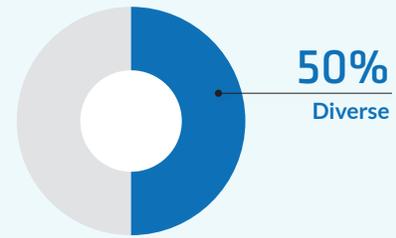
	CEO/Senior Officer Experience	Industry Experience	Financial Reporting Experience	Banking/Finance Experience	Geoscience/Engineering	Technology	Risk Management	Committees				
								Audit	Compensation	Governance & Nominating	ESG & Safety	Dividend Committee
Brenda A. Cline	✓		✓	✓			✓	✓*		✓	✓	
Margaret K. Dorman	✓	✓	✓	✓			✓	✓		✓	✓*	
James M. Funk	✓	✓			✓		✓		✓	✓*	✓	
Steve D. Gray	✓	✓			✓		✓		✓*		✓	
Greg G. Maxwell	✓	✓	✓	✓		✓	✓	✓			✓	✓*
Reginal W. Spiller	✓	✓			✓	✓	✓			✓	✓	
Jeffrey L. Ventura	✓	✓			✓		✓					✓

* Committee chairperson

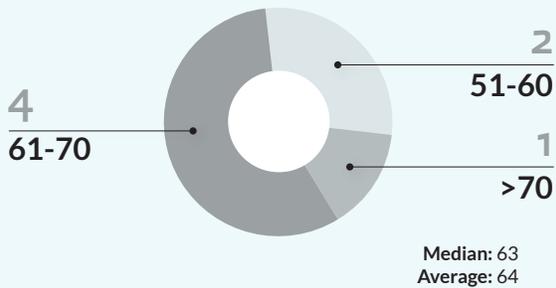
Figure 6.2



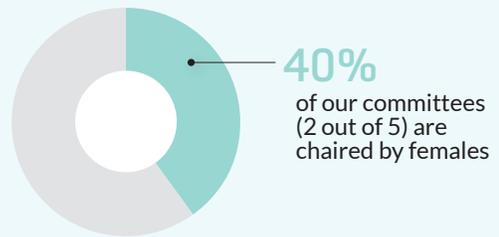
Director Tenure Diversity



Independent Director Ethnic/Gender Diversity



Director Age Diversity



Gender Diversity in Board Leadership Roles

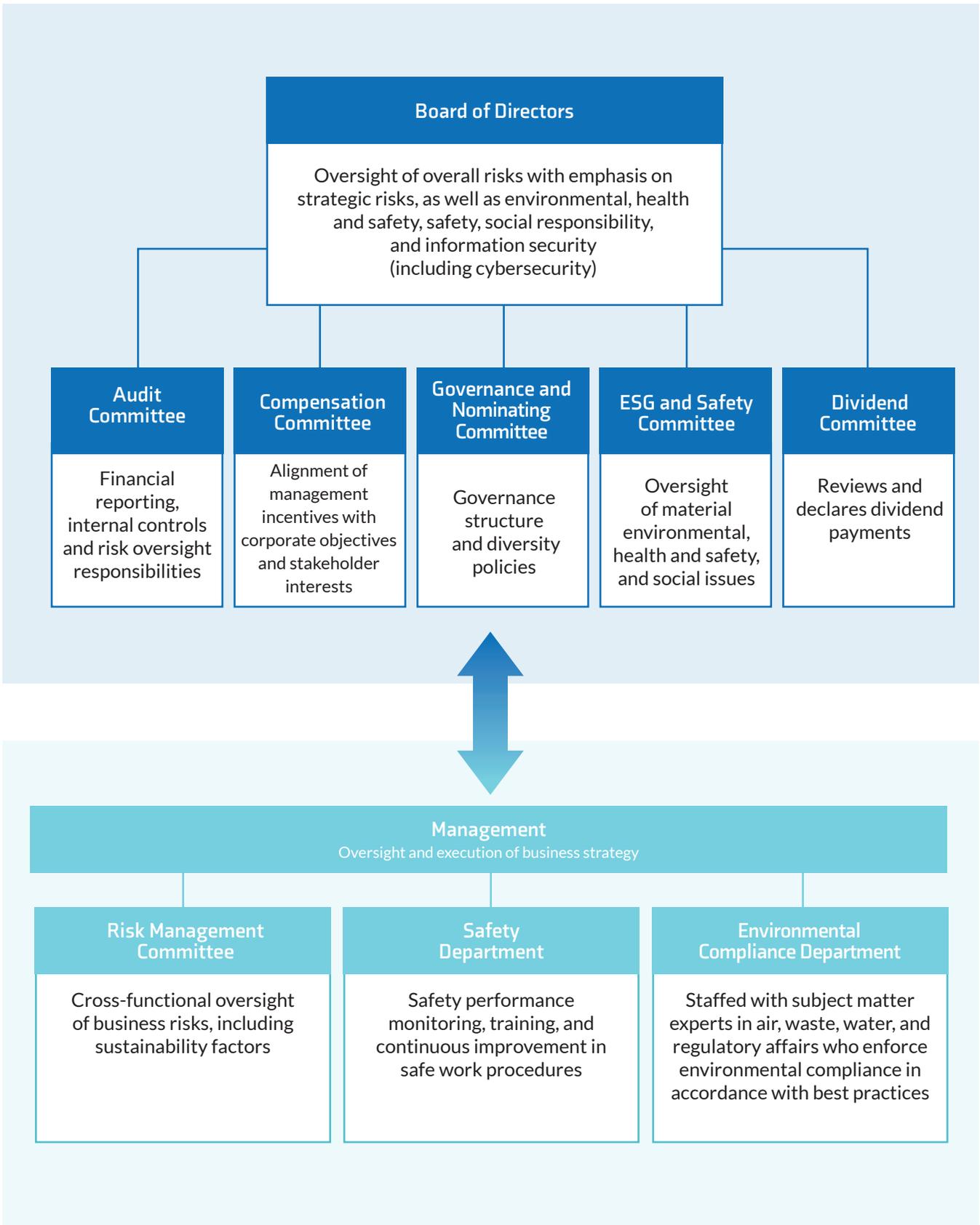
Through the annual board evaluation process, our Governance and Nominating Committee strives to maintain diversity of backgrounds, perspectives, and expertise. This Committee's goal is to include key considerations, such as diversity in race, gender, and age in this process.

Annual board evaluations serve as a critical tool in assessing the effectiveness of the Board, its committees, and its directors. The evaluation process is reconsidered each year by the Governance and Nominating Committee and, in recent years, has included anonymous questionnaires, one-on-one director interviews, and the assistance of outside legal counsel. As shown above, the Board balances interests in continuity with the need for fresh perspectives and diversity that board refreshment and director succession planning can provide.

Risk Oversight

Risk management is by nature multifaceted, and the Board's approach to risk oversight recognizes that reality. It is a control and compliance function, but it also involves strategic considerations in normal business decisions, as well as concerns regarding finance, security, cybersecurity, safety, health, and the environment.

Historically, the entire Board retained direct oversight of environmental, health and safety issues, and any related social concerns. In May of 2021, the Board formalized our long-standing integration of sustainability oversight by creating an ESG and Safety Committee. The ESG and Safety Committee will serve to expand ongoing efforts in coordination with the other Committees of the Board.

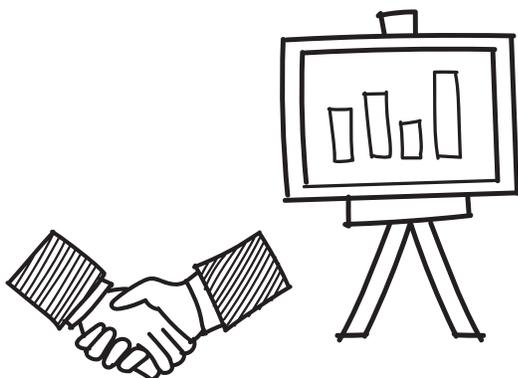


Each Committee meets regularly with management to review, as appropriate, compliance with existing policies and procedures and to discuss change or improvement that may be required or desirable.

The five Board Committees include the following:

- **Audit Committee:** Evaluates the Company's financial reporting, interfaces with the independent auditor, Chief Financial Officer, and other members of management, while monitoring the Company's compliance programs.
- **Compensation Committee:** Considers the possible risk implications of the Company's various compensation programs and monitors those programs to ensure they are aligned with shareholder interests, do not incentivize excessive risk-taking, and provide equitable compensation.
- **Governance and Nominating Committee:** Responsible for the oversight and monitoring of the Company's governance processes, including the Company's Code of Business Conduct and Business Ethics.
- **ESG and Safety Committee:** Responsible for providing guidance on workplace health and safety, diversity, environmental risks, community involvement, ethical business operations, and other ESG topics.
- **Dividend Committee:** Responsible for the declaration of dividends in a manner consistent with the Board's dividend policy.

While the Board and its Committees oversee the Company's risk management strategy, Range management is responsible for managing risk on a day-to-day basis. We have a robust enterprise risk management process for identifying, assessing, and managing risk, while monitoring risk mitigation strategies. A committee of officers and senior managers



work with our Principal Accounting Officer to manage each enterprise-level risk and to identify emerging risks.

Oversight of Sustainability

The oversight of environmental, health and safety, and social issues are an integral part of our risk management and oversight process. Further, sustainable practices present significant opportunities for our business operations and our ability to maintain good working relationships with stakeholders. In order to enhance oversight and implementation of Range's sustainability goals, the ESG and Safety Committee will work closely with the appropriate management groups.

In addition to the ESG and Safety Committee, the Compensation Committee works to ensure that management incentives are aligned with our sustainability goals. In 2021, the Compensation Committee introduced Emission Intensity Performance targets into the Long-Term Incentive Program to further drive our long-term environmental strategy and more closely align our executive compensation with this strategy. This addition to the Long-Term Incentive Program is the second ESG metric the Compensation Committee has introduced into the compensation design. In 2019, the Compensation Committee increased the weighting of health, safety, and environmental performance within the Annual Cash Incentive plan which is now 25 percent.

Management of Sustainability

The Company's Environmental Compliance (EC) Department is responsible for the oversight and implementation of our Environmental Compliance policy. That policy is focused on compliance with rules and regulations and the Company's commitment to advancing our environmental goals through implementing best practices.

- The EC Department's basic functions include advising the operating functions of the business, with specific focuses on developing policies, inspecting regulated activities, and auditing compliance with laws, rules, and policies, including data management.
- The EC Department develops and maintains plans, procedures, and field guides. Employees are encouraged to utilize EC Department resources and to seek assistance from any member of the EC or Legal Department as necessary to ensure Range's continued compliance with all applicable laws and regulations.



- The EC Department reports directly to Range’s General Counsel, and then to the CEO, and provides quarterly updates to the Board.

Our Safety Department is responsible for overseeing and supporting the implementation of our Safety Policy, which includes Range’s workforce and community health and safety management systems.

- The Safety Department’s basic functions include site and facility visits to monitor compliance with all applicable laws and regulations, monitoring of safety performance data, training and education of our employees, incident investigation and mitigation, identifying continuous safety improvement opportunities, and contractor safety management.
- Safety Department representatives routinely engage with Range’s Leadership and employees to assist in the development and implementation of processes and procedures that are designed to identify and mitigate risks and hazards in the workplace.

- The Safety Department reports to Range’s Chief Operating Officer, and then to the CEO, and provides ongoing updates to the ESG & Safety Committee.

Code of Business Conduct and Ethics

Transparency, innovation, performance, and integrity are the principles upon which Range has built its reputation for more than 40 years. Our success is rooted in our adherence to core principles that govern the business, and we require our contractors, directors, officers, and employees to comply with all laws applicable to our business operations. We also insist that our personnel follow a Code of Business Conduct and Ethics, which is crafted around our core values and designed to embody ethical transparency and compliance with the law. Employees are required to acknowledge our Employee Handbook each year which includes our Code of Business Conduct and Ethics.

Range's Code of Business Conduct and Ethics is available on [our website](#) and provides guidelines in relation to legal and environmental compliance,

conflicts of interest, and protection of Company property and assets. Participants found in violation of the code are subject to disciplinary action. The Company has instituted anonymous reporting procedures through a third-party service, available via the internet and phone for reporting any violations of the code, including financial, human resources, and other matters of conduct and ethics. All organizations are dependent upon human performance, which by nature can result in errors of judgment and lapses in compliance. Range maintains a practice of monitoring for and acknowledging its errors and accepting accountability for them.

Political Engagement

When it comes to political activity, Range is committed to maintaining the highest ethical standards. Our political engagement is guided by the basic belief that it is important to constructively participate in the political process to further the best interests of the Company and our shareholders, and to improve the communities where we live and work.

We support public policy at the national, state, and local levels that advances the safe development, production, transportation, and use of natural gas and natural gas liquids while protecting the environment. These policies are important to Range not only for our success but for the success of our industry, our partners, and our nation's economy and security.

The Board of Directors oversees and regularly monitors Range's political engagement activities and the relevant policies and procedures, including the assessment of the effectiveness of our approach. Our political engagement guidelines are available on [our website](#), and they outline our approach to political contributions and trade associations, as well as reporting and disclosure.

Our political contributions program adheres to several principles, which are also guided by our Code of Business Conduct and Ethics, including the following:

- Contributions reflect the interests of the Company and its stakeholders, not individual officers or directors.
- Corporate political expenditures require approval by the General Counsel and Government Affairs Department.

- Priority is given to direct political action committee (PAC) donations instead of donations through third parties. Any indirect contribution is monitored to assure consistency with the Company's values, policies, and long-term interests.
- No contribution will be given in anticipation of, in recognition of, or in return for an official act.
- Employees are not reimbursed for personal political contributions and employees will not be pressured or coerced to make any personal political expenditure.

Range also engages in the policy-making process by participating in various business and industry forums and trade associations. These activities are necessary to create a positive understanding of, and appreciation for, the oil and natural gas industry and the critical role the industry plays regionally and nationally. We file all public reports and information concerning the PAC with the appropriate Pennsylvania governmental authorities. In 2020, our political spending contributions through our PAC amounted to a total of \$34,350.

Information Technology and Cybersecurity

Range's digital frameworks support a cohesive and collaborative environment across our business operations. This provides our employees a platform to efficiently work together to pursue Company goals while operating in a secure manner. As a result, protecting the Company from cybersecurity threats is of the utmost importance to Range.

Governance of IT & Cyber

While information technology and cybersecurity threats are always evolving, Range's deep commitment to proactively managing these issues has not changed. At Range, adhering to best-in-class technology and cybersecurity practices is an effort that starts at the top of the organization and includes all employees. Cybersecurity governance is sustained by the Information Technology Department which includes certified security professionals and other seasoned security analysts ensuring proper alignment with business risks and opportunities. Range's Information Technology Department works diligently to address risks and opportunities in these areas through collaboration with other departments and executive leaders. Formal reports are provided to the Board of Directors quarterly or more frequently as needed.

Multiple departments within Range have worked

closely with our IT Department to enhance controls and procedures specific to their operations, improving efficiency and security. These include our Operations Department, Water Operations Department, Environmental Compliance Department, Planning Department, Community Relations Department, and more.

Beyond department specific efforts, employees at Range receive annual information security training to encourage regular reinforcement of threat identification techniques, reporting processes, and other security best practices. These training efforts are paired with regular awareness initiatives that the Company utilizes to keep our team informed on evolving cybersecurity threats and trends. Together, continual training and awareness initiatives better equip our employees to identify and report information security threats, embedding the importance of information technology into our culture.

Policies and Best Practices

When developing and assessing policies and procedures, Range conducts a multi-faceted review to facilitate strong compliance around information technology and cybersecurity. Range considers our Company-specific needs while leveraging best practices, participating in industry-specific cyber or information

PANDEMIC PREPAREDNESS

Despite the upheaval brought by the COVID-19 pandemic, Range's employees were well-prepared for the challenges, allowing for a smooth transition to a remote work environment. Most of the technology and platforms needed to successfully work remotely were in place at Range well before the onset of the pandemic.

The majority of Range employees had Company-issued laptops and Company-issued cellphones prior to 2020, which meant we had enough resources for employees to make the shift to remote working immediately. Additionally, Range provided employees with hotspots or virtual desktops if they encountered bandwidth issues at their homes and allowed employees to take office equipment home if needed. Range also published information on the Company intranet to further help our employees in setting up their home offices.

Range's existing structures and investments were also a catalyst to a successful remote working environment. Virtual Private Network (VPN), End Point Detection and Response, and Multi-Factor Authentication were all in place before the COVID-19 pandemic. Virtual collaboration systems were also an existing part of Range's business ecosystem prior to the pandemic. This was a huge benefit for our employees, allowing continued collaboration and sustained business communications without in-person interaction.





technology events, and engaging with stakeholders. This process guides the development of policies such as our IT Security Policy, Business Continuity Plan (BCP) Policy, IT Disaster Recovery Policy, IT Incident Response Policy, and IT Vulnerability Management Policy.

Range's security framework is based on the National Institute of Standards and Technology Cybersecurity Framework (NIST CSF), which allows benchmarking and regular measuring of our profile to focus on continuous improvement. Our ransomware attack prevention efforts adhere to best practices published by The Cybersecurity and Infrastructure Security Agency (CISA) and Multi-State Information Sharing and Analysis Center (MS-ISAC). Beyond these efforts, we utilize multiple industry leading platforms for network and application security, incorporate best practices for Industrial Control Systems (ICS) security and segmentation, and use state-of-the-art technology to protect our information.

Quarterly, Range's Information Technology Department conducts a full review of all security initiatives to assess the current state of our program and potential evolution based upon current business risks, and they report their findings to the Range leadership team and Board of Directors.

Audits and Compliance

Monitoring the status of our information security and cybersecurity program and ensuring compliance with our policies is a crucial step in Range's commitment to risk management. We conduct penetration tests (pen tests) on our systems, review our entire information technology program, and internal audits on an annual basis. To date, Range has not experienced any breaches.

Additionally, an independent third party conducts an external review of our Incident Recovery (IR) Plan and runs an annual IR exercise with Range's internal team to further ensure the preparedness of our Company and employees for potential situations that may arise.

These efforts reflect how Range's commitment to managing information security is engrained into our culture and our daily operations.

7. SAFETY LEADERSHIP



SAFETY IS OUR
CORNERSTONE

Section Highlights



0.30
Days Away,
Restricted or
Transferred
(DART)



0.30
Total Recordable
Incident Rate
(TRIR)



Range employees
completed
1,800 hours
of safety-related training

At Range, we strive to operate in a manner that protects the safety of our employees, contractors, and the public. We work diligently to prevent incidents by creating a workplace culture that integrates safety and health in all activities.

From project planning to daily shifts, safety at Range is integrated into every aspect of our operations across the Company. Professional Safety staff work alongside Operational Management at every level promoting the safety effort through tasks such as:

- Coordinating pre- and post-job meetings
- Evaluating successful safe work practices and analyzing opportunities for improvement
- Integrating safety standards into the procurement process
- Collecting safety specific data
- Providing general and task-specific training
- Reviewing leading and lagging safety indicators
- Facilitating incident root cause analysis efforts

But Range's commitment to safety is not confined to just the Safety Department. Rather, it is embraced and demonstrated at all levels of the Company, led by Senior Management, and upheld by all Range employees.

In place for over ten years, Range also has a cross-functional Safety Committee that meets on a monthly basis. Key operational departments within Range send at least one employee, ensuring a diverse knowledge base of all operations. The overall objective of this committee is to help make Range a safer place to work for all employees and contractors by having regular and thoughtful discussions covering pertinent safety topics.

Every employee is accountable to and responsible for their respective colleagues. This commitment to safety is grounded in a shared belief in and adherence to our corporate values. In Safety, like all that we pursue, we endeavor to achieve excellence.

The Safety Department conducts an annual review to update Range's Safety Roadmap, the strategy, and plan guiding all important safety actions, improvements, and initiatives for the upcoming year. Working closely with operational leaders and the Safety Committee, the Safety Department looks at Range's operational risks, safety performance data, and key learnings from incidents and near misses, all of which are carefully tracked and recorded across all areas of operations.

Once reviewed, the Safety Department and Operations Management identify necessary mitigation actions to proactively address risks and prevent future incidents.

Our Safety Management System Process



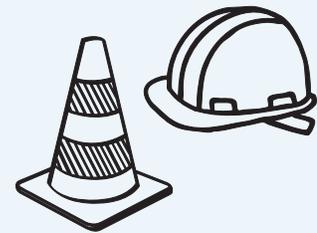
SUPPLIER STANDARDS

Reflective of our deep commitment to health and safety excellence, our rigorous standards extend to our business partners, suppliers, and contractors. As part of a thorough due diligence process, Range maintains an internal list of approved suppliers, which is audited and updated on a quarterly basis.

During the procurement process, a scorecard approach is being implemented that evaluates health and safety performance, risk management, and, where appropriate, other ESG factors. Our suppliers and contractors are required to sign a contract with Range before any work can begin.

Specific data-driven metrics that we regularly monitor for all contractors are TRIR, DART violations, and an overall safety grade. Systematic checks ensure potential and current suppliers meet Range's industry-leading health and safety standards. These checks flag potential issues at our own facilities or at facilities of other companies at which the vendor may operate. If a safety standard violation is identified, Range promptly engages with the non-compliant supplier to regain compliance. Contracts are terminated with suppliers who fail to regain compliance.

As our procurement process evolves, we regularly reevaluate our scorecard approach and explore further risk management enhancement approaches.



Through our 'Plan, Do, Check, Act' process, all actions and initiatives generated by the Safety Department focus on the continual implementation and improvement of our Safety Management System.

COVID-19 Response

In 2020, the global COVID-19 pandemic introduced risks in the workplace that have rarely been seen before. Key members of our organization began monitoring this threat in late 2019. As a result of these efforts and the

early implementation of Range's Crisis and Emergency Management System, our team effectively mitigated these risks and took actions to prevent the spread of the virus while continuing to operate.

During the first quarter of 2020, Range activated the Crisis Management Team. This team was comprised of Senior Management members, representing several departments across the organization whose primary focus was on developing plans to manage the COVID-19 outbreak. Protecting the health and



safety of Range employees and their families was the top priority of the Crisis Management Team. Significant actions developed and implemented by the team included instituting a remote work approach for employees whose jobs would allow them to work from home, establishing pandemic reporting, case management and return-to-work protocols, communicating new workplace safety procedures, and procuring specialty PPE for the workforce. Additionally, Range Senior Management sent periodic communications to keep the Range Family informed about the constantly changing situation and the measures being taken to keep everyone safe.

Prior to the peak of the pandemic, a Crisis Management Team sub-committee was formed to facilitate ongoing dialogue regarding the constantly evolving situation. This sub-committee became a working group, consisting of some of the regular Crisis Management Team members, as well as several other employees from various departments.

Safety Process

The integration of safety improvement efforts is supported by Range's Safety Management System

Leadership Team, made up of senior leaders in the Company. The involvement of the Safety Management System Leadership Team instills the sense of importance placed on safety, which resonates through the organization. In addition, all Range operations have their own site-specific safety and emergency response plans that address any unique elements to each location.

The Safety Management System seeks to:

- Demonstrate management's commitment to safety and to building a strong safety culture among all workers.
- Ensure that all reasonably practical steps are taken to recognize and eliminate hazards or mitigate safety risks through effective and preventative measures.
- Ensure compliance with Company standards, programs and procedures, and federal and state regulation.
- Continually improve safety performance.

Range's Incident Management Team (IMT), a group of employees trained in Incident Command System (ICS) processes, was established in 2018 and routinely participates in extensive training and drills to improve

Company preparedness to handle a wide variety of potential emergencies. Participants must complete online training provided by the Federal Emergency Management Agency (FEMA) as well as general ICS training provided by Range.

In the event of a major incident, Range has invested in a state-of-the-art Emergency Operations Center (EOC), which utilizes advanced technology for live video feed, GIS, media monitoring, presentations, meetings, situation status displays, press briefings, operational security, and more. The EOC allows Range to manage any situation or event across all Range locations and provides regional incident management teams with a full back-up center supported by the IMT.

Further, Range implements a series of safety and emergency response plans, which include important site information in case an emergency situation arises. This information includes:

- Address with coordinates, directions to location, and site map with legend
- Emergency contact information
- First responder emergency notification, critical information requirements for first responders, and nearest hospital
- Emergency response procedure for well site personnel
- Risks and hazards to the public
- Safety data sheet (SDS) information
- Spill control / fire suppression information

Occupational Safety

Range regularly updates and improves the safety of our work processes to ensure we are meeting our evolving safety needs. Safety staff work in concert with all levels of employees to maintain consistent implementation of necessary procedures and protocols. Consistent communication and collaboration allow our safety programs to facilitate understanding and usability by our staff.

For more than nine years, Range has facilitated a Management of Change (MOC) program, which is a component of the Occupational Safety and Health Administration's (OSHA) Section 1910.119 – Process Safety Management of Highly Hazardous Chemicals.

Though Range is exempt from section 1910.119, as it more directly applies to plants and refineries, we made the decision to develop and implement a MOC process as a Best Management Practice given our commitment to safety.

SIF PREVENTION



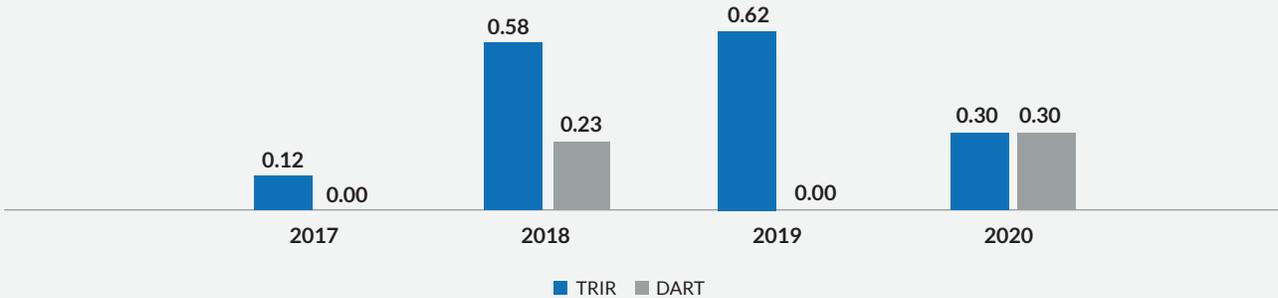
Range currently initiates a root cause analysis for all injury/illness incidents resulting in an OSHA recordable outcome along with other more minor incidents that could have had a more severe outcome had the situation been slightly different. We have also recently made the commitment to focus more on incidents involving potential Serious Injury and Fatality (SIF) outcomes. By focusing on SIF potential incidents in addition to other more minor incidents, we plan to uncover valuable information to prevent these potential SIF incidents from ever taking place.

Range also prioritizes the documentation of hazardous conditions and “near hits,” both on site and in our offices, through the Hazard Identification (Hazard ID) form on the Company’s intranet. All near hits and incidents are investigated to determine if a Severe Injury or Fatality potential (SIF-P) was or is present. Then, all SIF-P near hits and incidents are fully investigated, and the findings of 100% of those investigations are communicated to applicable levels of management.

Figure 7.1

RANGE EMPLOYEE INJURY TREND

Total recordable incident rate (TRIR) and days away, restricted or transferred (DART) for Range employees



DRIVER SCORECARD

Range implements a driver scorecard to track driving

performance data such as hard braking, speeding, or rapid acceleration. This data can be used to ensure driver safety best practices are followed. In 2020, our average monthly score was 97 out of 100. For 2021, we have set a goal of improving that score by one full point to 98. Furthermore, we are seeking to reduce by 25 percent the number of weeks any driver receives a score of a “C” or lower, when compared to 2020 data. Our firm commitment to safety, both of our employees and the communities in which they operate, is part of our culture of improvement and a dedication to best-in-class practices.



The purpose of Range’s MOC program is to implement change more effectively by:

1. Identifying when a change is necessary or already taking place;
2. Giving all affected parties the opportunity to communicate their thoughts and concerns; and
3. Developing a plan to carry out the necessary changes.

After nearly a decade of implementation, the MOC process is a success story for Range. It has led to a safer workplace for employees and added value across all aspects of our operations. Implementing a formal process that is inclusive of all appropriate parties has created an open forum, allowing proposed changes to be raised and fully considered prior to final implementation.

Through the use of Intelx, an EHS Incident Management Application, Range’s Safety Department receives automated reports and is able to track the progress of incidents from the initial report through investigation, corrective action implementation, and closure. That means that Range can track not only the type of incident but also the root cause(s), the operation taking place, the length of time involved personnel was on duty and, for an injury, – the area of the body affected. Intelx also allows for a cohesive tracking of incident reviews and investigations, as well as the corrective actions implemented, providing a repository of lessons learned. The level of detail in this data is invaluable to Range, allowing us to proactively identify safety risks, educate

employees, and vendors prior to beginning work on elements that may result in an incident or injury and provide ways to mitigate such factors.

In 2020, Range reduced the number of recordable employee injuries by 3 compared to 2019. Two moderate incidents involving Range employees were recorded that required days away from work (*Figure 7.1*). The incidents were analyzed and evaluated, resulting in corrective actions where appropriate.

Once these incidents were identified, the team acted quickly to ensure the safety of the affected employees and closely followed our incident policies and procedures. After analyzing the cause of the incidents, a determination was made that both were anecdotal in nature and not the result of systemic issues. However, the team responded promptly to address the root cause of each issue.

By leveraging the information provided through Hazard ID, we can track workplace conditions that could potentially lead to an injury or incident and prevent future occurrences from happening. Range's goal is to report near hits, warning signs that caused no damage or injury, and provide an opportunity to enhance the current system and prevent future injuries or incidents.

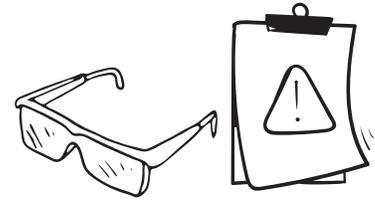
Workforce Safety Participation

Range's Safety Management System was developed to equip our workers with the skills and knowledge they need to perform their daily responsibilities safely. This has been an evolving process, and over time we have refined our development and training programs to provide Range employees with relevant, job specific trainings based on the degree of risk involved and the complexity of efforts to mitigate said risk.

In 2020, our workforce completed safety related training, accumulating 1,800 hours of safety related trainings through our online Learning Management System, allowing individuals to learn at their own pace and convenience. Range also conducts in-person classes, including defensive driver and Cardiopulmonary Resuscitation (CPR) training, to ensure our employees receive hands on instruction for critical health and safety skills that may be needed on the job.

Safety in Our Communities

The communities in which we operate are the communities we call home. The



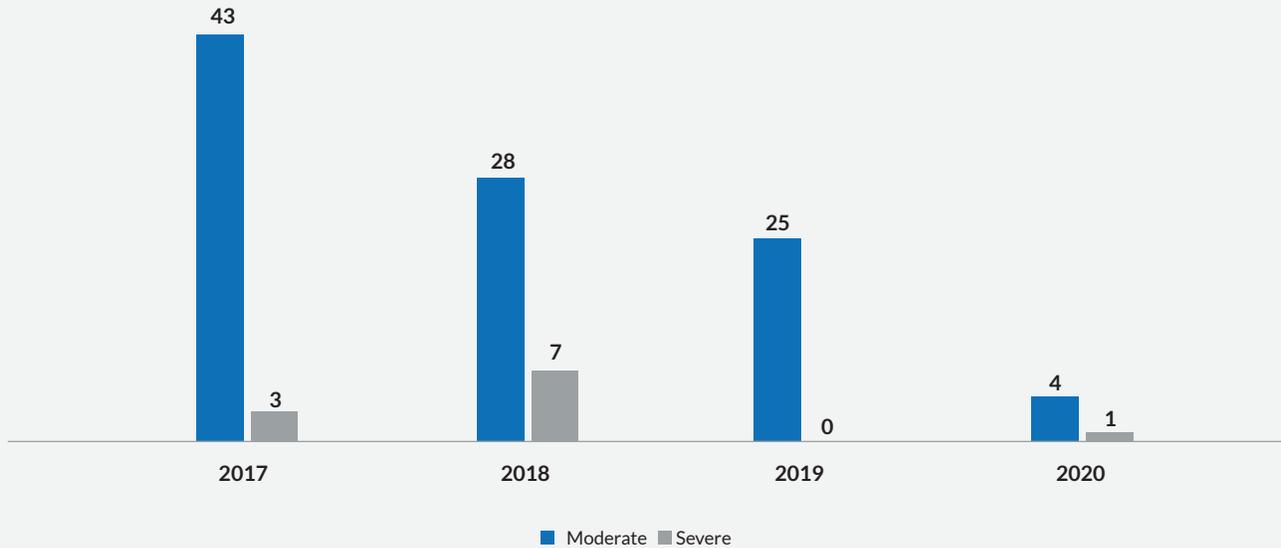
safety and well-being of those communities is a top concern to Range. From planning to construction and subsequent operations of Range sites, our Security and Safety teams work diligently to ensure the community is considered in all aspects of the process.

- Before we begin any operations, the Security Team travels along and monitors the approved routes in Pennsylvania during the regular morning and afternoon commute times to determine when school buses travel through the area. Range then sets “curfew” times for all commercial motor vehicles traveling to and from our job sites, to ensure no commercial motor vehicle is on the road at the same time as local school buses. Range voluntarily suspends this activity in order to promote the health and safety of the communities in which we work, particularly the safety of our communities’ children.
- Annually, the Range Operations, Safety, and Environmental Compliance teams hold Pennsylvania Safety Week, a week-long event dedicated to promoting a culture of safety, teamwork, and education. The event was changed to a virtual approach due to COVID-19 restrictions and will be conducted similarly in 2021. During a typical Safety Week, Range voluntarily suspends operations intermittently and allows local first responders and external stakeholders to visit Range locations. Throughout the week, Range employees and vendors conduct training events to educate others on the various jobs and roles and explain mitigation efforts in order to perform jobs safely and efficiently. The week also includes an Emergency Tabletop Drill, which brings together our Incident Management Team, local first responders, and local stakeholders to enhance our response to a large-scale incident.

Figure 7.2

CONTRACTOR RECORDABLE INJURY TREND BY YEAR

Number of contractor recordable injuries by severity and by year



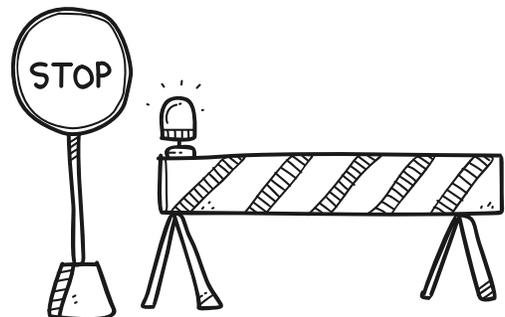
Contractor Safety

Range's focus on safety is not limited to just our employees. Much of our field work is performed by contractors, and in 2018, Range upgraded its contractor management tool to include ISNetworld, an oil and gas industry platform that allows Range to better connect and evaluate the safety performance of industry vendors. Through ISNetworld, Range benchmarks contractor safety performance with our industry peers and identifies potential areas for improvement.

Working on a Range site requires mandatory safety orientation for all contractors and vendors operating in any location. In 2020, approximately 6,000 individuals received Range's safety training from the Range Safety Department or through our Train the Trainer program.

The orientation covers a comprehensive list of topics including but not limited to: Stop Work Authority, Range's Safety Policy, Fit for Duty, PPE, Hazard Communication, Simultaneous Operations (SIMOPS), Restricted Areas, Chemical Hazards and SDS, Equipment Operation, Speed limits, Backing Policy, Reporting Incidents, and Participating in Incident Investigations.

Contractor crews performing work on location report directly to an onsite Range supervisor who monitors their work and safety behaviors throughout the day. The Safety Department has field safety specialists who regularly perform site safety assessments to identify gaps, communicate any gaps to operations, and help facilitate a correction to ensure the safety of everyone on site. Upon completion of Range's safety training program, all personnel receive a sticker for their hard hat to symbolize that they have been informed of Range's safety expectations and commitment to the environment and communities in which we work.





CONTRACTOR SAFETY

Contractors are an integral part of our operations, which is why we integrate our contractors into our health and safety management process. In order to maintain a healthy and safe work environment on all of Range's sites, we require a few important protocols of each and every one of them. First, on our active locations, we have a manned security or a cyber gate system that checks in each contractor to ensure 100% accountability at all of our locations. Second, prior to working at any of our locations, we require all contractors to attend the Range field safety orientation, which covers various industry- and Range-specific safety items. These include Range's Safety Policy, recognizing, communicating, and mitigating hazards, effective communication, safe operating procedures, and incident response. It also includes pre-work items, such as COVID-19 safety protocol and minimum PPE requirements on location, and at-work items, such as security and Range site supervisor check-ins, planning the day's work through the use of a Job Safety Analysis, and stop work authority. A safe work environment is the top priority for Range, its employees, and the communities in which we operate. By following these procedures, we are ensuring the safest possible operations.



8. CLIMATE CHANGE



Section Highlights



Goal: Net Zero

GHG Scope 1 and Scope 2 Emissions by 2025



69%

reduction in GHG emissions intensity and 86% reduction in methane emissions intensity compared to 2017 levels



Launched 22.2 acre

Reforestation project

in Washington County, Pennsylvania.

At Range, we view climate change as an environmental, economic, and social reality with potential impacts for our world, our industry, and our communities. We believe that the production and use of natural gas plays an integral role in addressing the risks associated with climate change and transitioning to a lower-carbon economy. With this opportunity, we remain committed to responsible production in an economic and safe manner, while continuing to achieve industry-leading emissions reductions as part of our operations.

Our approach to climate change is guided by the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and formalized by our recently released Environmental Policy. Our [Environmental Policy](#) details our Environmental Management System, the involvement of all of our employees in this process, and our environmental stewardship objectives and goals. Our Environmental Policy represents Range's commitment to continuously improving and deploying industry-leading environmental standards during the transition to a lower-carbon economy.

In 2020, Range Resources completed the sales of our North Louisiana and conventional assets. To enable benchmarking of data in the future, the 2020 environmental data throughout the report excludes data from this asset. Prior year data has not been restated and reflects ownership of the asset.

Governance – Board and Management Oversight

Board Oversight

The Range Board of Directors includes climate change considerations in its oversight responsibilities, as climate change issues relate to business development decisions, risks, and opportunities that the Board reviews and acts upon as part of the regular course of fulfilling its duties. Environmental risks and opportunities associated with climate change are a core responsibility and area of focus for the full Board. In May of 2021, the Board added an ESG and Safety Committee, which will supplement that oversight. The Committee provides guidance and reviews reports on ESG topics including climate change and other environmental topics.

The Board receives quarterly updates from several sources regarding information related to our environmental initiatives and progress towards our goals, including climate-related risks and opportunities. For example, the Environmental Compliance Department reports to the Board with information about our progress on our sustainable performance metrics, including climate-related indicators like GHG emissions and water usage. Likewise, our Legal Department and Government Affairs Department inform the Board

about regulatory developments including climate change issues, such as state, federal, and global regulatory actions and initiatives that may be relevant to both Range and our industry. The Risk Management Committee, the cross-functional body which comprises managers and executives from multiple business departments (Environmental Compliance, Finance, Investor Relations, Accounting, Operations, Health and Safety, Legal, and Government Affairs) regularly provides information on all manners of risks to the Audit Committee including those related to climate change.

Our Board regularly reviews macroeconomic trends and forecasts in relation to the natural gas market from our Marketing Department including long-term projections of commodity prices, which include assumptions that incorporate climate change impacts. The Board, guided by the ESG and Safety Committee, includes all climate change-related information that it receives into their discussions and decision-making processes with regard to the development and the approval of Range's business plans and risk management policies. Our goals and objectives, in relation to climate resilience and sustainability, affect capital allocation decisions, including capital expenditures, acquisitions, and divestitures.

Management Oversight

Climate change risks and opportunities are by nature interdisciplinary and, to that end, our management team applies the oversight and management of emissions reductions efforts through multiple channels. This comprehensive approach provides leadership a 360-degree view of how several aspects of our business are impacted by climate-related issues, including our efforts to reduce emissions, preserve and protect water, meet other environmental compliance responsibilities, our capital expenditure decisions and future investments, the markets for our products and services, the impact of legislative and regulatory developments, and our relations with our shareholders and investors.

Range's Senior Management Team establishes the expectations for the Company's efforts in assessing and managing climate-related issues. The various teams and departments responsible for monitoring and managing of climate-related risks and opportunities report directly to or are led by members of the Senior Management Team.

The risks and opportunities that come with climate change policy are top of mind for our Senior Management Team, who understand its potential impacts

for our business. The team incorporates its assessment of these risks in the daily management of the Company and its long-term business planning decisions. Our Legal Department and Government Affairs Department also regularly monitor issues associated with regulatory action or political advocacy.

As directed by the Board and Senior Management, the Environmental Compliance Department is responsible for developing policies, procedures, and field guides for operations, providing training and education for employees, creating channels of communication, internal reporting of performance, and monitoring and auditing environmental practices. A committee of officers and senior managers work across the business to manage enterprise level risk and identify emerging risks, including climate change-related risks. Finally, our Finance Department and Marketing Department assess the impact of climate change on commodity prices when reviewing macroeconomic trends and projections that affect our industry.

Our Strategic Response to the Climate Policy Discussion

At Range, we recognize and understand our responsibility to act as a steward of the environment, and that understanding guides everything we do. Our approach to climate change management is an integral part of our broader business strategy, which includes the following elements:

- Commit to environmental protection and worker and community safety;
- Concentrate on our core operating area;
- Focus on cost efficiency;
- Maintain a multi-year drilling inventory;
- Minimize land disturbance and associated impacts by drilling longer laterals and using well pads to access multiple gas formations;
- Maintain a long-life reserve base with a low base decline rate;
- Market our products to a diverse set of customers;
- Maintain operational and financial flexibility

Climate-change and other macroeconomic factors can impact the price of the natural gas we sell. Range focuses on operating responsibly and as efficiently as possible in order to manage the risk of changing natural gas prices.



By continuing to be on the lower end of the industry supply cost curve, Range is able to reduce the risk from lower prices relative to peers.

In order to operate in a clean and safe manner, we have invested and implemented substantial GHG reduction programs and water management initiatives as part of our environmental stewardship strategy.

Natural gas is a cleaner and safer alternative to other fossil fuels and is projected to outpace oil and coal as a source of energy. As a producer, we understand the inherent opportunity natural gas production provides us and our stakeholders. Our focus on natural gas and NGL production in the Appalachian basin in Southwestern Pennsylvania grants us some of the lowest production costs in North America, while operating under some of the highest state and local environmental and safety regulatory standards.

Our emphasis on maintaining a long-life drilling inventory and low decline reserve base reflect our long-term focus and strengthen our resilience in maintaining our cost advantage, while marketing our products to a broad customer base reaffirms our belief in natural gas' long-term advantage as a reliable and clean energy source with significant global demand potential. Finally, in order to adapt to the challenges before us, we maintain operational and financial flexibility and are fully committed to the continued reduction of our GHG emissions footprint, positioning Range as a leader in the industry.

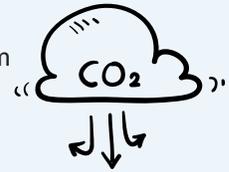
From 2011 to 2020, we have reduced our direct GHG production emissions intensity by 84 percent, while reducing our absolute direct emissions by 66 percent in just the last three years. As technology allows us to improve efficiency and production techniques, our methane intensity will improve. Additionally, we work to upgrade older well sites with newer, more advanced technology. By utilizing improved technology, we are reducing overall emissions.

Emissions Reduction Goals

Range has expanded our emissions goal by committing to net zero Scope 1 and Scope 2 GHG emissions by 2025. The [EPA](#) defines Scope 2 emissions as indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling. We view those emissions part of our GHG inventory and believe this added commitment strengthens our sustainability goals.

TRANSPARENT EMISSION REDUCTIONS

In June 2019, Range joined EPA's Natural Gas Star Program and has begun reporting emission reduction efforts as of this year. In November 2019, EPA held a Natural Gas STAR and Methane Challenge Workshop in Pittsburgh. Range presented its liquids unloading program to reduce emissions and hosted a field tour of Range, drilling, completion, and production sites to demonstrate emission reduction projects.



Emissions reductions are an integral part of our strategy implementation, and we have set several short-term, medium-term, and long-term objectives specifically related to GHG emissions. Our medium-term goals focus on achievements by 2025, including net zero Scope 1 and Scope 2 GHG emissions through absolute reductions in emissions, the use of carbon offsets including reforestation and improved forest management, and further reducing our GHG emissions intensity by 15 percent relative to 2019 levels by 2025.

Scenario Analysis

Our strategy development is guided by the analysis of long-term trends and developments in energy markets. This type of review helps us assess our business strategy and market position relative to regulatory, market, technological, reputational, and physical risks associated with climate change. For the purposes of our analysis, we use the publicly available scenarios produced by the International Energy Agency's (IEA) World Energy Outlook (WEO) 2020, which is currently one of the most widely recognized models contemplating the transition risks associated with climate change.

The WEO 2020 presents two main scenarios: The Stated Policies Scenario (STEPS) and the Sustainable Development Scenario (SDS). Each scenario assumes a different set of changes in policy along with associated technological advances, market demand trends, and energy efficiencies. The energy market projections of the scenarios extend to 2040, while assumptions around population growth and economic growth are the same in both scenarios.

1. The **Stated Policies Scenario** assumes that global GDP returns to pre-pandemic levels in 2021 and that global energy demand normalizes by early 2023. This scenario incorporates today's official policy intentions and targets in addition to policies and measures that governments around the world have already put in place.
2. The **Sustainable Development Scenario** identifies a pathway to fully meet sustainable energy goals related to universal access to energy and cleaner air. The achievement of these goals assumes a different mix of fuels and technologies that provide efficient and cost-efficient energy services.

The primary difference between the WEO 2019 and WEO 2020 is that there is no longer a "Current Policies Scenario." The STEPS scenario reflects current policies as of 2020, and from 2021 through 2040 "describes a pathway forward from a new, postcrisis starting point."¹ The SDS scenario assumes the same economic growth outlook and outlines a pathway to reaching 2040 climate goals. IEA has also added a Delayed Recovery Scenario (DRS) through 2030, to reflect a slower return to normal economic activity and thus energy demand from the Covid-19 pandemic.

Under the STEPS scenario, natural gas demand rises at 1.2 percent annually over the 2019-2040 period (Figure 8.1). This level of growth is lower than pre-pandemic forecasts as assumptions on the timing of cost-effective fuel switching have been brought forward into this decade as opposed to the 2030s. In terms of sector shifts in gas consumption, growth will come from the industrial sector as renewables claim a larger share of power generation.

Under the SDS scenario, natural gas production peaks in 2025 and then falls, ending at 13 percent below current levels by 2040. Average annual production in this scenario declines by 0.7 percent from 2019 to 2040 (Figure 8.1).

When looking at regional production in North America, overall gas production grows by 0.6 percent per year in the STEPS scenario over the 2019-2040 period. While in the SDS scenario, North American annual gas production falls on average by 2.2 percent annually during the same period. (Figure 8.2)

According to IEA's analysis, shale production globally has a stronger growth rate than conventional or tight gas in the STEPS scenario, rising on average by 2.7 percent.

NATURAL GAS' ROLE IN DECARBONIZATION

Society can pursue multiple decarbonization pathways, with different costs and mixes of technology to those outlined by the IEA. IHS Markit for example details the role natural gas could play in achieving greater near-



term decarbonization in a more cost-optimal manner. In order to reduce emissions in a cost-efficient manner, many core industries and regions are projected to opt to use natural gas in combination with carbon capture, utilization, and storage. For example, liquefied natural gas has the opportunity to help the global supply chain operate more sustainably as shipping and trucks evaluate low-carbon gas solutions. Further, industries and regions that currently rely on coal as an energy source have the potential to reduce emissions swiftly by switching to gas usage. Technological advancements within the natural gas industry will only serve to amplify the potential benefits of natural gas and its role in decarbonization.

"IHS Markit estimates that 420–550 Bcm per year of additional natural gas—10–15% of current global consumption—would be required to meet a cost-optimal pathway for emission reductions in the Asian power sector alone, generating between 0.9 and 1.2 gigatons (Gt) of annual carbon dioxide (CO₂) reductions."*

The potential benefit of Asian and other markets increasing the use of liquefied natural gas is huge. One example: the effect of switching from coal to natural gas in China is an estimated 47–57% reduction in GHG emission intensity, cradle through power generation.

Sources:

IHS Markit report: *A Sustainable Flame: The role of gas in net zero*
 ACS Sustainable Chemistry & Engineering: *LNG Supply Chains: A Supplier-Specific Life-Cycle Assessment for Improved Emission Accounting*

* One billion cubic meters (Bcm) is equivalent to 35.3 billion cubic feet (Bcf)

¹International Energy Agency, 2020, World Energy outlook (2020), IEA, Paris, p. 171

Figure 8.1

COMPOUNDED ANNUAL GROWTH RATE IN GLOBAL FOSSIL FUEL PRODUCTION

By policy scenario and by fuel type, 2019-2040

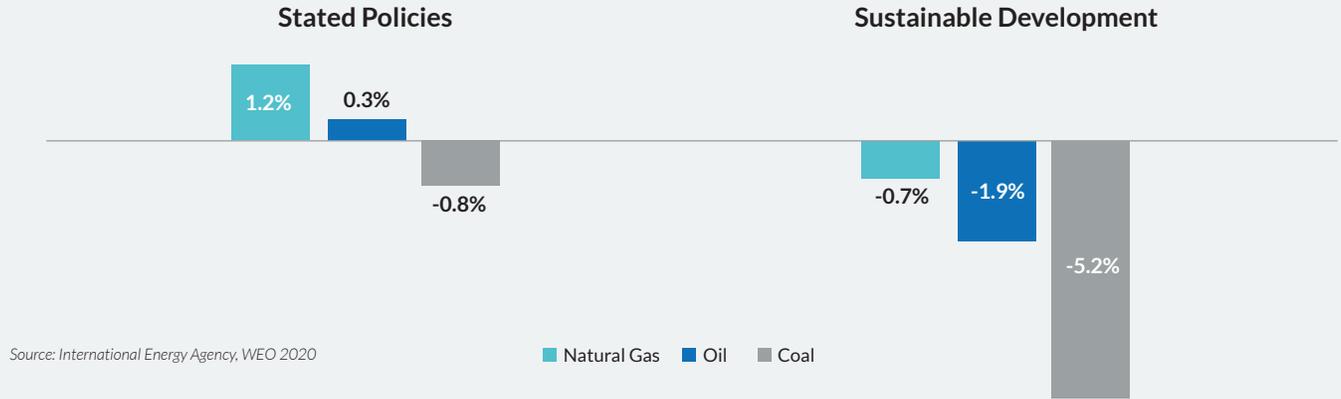
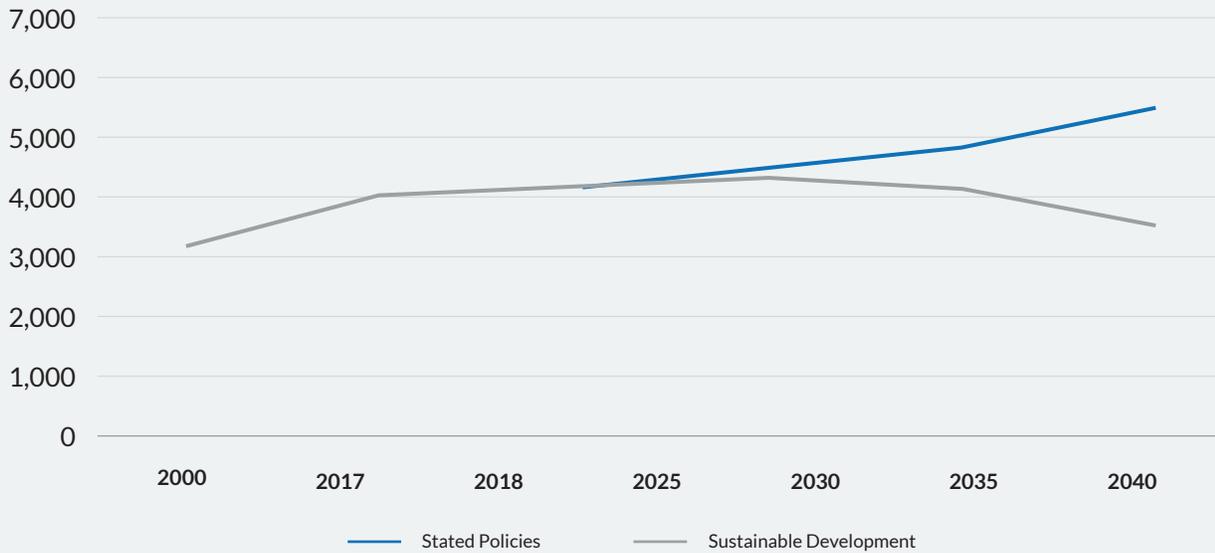


Figure 8.2

GLOBAL NATURAL GAS PRODUCTION PROJECTIONS BY POLICY SCENARIO

Annual production volumes in bcm*



* One billion cubic meters (bcm) is equivalent to 35.3 billion cubic feet (bcf)

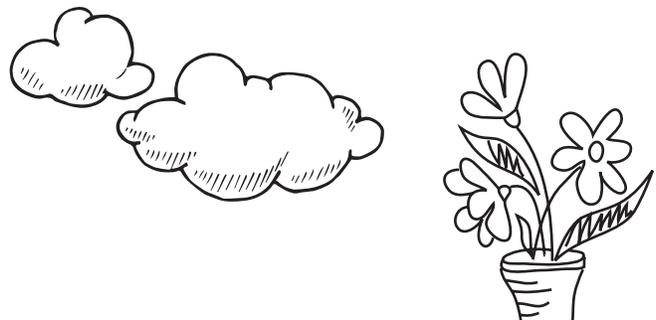
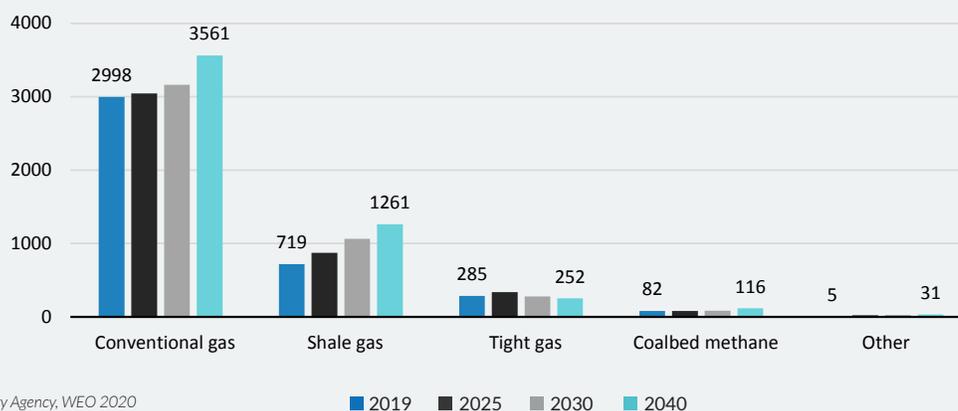


Figure 8.3

STATED POLICIES SCENARIO: GLOBAL NATURAL GAS PRODUCTION PROJECTIONS BY GAS TYPE

Annual production volumes in bcm*



Source: International Energy Agency, WEO 2020

* One billion cubic meters (bcm) is equivalent to 35.3 billion cubic feet (bcf)

More specifically:

- U.S. shale will be the natural gas production leader globally
- The U.S. will remain a net exporter of natural gas under both scenarios
- The use of natural gas for power generation, and in the industrial sectors, is associated with significantly lower GHG and other air emissions

While no scenario can predict future events, scenarios can serve to evaluate strategic priorities and positions under a variety of policy circumstances. Based on our review of global energy market projections, it is apparent that the natural gas industry is better positioned relative to other fossil fuels under both scenarios. The projected compounded annual growth rate for global natural gas production outpaces oil and coal significantly in the STEPS scenario. In the SDS scenario, natural gas production declines albeit at a much lower rate than other fossil fuels.

While natural gas production is projected to face a compounded annual decline of 0.7 percent under the SDS, the impact is significantly lower compared to the other two fuels. Under the SDS, the 2040 production level for natural gas is projected to be approximately 13 percent lower than current levels, while 2040 oil and coal production levels are projected to be lower by 33 percent and 67 percent, respectively. For context, IEA's *Gas Market*

Report for the third quarter of 2021 shows the progress of demand growth in relation to the SDS scenario: global gas demand by 2024 would already be 2% above the 2025 level in the Sustainable Development Scenario.

A closer look at the natural gas production forecasts by type shows that shale gas proves to be more resilient compared to conventional gas or tight gas. The Stated Policy Scenario projections estimate 2040 shale gas production levels to increase by 75 percent compared to current production, while production for tight gas is projected to drop significantly. Conventional gas production in this scenario grows by 19 percent in comparison (*Figure 8.3*). SDS projections show similar reductions in both conventional and shale gas, of 11 percent and 12 percent respectively, while tight gas production has a 42 percent drop.

Our business strategy outline recognizes these favorable projections in the STEPS scenario but incorporates the fact that our industry faces challenges that will require us to maintain operational and financial flexibility. Under the Sustainable Development Scenario, the price of natural gas remains at relatively low levels, which underlines the need for Range to maintain discipline and focus on cost efficiency. Our current costs of production and breakeven prices are among the lowest in the industry and should allow us to remain competitive under these various forecasted price scenarios (*Figures 8.4 and 8.5*).

Figure 8.4

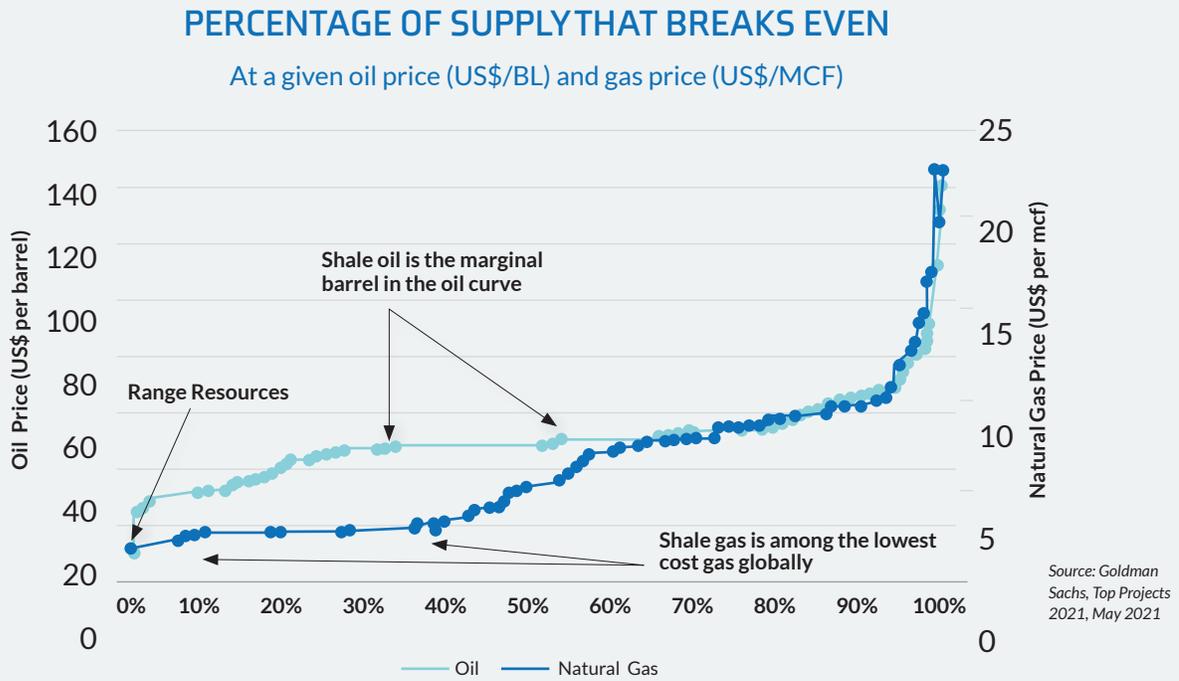
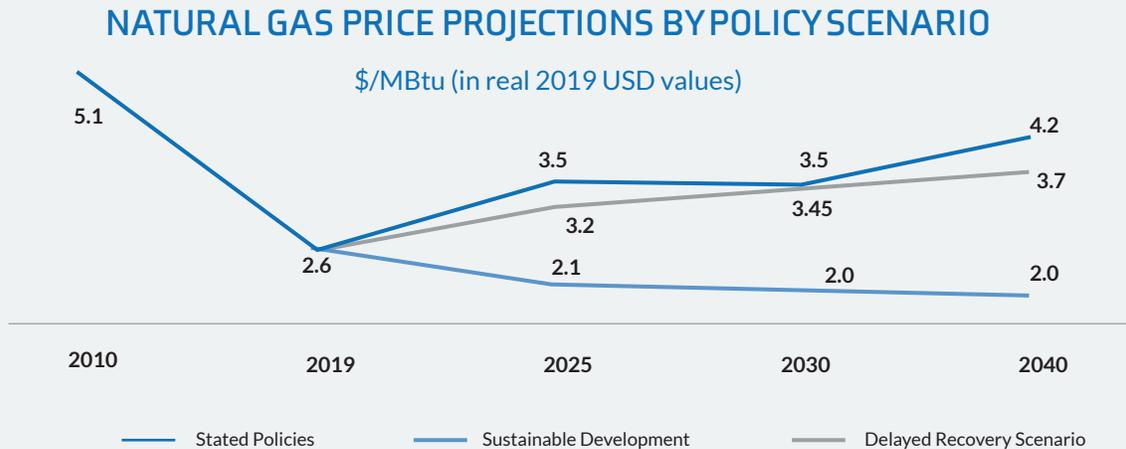


Figure 8.5



Source: International Energy Agency, WEO 2020

Under both policy scenarios, North America is projected to remain a net exporter of natural gas as demand is expected to grow more rapidly in other parts of the world (Figure 8.6). In line with our business strategy position to market our products to a broader customer base and different markets, the global market dynamics may require us to continue positioning our products and services for exports.

Our investments in the production of natural gas liquids (NGLs) will also likely prove to be more resilient compared to conventional crude oil. While NGLs

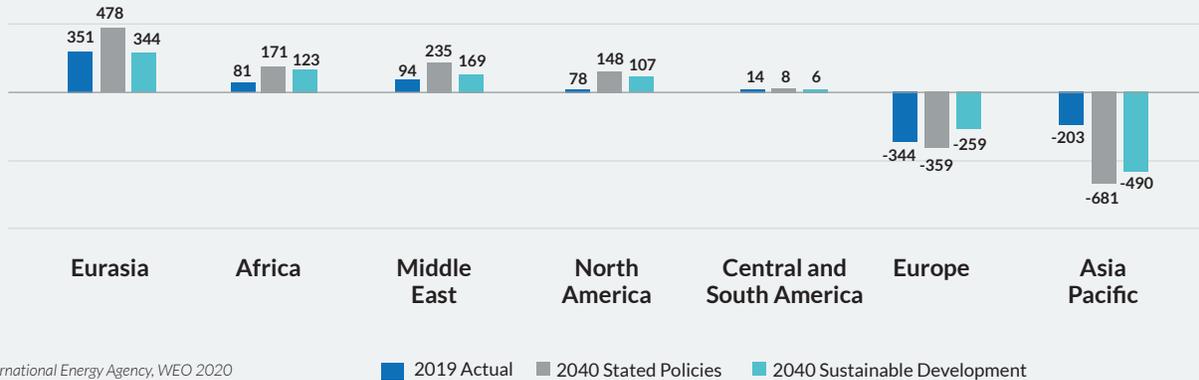
are projected to face a slight decrease in production under the Sustainable Development Scenario, they are expected to gain a larger portion as a percentage of total production (Figure 8.7).

Further, LNG/NGLs provide additional benefits beyond resilience to climate change. According to the IEA, the use of LNG/NGLs for power generation, and in the automotive and industrial sectors, is associated with significantly lower GHG and air pollutant emissions, such as particulate matter, nitrogen oxide, and sulfur dioxide, relative to oil and coal.

Figure 8.6

NATURAL GAS REGIONAL TRADE DYNAMICS BY SCENARIO TYPE

Net export (import) position based on production minus demand volumes in bcm*

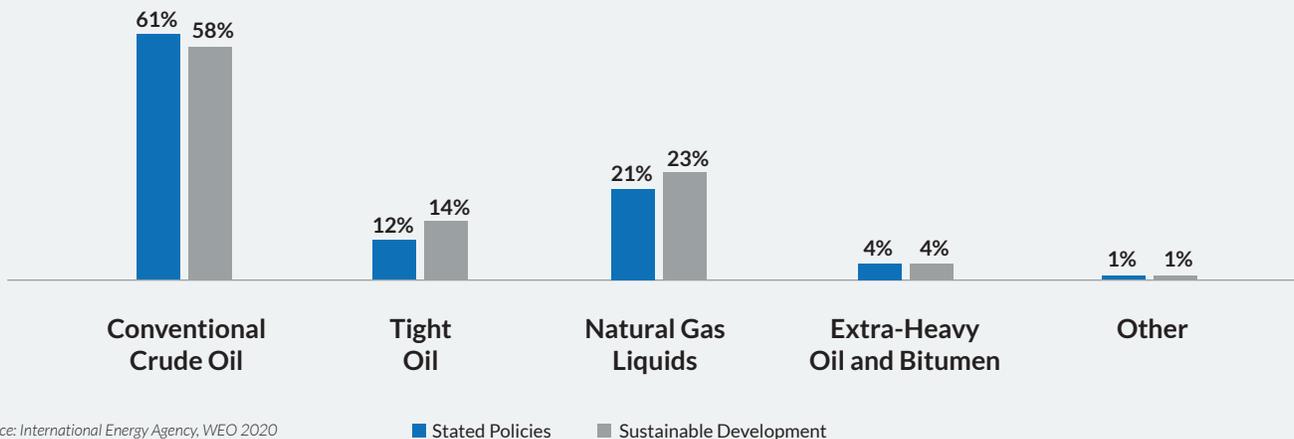


* One billion cubic meters (bcm) is equivalent to 35.3 billion cubic feet (bcf)

Figure 8.7

2040 PROJECTED GLOBAL OIL PRODUCTION BY SCENARIO

Production of each oil type as percentage of total global production



Moreover, NGLs can help prevent premature deaths related to illnesses attributable to household air pollution from cooking with solid fuels in emerging markets. IEA estimates there are currently 2.6 billion people without access to clean cooking facilities. IEA estimates a total of 2.44 million premature deaths in households due to lack of clean cooking in 2019. Under the Sustainable Development Scenario – which envisions universal access to clean cooking by 2030 – reducing reliance on polluting fuels for cooking by 2030 reduces PM2.5

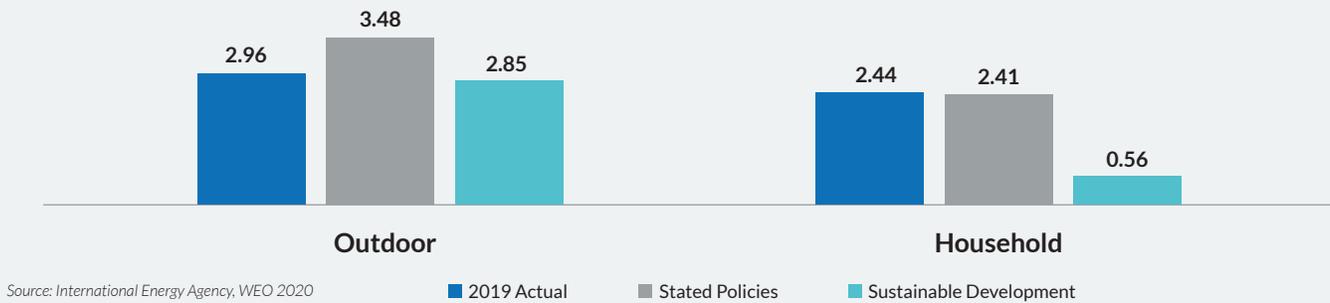
emissions by more than 80 percent compared to the Stated Policies Scenario.

With the backing of policy in jurisdictions around the world, NGLs will catalyze access to clean cooking to hundreds of millions of households, saving people's lives. Premature deaths due to household air pollution fall to 0.6 million a year in the Sustainable Development Scenario by 2030, compared to 2.4 million a year in the Stated Policies Scenario (Figure 8.8). According to the IEA, access to clean cooking facilitated by liquified petroleum

Figure 8.8

GLOBAL PREMATURE DEATHS ATTRIBUTABLE TO AIR POLLUTION BY SCENARIO, 2019-2030

Millions of premature deaths per year



gas also reduces overall greenhouse gas emissions by reducing methane emissions from incomplete combustion of biomass and reducing deforestation.

A careful analysis of climate change policy scenarios reinforces Range's commitment to our current business strategy. Each key element of our strategy aligns with the risks and opportunities presented by climate change and ensures we maintain a competitive and resilient market position under the various policy scenarios discussed above.

Climate Change Risk Management

We have a robust enterprise risk management process for identifying, assessing, and managing risk and monitoring risk mitigation strategies. Our multidisciplinary Risk Management Committee comprises managers from various parts of our organization – including Operations, Legal, Finance, Investor Relations, and Environmental Compliance – and regularly reports to our Senior Management Team and to the Audit Committee of the Board.

The Risk Management Committee monitors risks related to climate change as part of our enterprise risk management process, including legal and regulatory risks, market risks, reputational and community risks, and the physical risks associated with extreme weather events or long-term impacts due to changes in weather patterns. Range views regularly conducting a scenario analysis as an important strategy to identify, assess, and manage evolving climate change risks.

Actions to Manage Climate Change Risks

Our actions are guided by our strategy as previously outlined. As this climate change risk management approach is further developed and formalized, we will continue to evaluate potential action plans for addressing risks and opportunities.

Range is fully committed to identifying solutions that protect the public good, and we are engaged in public policy discussions and consultations among peers and other industry participants in that pursuit. These solutions are key to allowing our industry to continue to serve our communities with cleaner and responsible energy production.

Range's systematic and methodical approach to reducing our carbon footprint includes an annual review process of available options in terms of technological improvements and changes in design. Importantly, our proactive approach to address risks related to carbon emissions focuses on continuous improvement, which drives innovation and encourages long-term thinking on how to achieve our emissions reduction goals. These efforts include:

- Continued progress in accurately measuring, monitoring, and reporting on emissions.
- Our pioneering approach to water management constitutes a significant portion of our risk management efforts, as we engage in industry-leading practices that advance water preservation, water quality, and community safety.

- Our proactive approach to emissions reductions and water management helps us gain efficiencies, which keep us in alignment with our strategic objective to maintain a low cost of production to remain competitive and resilient during potential market disruptions.
- Robust business continuity plans, which consider multiple sources of business disruptions, including severe weather events.

Vital to our success is a close working relationship with our communities, with whom we communicate our commitment to environmental stewardship and information regarding any potential impacts. This close relationship ultimately helps us protect our social license to operate and strengthens our reputation in the communities we serve.

Climate Change Opportunities

In addition to risks, we believe that global climate change challenges present several opportunities for our business, as we believe our products and services can play an important role in the transition to a low-carbon economy.

- **Industry Leadership.** We aspire to become one of the first natural gas producer to achieve net zero Scope 1 and Scope 2 GHG emissions by 2025 through absolute emissions reductions and the use of carbon offsets associated with reforestation and improved forest management, as well as other available and emerging offset methodologies. Along with our goal of net zero Scope 1 and Scope 2 GHG emissions by 2025, we are committed to long-term continuous improvement in emissions reductions. We hope that by being an industry leader in addressing climate change challenges, we can yield significant benefits in our relationships with our employees, our communities, and our investors.
- **Operational efficiencies.** Our focus on environmental stewardship has resulted in significant operational efficiencies and cost savings both in relation to our emissions reductions efforts and our water management initiatives. For example, the installation of plunger lift systems and our leak detection and prevention processes and procedures have allowed us to save and sell gas that would have otherwise been emitted in the atmosphere. Our water recycling program not only allows us to reuse water, but, through our reliance on a network of transfer pipelines, we are able to reduce costs and associated emissions from the reduction of truck traffic.
- **Market Demand.** Natural gas is a significantly cleaner and more efficient fuel compared to other fossil fuel sources. According to the U.S. Energy Information Administration, for the same amount of energy, natural gas produces between 43 and 49 percent less CO₂ emissions compared to coal-based fuels and between 26 and 27 percent less CO₂ emissions compared to diesel and gasoline. As demand for higher-emitting fuels may be reduced, we believe natural gas presents a safe, environmentally friendly, and cost-effective alternative.
- **Access to Capital.** From an investment perspective, Range seeks to differentiate itself among other natural gas producers. The state of Pennsylvania, where most of our production is located, has a modern regulatory framework for producers, with some of the strictest state regulations. As production in the Marcellus basin is focused on natural gas (and not oil), our emissions are significantly lower compared to oil and gas producers in other parts of the country. Further, our cost of production is among the lowest in the industry, which renders our reserves more resilient and more profitable over the long term.

Greenhouse Gas Emissions

Range's long-term value proposition has relied upon our ability to differentiate our business from other industry players, and one focus area in which we do that is through carbon emissions reductions. These reductions have long been a core focus of our broader sustainability strategy and they play an important role in mitigating risk.

We strive for measurable emissions reductions each year, and to achieve our objective, we continue to invest in technologies, implement best-in-class emissions reductions policies, and develop improved measurement methods to reliably track emissions. To that end, each year we review the designs and processes we have in place to identify new technologies, design changes, and processes that will allow us to effectively and efficiently reduce our direct emissions.

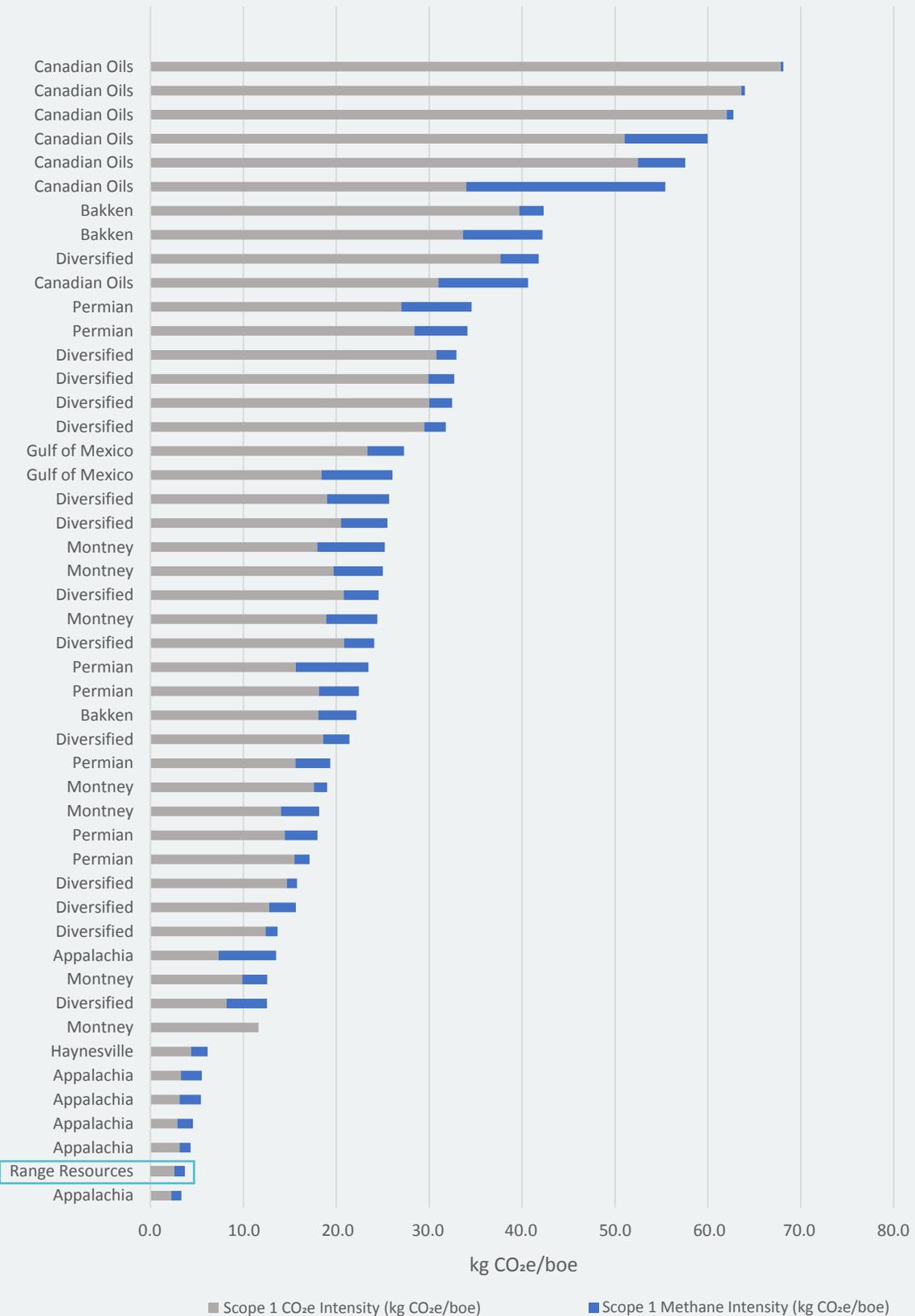
Our annual design and process change review provides us an opportunity to consider the adoption of multiple emissions-reduction initiatives. As part of this process, we estimate each initiative's emissions reductions along with its capital, operating, and maintenance costs. We then rank initiatives by marginal abatement cost, giving us the opportunity to select initiatives that will result in the most effective emissions reductions.

This annual review process also allows us to analyze

Figure 8.9

2019 SCOPE 1 CO₂ & METHANE INTENSITY (KG CO₂E/BOE)

Range and anonymized oil and gas producers

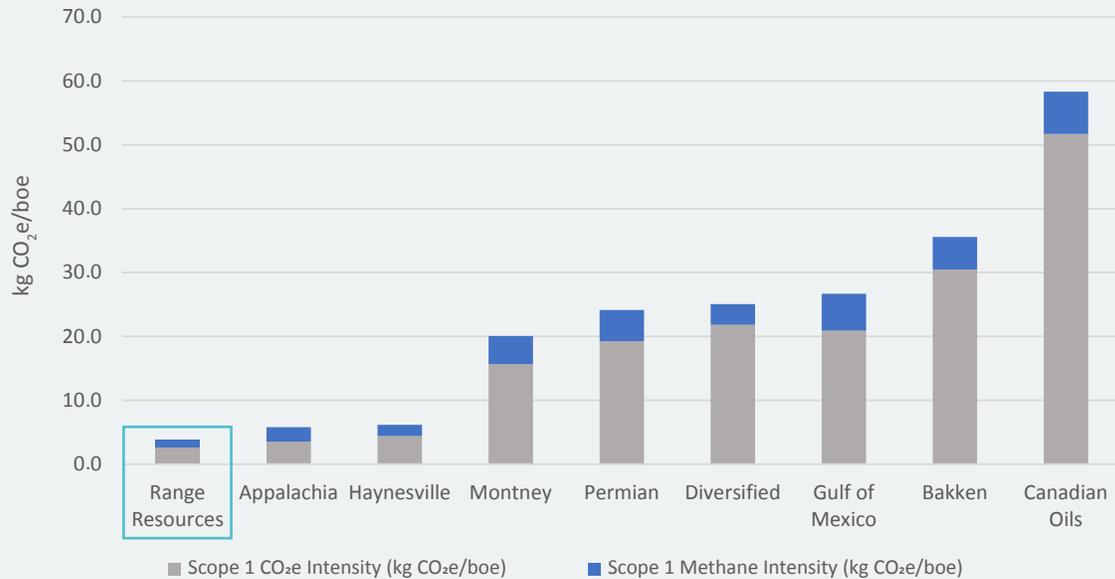


Source: Enverus

Figure 8.10

2019 SCOPE 1 CO₂ & METHANE INTENSITY (KG CO₂E/BOE) BY REGION

Range compared to average emissions intensity by region



Source: Enverus

and address our emissions by source and type during each part of the operating process, and it constitutes a core element of our long-term strategy to achieve our emissions reduction goals. Beyond these annual reviews, we are also actively considering the development or purchase of carbon offsets in order to achieve a medium-term target of net zero Scope 1 and Scope 2 GHG emissions by 2025.

These reviews, analyses, and actions are paying off in the form of emissions reductions. Based on third-party data we received from Enverus, the largest SaaS company solely dedicated to the energy market, we are estimated to rank among the lowest in CO₂ emissions intensity in a group of 50 global natural gas producers (Figure 8.9).

When reviewing emissions intensity by operating region, Appalachia demonstrates an advantageous position, with the lowest emissions intensity figures compared to all other regions. Range ranks as a leader in Appalachia with below-average upstream carbon dioxide emissions intensity (Figure 8.10).

Legacy Initiatives (2009-2017)

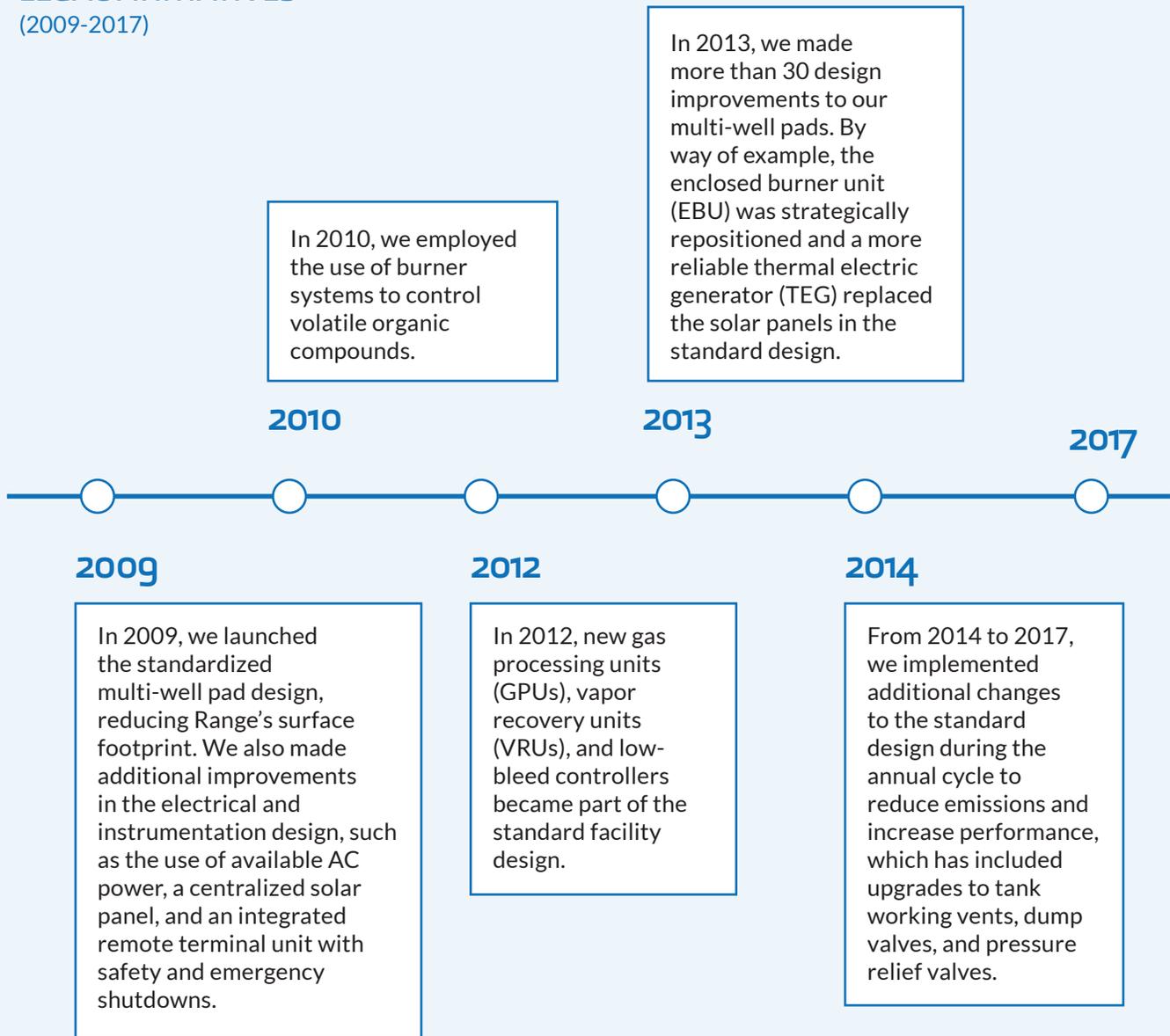
As a part of Range's commitment to responsibly and proactively reduce emissions, we developed and implemented several long-standing practices very early on in our business. For example, for more than a decade, Range's well site design has undergone an annual engineering review that carefully considers lessons learned from mechanical, electrical, and instrumental developments, and gathered production data. This annual assessment has enabled us to proactively enhance production equipment and refine the overall design of our well sites.

These design improvements have significantly reduced GHG emissions and potential pollutants. But most importantly, the decrease in emission rates have occurred while production increased significantly, resulting in a substantial decrease in GHG intensity. Overall production decreased slightly in 2020 after the sale of our shale assets in North Louisiana.

In Figure 8.11, we show our historical record of reducing our production emissions intensity during the past decade. To normalize the data, the graph is based on only

LEGACY INITIATIVES

(2009-2017)



emissions related to production and excludes gathering and boosting-related emissions, as we began tracking and reporting on those types of emissions in 2016. Between 2011 and 2017, we experienced a reduction of 54 percent in GHG production emissions intensity.

As indicated in *Figure 8.11* and discussed on the following pages, we continued our efforts to reduce emissions in the past two years, with an overall rate of GHG production emissions intensity decreasing by 84 percent

from 2011 to 2020. Despite these achievements, we are determined to continue to push for further reductions of our emissions intensity.

Recent Progress and Initiatives (2017-2020)

In the past few years, our absolute levels of GHG emissions decreased, while production has generally increased, further reducing our GHG emissions intensity. Between 2017 and 2020, we achieved a 66 percent

Figure 8.11

RANGE RESOURCES PRODUCTIONS EMISSIONS INTENSITY

Production (in mmcf), production emissions intensity mtCO₂e/mmcf

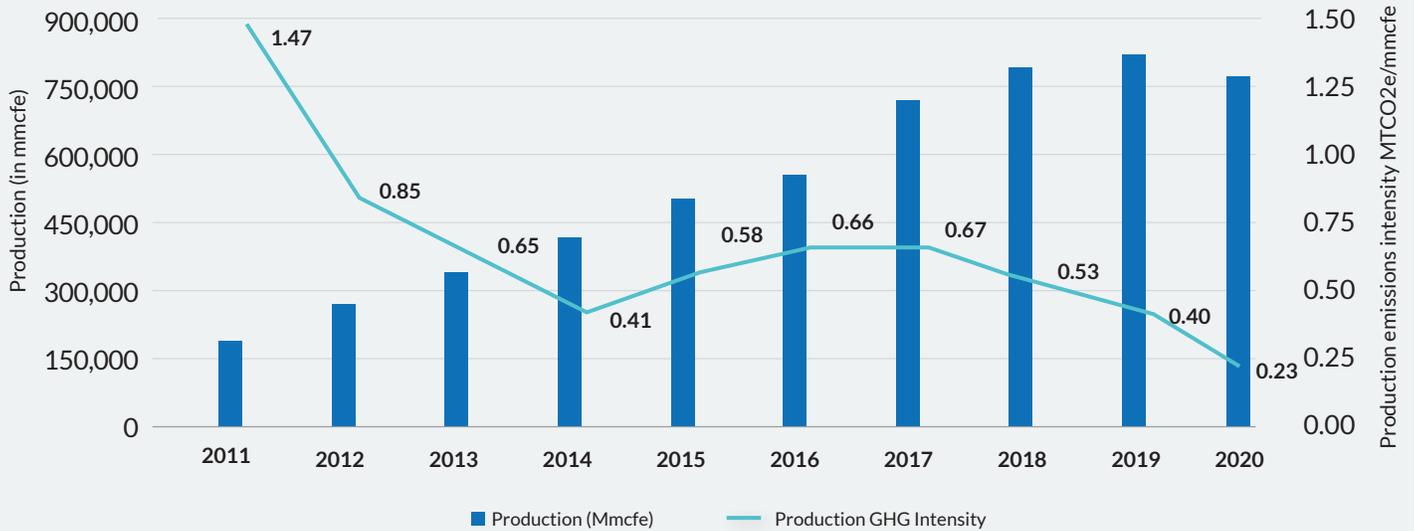
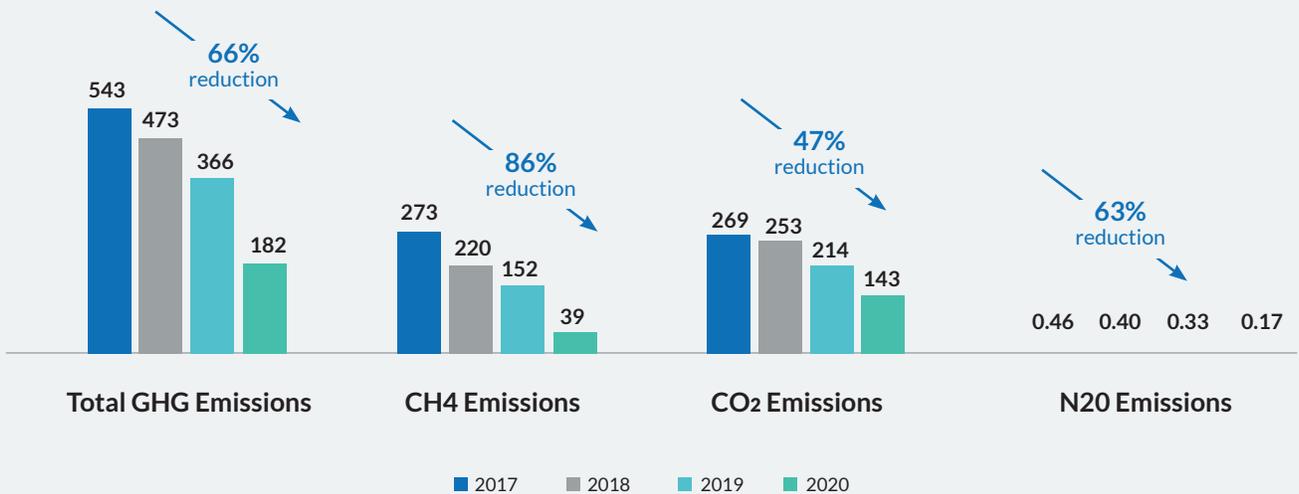


Figure 8.12

RANGE RESOURCES GREENHOUSE GAS EMISSIONS BY TYPE OF GHG

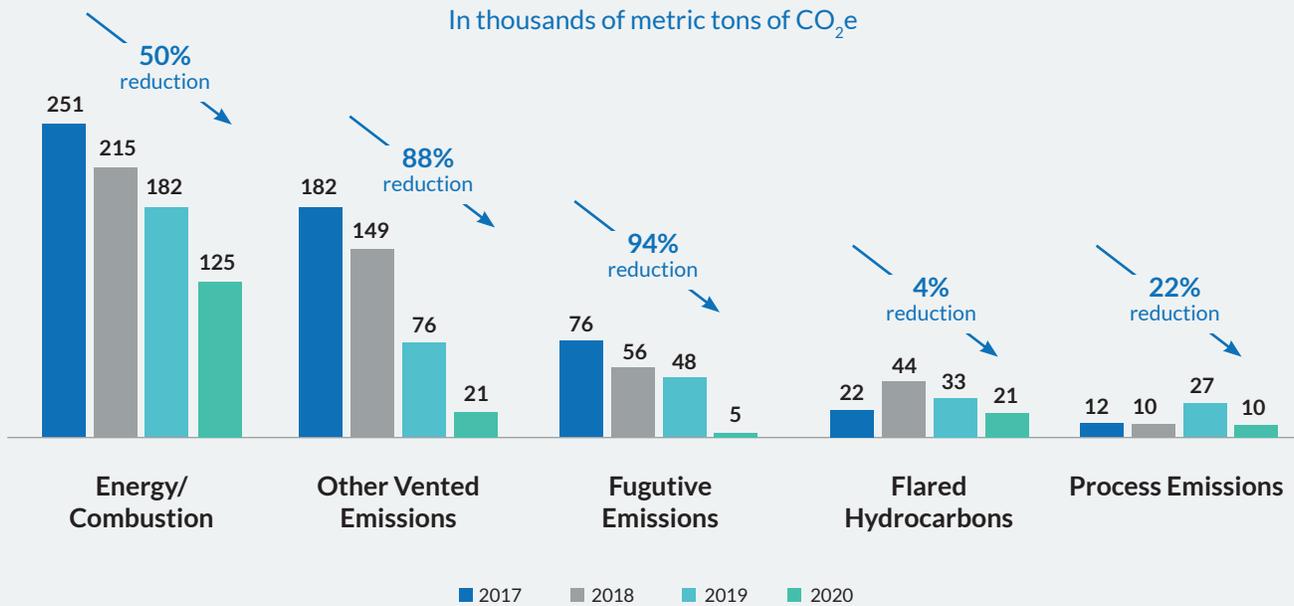
In thousands of metric tons CO₂e



In 2020, Range Resources completed the sales of our North Louisiana and conventional assets. To enable benchmarking of data in the future, the 2020 environmental data throughout the report excludes data from this asset. Prior year data has not been restated and reflects ownership of the asset.

Figure 8.13

RANGE RESOURCES GREENHOUSE GAS EMISSIONS BY SOURCE



In 2020, Range Resources completed the sales of our North Louisiana and conventional assets. To enable benchmarking of data in the future, the 2020 environmental data throughout the report excludes data from this asset. Prior year data has not been restated and reflects ownership of the asset.

decrease in our overall GHG emissions (including the emissions from boosting and gathering segment). During this period, we have achieved similar levels of reductions across all types of greenhouse gases, with a 47 percent reduction in direct carbon dioxide emissions and an 86 percent reduction in methane emissions. In 2020, our total GHG emissions stood at approximately 182,000 metric tons CO₂e, down from 543,000 metric tons CO₂e in 2017, 473,000 metric tons CO₂e in 2018, and 366,000 metric tons CO₂e in 2019 (Figure 8.12). This reduction is a result of selling our North Louisiana assets and our ongoing emission reduction efforts.

In our annual production facility design and process change review, we prioritize the largest sources of emissions, ensuring our emissions reductions investments and initiatives achieve the most impactful reductions for the associated costs. In the past four years, we paid significant attention to emissions stemming from energy combustion, other vented emissions, and fugitive emissions.

Between 2017 and 2020, emissions related to combustion decreased by 50 percent, in part due to our use of natural gas instead of diesel for several of our combustion sources and the sale of our North Louisiana assets. Vented

emissions also dropped by 88 percent between 2017 and 2020, primarily as a result of our installation of plunger lift systems, our zero emissions flowback initiative, and the sale of our North Louisiana assets (Figure 8.13).

In addition to design and process changes that reduce our emissions significantly, we regularly assess opportunities for additional reductions. One example of these efforts is our investment in the use of compressed natural gas (CNG) in our Pennsylvania based vehicles.

In 2020, we increased the use of CNG gallons used as a percentage of the total gallons used by our fleet. Increasing the use of CNG within our Pennsylvania based vehicles is just one example of Range's commitment to constantly looking for increased efficiencies and opportunities to reduce emissions (Figure 8.14).

As previously mentioned, our overall emissions intensity (including emissions from gathering and boosting) improved by a larger percentage than our absolute emissions, as our production increased over this timeframe. Our GHG emissions intensity was cut by 69 percent from 2017 to 2020, while our methane emissions intensity was reduced by 86 percent during the same period (Figure 8.15).

Figure 8.14

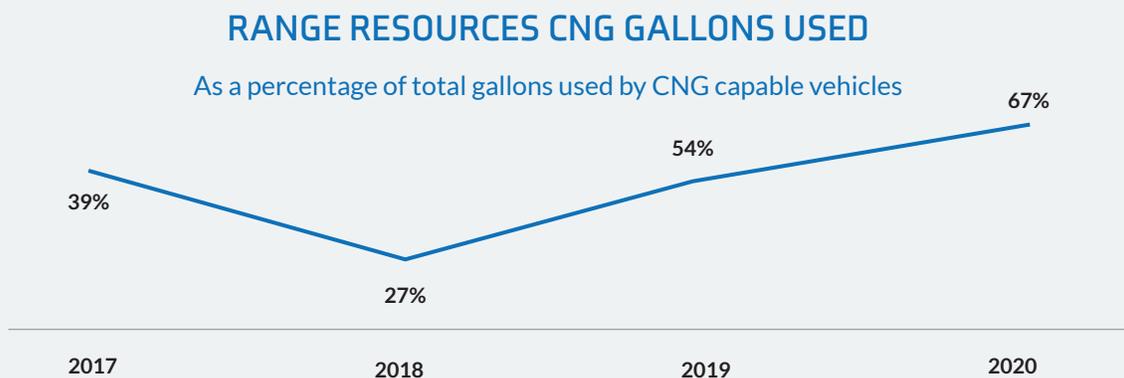
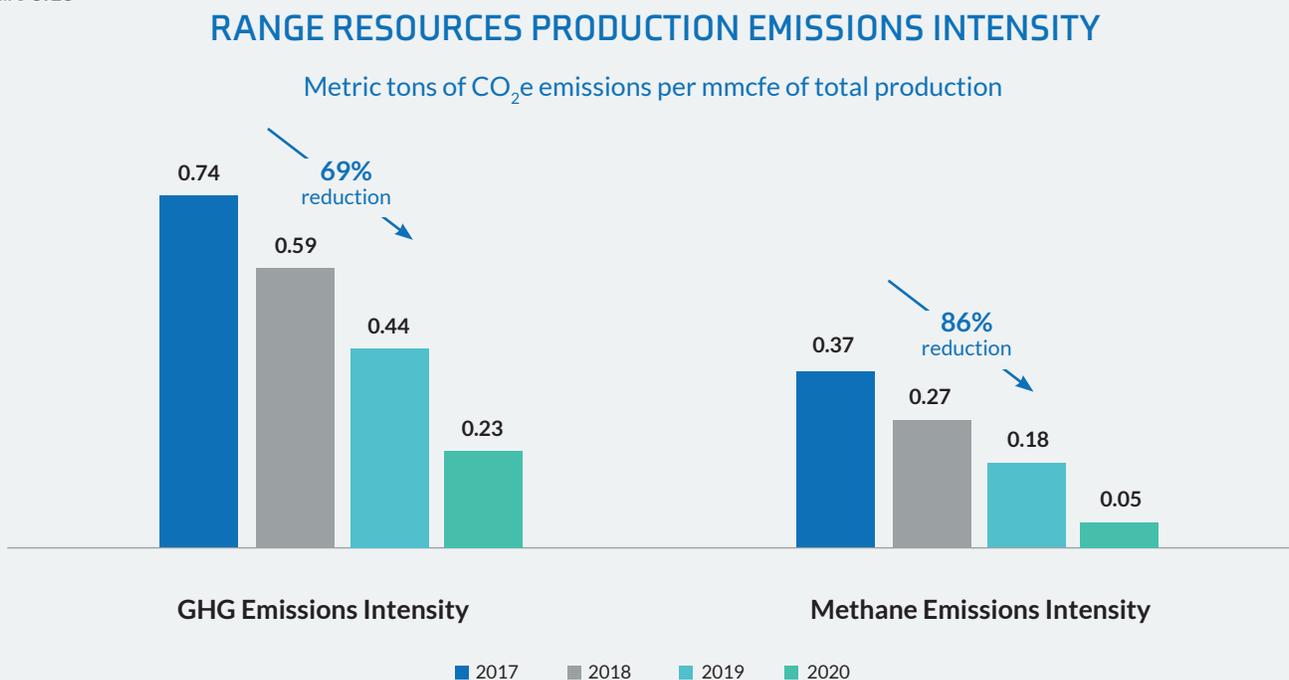


Figure 8.15



In 2020, Range Resources completed the sales of our North Louisiana and conventional assets. To enable benchmarking of data in the future, the 2020 environmental data throughout the report excludes data from this asset. Prior year data has not been restated and reflects ownership of the asset.

ELECTRIC FRAC FLEET



Many of our emissions reduction initiatives include on-site combustion activities, which have a direct impact on our energy use during operations. For example, our continued initiative to replace diesel with natural gas throughout our operations has resulted in significant energy efficiencies in addition to emissions reductions. Range pioneered the deployment of this kind of technology in the Appalachian Basin, becoming one of the first companies to partner with U.S. Well Services for an electric frac fleet. Utilizing cutting-edge Clean Fleet® technology, the fleet is powered by natural gas and has its own turbine generators on the well site.

Independent, [third-party studies](#) show that Clean Fleet® technology is proven to successfully reduce emissions by 99 percent, dramatically decrease sound pollution, and generate operational cost savings upwards of 90 percent of fuel costs.¹ Not only will our electric frac fleet improve capital efficiencies, but it will operate in a cleaner and quieter manner, an important consideration when we consider our various stakeholders. In recent years, we have increased the use of natural gas as a fuel source, in conjunction with dual fuel and electric powered fracturing operations, to a total natural gas fracturing fuel volume of 680 Mmcf or Mmbtu in 2020. This represents a 140 percent increase compared to the amount of natural gas used as a fuel source in 2019.

Measuring methane intensity as the volume of methane emissions as a percentage of the volume of total gas produced, in 2020, our estimated methane intensity was 0.012 percent of production, down from 0.04 percent of production in 2019, 0.06 percent of production in 2018, and 0.09 percent of production in 2017.

Our most recent initiatives are focused on new technologies and other emission reduction initiatives,

primarily addressing emissions associated with flaring, venting, stationary engines, liquid unloading, tanks, heaters, reboilers, and completion engines. Our top emission reduction initiatives over the past two years include:

- **Plunger lift installations in wells in the northcentral Pennsylvania region.** This initiative yielded a 95 percent reduction in associated methane emissions by the end of 2020. The reduction in venting is also expected to increase revenue as we sell the gas that would have otherwise been emitted to the atmosphere.
- **Zero emission flowback turn-on procedure.** Before actual production, during the flowback phase, the well produces a mixture of water, sand, condensate, and natural gas. During this phase, our goal is to clean the well bore and manage the flowback fluid while keeping the well open and producing. The zero-emissions flowback turn-on procedure eliminates the need to vent hydrocarbons to flowback tanks early in the flowback process and reduced associated emissions by 97 percent by the end of 2020.
- **Electric motor-driven vapor-recovery unit compressor.** This technology replaces small natural gas-fired engines with electric motors, significantly reducing pollutant emissions (CO) and direct GHG emissions.
- **Vapor recovery tower with white tanks.** The adoption of this technology reduces storage tank and condensate loading emissions, as well as conventional pollutant emissions (primarily VOC).

Ongoing Efforts and Future Strategy

We are committed to advancing several implementation changes and new technology adoptions, which will further improve our performance.

- **LDAR Surveys.** 2020 marked the start of our increased LDAR (Leak Detection And Repair) survey frequency. In previous years, surveys were conducted twice per year (semi-annual). 2020's data reflects the results of the doubled survey effort. This increase to a quarterly frequency reduced fugitive emissions reported in 2020 by roughly two-thirds as compared to 2019 levels. Also a direct result of the increased survey frequency, we observed a decrease in the component leak ratio as compared to the normalized leak ratio seen in 2019 (Figure 8.16). The total components surveyed has been utilized in the metric to more accurately reflect the results of the

Figure 8.16

Year	Total Wells	Total Components Reported *	Survey Frequency	Total Components Surveyed	Total Leaks Identified	Component Leak Ratio **
2017	1,251	556,535	Semi-Annual	1,113,070	698	0.00063
2018	1,315	594,437	Semi-Annual	1,188,874	610	0.00051
2019	1,364	638,690	Semi-Annual	1,275,292	702	0.00055
2020	1,488	685,596	Quarterly	2,742,385	923	0.00034

* Derived from PA OGRE report

** Component Leak Ratio is the product of Total Leaks Identified divided by Total Components Surveyed

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LDAR surveys and the resultant leak ratio. Surveys are conducted by trained Range Environmental Compliance staff in cooperation with Range Operations staff to ensure that any observed leaks are remediated quickly and effectively.

■ **Software Investments in Environmental Compliance.**

As a result of our ongoing investments in user-friendly software, our EC Department has increasingly used app-driven forms to allow for simplified data entry, reduced time spent on paper documentation, and the creation of on-demand reports through our environmental software. A dashboard has been developed to incorporate environmental statistics for easy access to real time data.

■ **Technology Investments.** Annually, we incorporate planned investments in technologies into our capital budgeting process, which will help us further reduce our direct emissions, including the following:

- Electric fracturing equipment;
- High-efficiency burners on heated flash separator and dehydration reboiler;
- Dehydration electric glycol pump;
- Diesel fuel additives to increase efficiency and reduce emissions.

- **Carbon Offsets.** Carbon offsets are a key part of our net zero Scope 1 and Scope 2 GHG emissions by 2025 goal. Our carbon offset strategy has several components focused on reforestation projects on Range-owned lands and developing forest management plans to increase the growth and diversity of native trees and removal of invasive species. Range is also working on expanding our opportunities for additional carbon offsets and we look forward to communicating our efforts in this area once further developed.

- **Expanded Emissions Measurement.** One of our longer-term emission reduction strategies focuses on improved emissions measurement methods. We recently entered into a pilot program with Project Canary, where we are utilizing the Canary X continuous monitoring technology. In 2021, we also committed to participate in the TrustWell™ certification process, which will aim to change to certify our production as responsibly sourced natural gas (RSG).

Figure 8.17

	2020	2019	2018	2017
Volume of Hydrocarbon Flared in PA (mmcf)	277.53	253.64	391.40	231.05
Volume of Hydrocarbon Flared in North LA (mmcf)	-	82.82	123.68	15.14
Total Quantity of Hydrocarbon Gas Flared (mmcf)	277.53	336.46	515.08	246.19
Range GHG Emissions due to Flaring (MT CO₂e)	20,863	33,054	43,765	21,842
Contribution to Overall GHG Emissions	11%	9%	9%	4%

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Minimizing Flaring

Range is committed to minimizing flaring. Minimal operational flaring is necessary under certain conditions in almost all oil and gas development to maintain a safe work environment. The emissions from this activity must be reported under regulatory requirements. When flaring is required, we deploy efficient combustion technologies to ensure minimal flaring.

Range is proud to have endorsed the World Bank's "[Zero Routine Flaring by 2030](#)" initiative, becoming one of the first natural gas producers to join. This initiative closely aligns with our own commitment to environmental stewardship of continuing to reduce GHG emissions intensity.

Range continues to report emissions from flaring in accordance with federal regulatory definitions, as seen in figure 8.17, which has been our approach since we launched our first Corporate Sustainability Report. **The AXPC definition of flaring (flaring of wellhead gas from the primary separator at assets) has been used for alternative calculations by our industry. Under those circumstances, Range has zero emissions flared from hydrocarbons.** For more information see page 82 in the Appendix.

Range uses zero emission flowback turn-on procedures. This is achieved through a closed-loop system that utilizes existing permanent production facilities and temporary flowback equipment. This process allows us to flow volumes directly to an existing pipeline, eliminating the need for flaring during this critical phase.

While drilling a typical oil or gas well, a minimal amount of hydrocarbons from geologic formations may need to be safely combusted on site. Range utilizes high-efficiency flaring technology which functions as a safety and control device and is used to combust unrecovered hydrocarbon emissions.

We continue to make progress on reducing emissions from flaring. Several of the initiatives discussed previously specifically contribute to the reductions of flaring activity, including the following initiatives:

- Zero emissions flowback turn-on procedure eliminates the need to vent hydrocarbons to flowback tanks early in the flowback process and reduced associated emissions by 97 percent by the end of 2020.
- Vapor recovery units capture vapors within production facilities and reroute them to sales lines, greatly reducing the volumes needed to be combusted on site.
- The use of electric pumps on glycol dehydrators as part of our standard design, to reduce emissions that would be required to be combusted (flared).
- Heated flash separators coupled with vapor recovery equipment are used on condensate-producing sites during flowback operations to reduce the need for flaring.

Figure 8.17 shows the total quantity of hydrocarbons flared and their associated emissions from 2017 to 2020. The emissions from flaring increased with higher production until the initiatives were implemented in 2019. 11 percent of our GHG emissions are due to flaring, a slight increase compared to 9 percent last year. This is a result of a slight increase in the volume of hydrocarbon flared in Pennsylvania (a 9 percent increase), but primarily due to the significant reductions we saw this year from our other sources of GHG emissions. This reflects many of the emission reduction initiatives previously mentioned. Both numbers used in these calculations are also impacted by the sale of Range's North Louisiana-based assets.

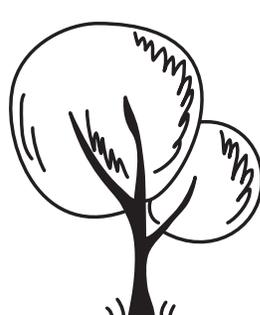


WASHINGTON COUNTY REFORESTATION PROJECT



In the Spring of 2020, Range initiated a 22.2-acre reforestation project in Washington County, Pennsylvania. We developed a Forest Management Plan, which was prepared by our professional forestry partner and approved by the Pennsylvania Department of Conservation and Natural Resources (DCNR). After fencing off the area with an eight-foot agricultural style fence to protect the seedlings from deer, 5,000 seedlings of more than a dozen tree species were planted. A small tube was also staked around each seedling to protect it from rodent damage and herbicide overspray.

We view these types of projects as mutually beneficial. Not only do reforestation projects help us achieve our target of net-zero in the years to come, but they also enable us to maintain positive relationships with our communities and preserve the ecosystems around us.



9. ENVIRONMENTAL STEWARDSHIP



Section Highlights



Total number of spills \geq 1 bbl reduced by **92%** compared to 2017



Approximately **60%** of total water used for operations was reuse water



Recycled close to **100%** of the flowback and produced water from our operations

A strong commitment to environmental protection, stewardship, and conservation is part of our culture. We constantly strive to demonstrate our dedication to these values and the continuous improvement of our performance. We are proud of our year-over-year advancements and take seriously our responsibility to be good stewards of the environment and communities in which we operate.

Consistent with our Environmental Policy, our environmental goals, values, and initiatives are integrated into our planning and operational procedures. These factors directly influence decisions and are incorporated into Range's overall business strategy. Our Environmental Management System provides the framework for a robust set of procedures and processes, to maintain compliance with applicable laws and protect the environment.

To help achieve these goals, Range employs a staff of dedicated and diverse Environmental Compliance professionals. These employees specialize in various disciplines such as air, waste, and surface activities, and are charged with oversight of the Company's environmental objectives and performance tracking. These employees report up to the Board of Directors through the General Counsel and serve as a support function of the Operations teams.

Staff Training and Qualifications

We understand the importance of a trained and experienced team. Our Environmental Compliance staff possess experience gained from years of service at regulatory agencies, service providers, and environmental consulting firms. They seek and maintain professional accreditations, regularly participate in relevant and meaningful learning opportunities, and contribute to industry-driven committees and workgroups. Also, as part of their duties, our Compliance staff provides training to the Operations teams that we support through monthly and quarterly Safety & Environmental Reviews. These sessions provide updates on performance, corrective action reviews, and various types of awareness and preparedness training.

Our Environmental Compliance staff maintain the following certifications and trainings:

- Certified Professional in Erosion and Sediment Control (CPESC)
- Certified Erosion, Sediment and Stormwater Inspector (CESSWI)
- Hazardous Waste Operations and Emergency Response (HAZWOPER)

- Radiation Safety Officer (RSO)
- DOT Hazardous Materials Management
- Resource Conservation and Recovery Act (RCRA)
- Optical Gas Imaging

Biodiversity and Ecosystems

Range is a committed steward of the environment and works to minimize our impact on the land in which we operate. Improvements in horizontal drilling technologies continue to allow us to access large volumes of natural gas with fewer wells and with less surface land disturbance. We also remain focused on conducting our development activities on existing pads, where possible, resulting in reduced surface disruption.

Our program begins with the incorporation of applicable state and regulatory requirements to identify biodiversity and ecosystem risks in our operations, and work alongside relevant agencies to develop action plans and take avoidance steps when necessary. Range's Civil & Environmental Engineering Department and Environmental Compliance Department are responsible for the oversight and management of biodiversity conservation and land impact assessment.

Biodiversity Risk Assessments

The evaluation process for a new proposed well site starts with a review of relevant habitat tools and resources. Through this review, as well as any subsequent permitting processes, we determine if our proposed development activities will occur near the habitats of any rare, endangered, or otherwise protected flora, fauna, or ecosystems. If such habitats are identified, we assess potential impacts and consult with the applicable agencies to develop any necessary action plans for avoidance measures or mitigation plans.

Range's current operating areas do not coincide with any Critical Habitats or areas currently recognized as Globally or Internationally Important Areas of High Biodiversity.¹ We will continue to assess our areas of operation for overlap with these areas of High Biodiversity and would evaluate an appropriate offset program if unavoidable impacts were expected.

Local Strategy

As part of our commitment to local biodiversity conservation, we have developed a strategy to minimize and mitigate our operational footprint.

- **Avoid:** In the early planning stages of our projects, we evaluate potential impacts and make appropriate schedule and plan detail considerations to put avoidance measures in place.
- **Minimize:** To the extent that some impacts cannot be avoided, we take steps to minimize impact, such as: adjusting operations to minimize seasonal impacts to flora and fauna, the implementation of noise reduction measures, the use of erosion control and stormwater best management practices, and the limitation of the duration of earth disturbance.
- **Restore:** When surface land disturbance occurs, we work diligently to restore the area promptly. Upon the final decommissioning of our well sites, we are committed to the removal of equipment and full reclamation of the work areas. Whether at an interim stage or upon final restoration, achieving permanent stabilization in the form of revegetation is our ultimate goal. We coordinate with our landowner partners to achieve these goals and seek to accommodate their needs where possible. We also seek to plant beneficial native and pollinator species whenever possible.

THE SPOTTED LANTERNFLY

The spotted lanternfly is an invasive insect native to Asia and first detected in North America in 2014. It has been found in 34 counties across Pennsylvania as well as in neighboring states. The Pennsylvania Department of Agriculture has issued a quarantine for counties where spotted lanternfly populations have been confirmed, and protective measures have been mandated to help control the spread of the species. To do its part, Range's Environmental Compliance Department has developed and implemented a Spotted Lanternfly Environmental Alert, which includes training on identification, inspections, mitigation, and reporting requirements.



¹Those Globally or Internationally Important Areas of "High Biodiversity" as recognized by the U.S. Fish and Wildlife Service, World Heritage Sites and Ramsar Wetlands.

Conservation

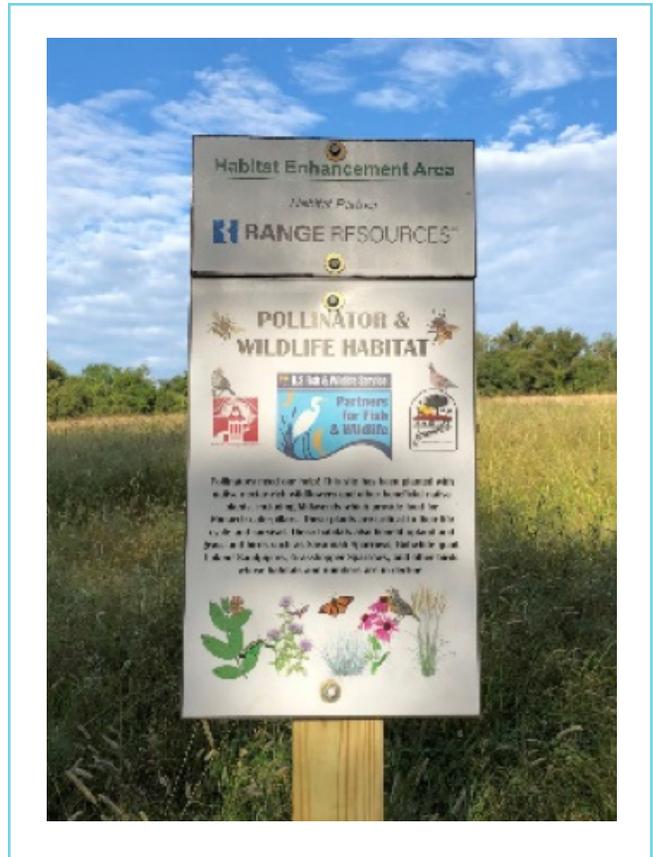
Range is proud to support a number of community-based partnerships focused on conservation, which remains a priority for the Company. These partnerships focus on protecting and restoring natural habitats of local wildlife in and around the regions where we operate.

Additionally, Range continues to partner with participating landowners in the form of our Habitat Enhancement Program. Dating back to our first habitat partnership with the National Wild Turkey Federation in 2014, wherein 33 acres of restored area was converted to prime wildlife habitat, Range continues to fund and expand this important program. Through 2020, approximately 52 acres have been enrolled in Range's Habitat Enhancement Program. Typically, habitat enhancement is performed by the use of seed mixes that are beneficial to pollinator and upland species. Current cosponsors include the California University of Pennsylvania Fish and Wildlife Program and Pheasants Forever.

Air Quality & Other Emissions

Our emissions reduction strategy is not solely focused on greenhouse gas pollutants. Rather, our focus is inclusive of non-greenhouse gas pollutants, including volatile organic compounds (VOC), nitrogen oxides, particulate matter, and sulfur oxides. Strategies to reduce these other air pollutants, including the assessment of technologies and investments, are included in our annual design and process review.

Figure 9.1 illustrates the changes in non-greenhouse gas pollutants and the effect of the design changes. The decrease in air pollutant emissions from 2019



to 2020 is partially a result of the sale of Range's North Louisiana-based assets, along with our strong commitment to strategies that help reduce these emissions year over year.

Our initiatives that result in emissions reductions of other air pollutants include the following:

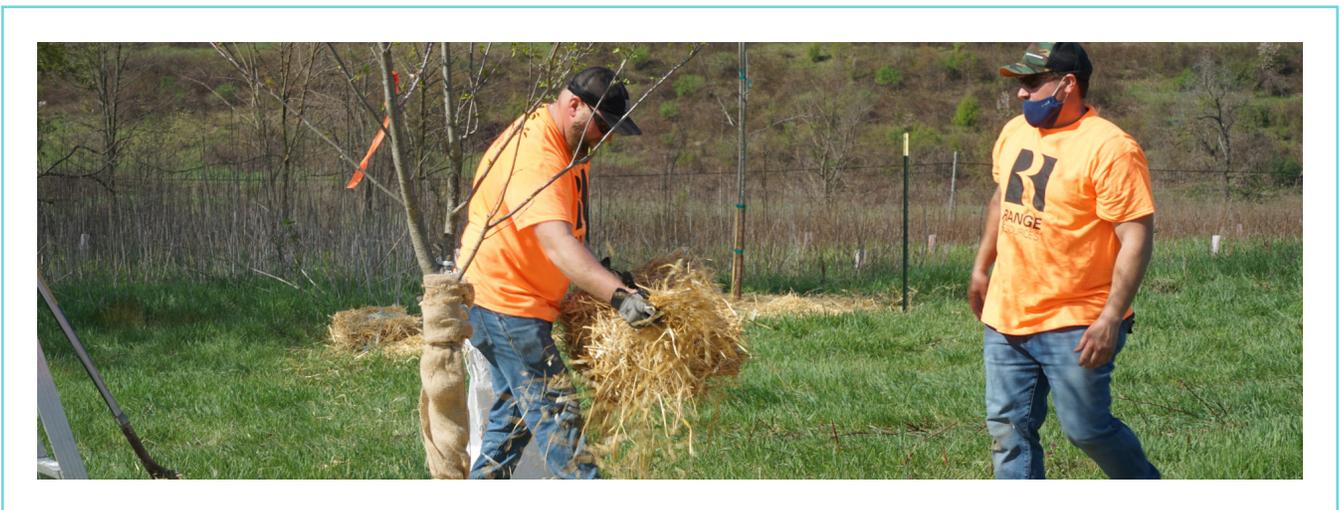


Figure 9.1

Air Pollutant Emissions	2020	2019	2018	2017
NOx (in metric tons)	1,335	3,327	3,733	4,177
VOC (in metric tons)	1,327	3,182	3,176	3,314
PM ₁₀ (metric tons)	36.8	65.6	68.9	73.0
SO _x (metric tons)	2.1	10.0	9.6	9.7
Net Production (Mmcfe)	776,786	833,354	803,408	733,231

In 2020, Range Resources completed the sales of our North Louisiana and conventional assets. To enable benchmarking of data in the future, the 2020 environmental data throughout the report excludes data from this asset. Prior year data has not been restated and reflects ownership of the asset.

TRANSPARENT AIR MONITORING REPORTS

In 2019, Range voluntarily launched an ambient air monitoring program in Washington County, Pennsylvania to provide timely data and information to the public. As part of our commitment to leading the industry in sustainable practices and public health transparency, we continue to monitor air quality at this site today.



Range collected and documented air quality data throughout all phases of development and operation of a Marcellus Shale well site near an elementary and high school campus.

We first published a report on our findings in 2019 which included independent, third-party analysis of the data collected. That report found there to be no air quality impacts of potential public health concern.

Similarly, we heard from residents near our Augustine well site in Pennsylvania through regular community outreach and voluntarily launched the ambient air monitoring program at this well site. All measurements are being collected using equipment and procedures in accordance with U.S. Environmental Protection Agency methods.

Six monitors were placed by third party consultants around the well site and collect the data which is sent to their certified lab for analysis. The latest data is made publicly available and can be found at www.rangeresources.com/air-monitoring.

- Use of Electric:
 - We use an electric-powered frac fleet when practicable.
 - We use electric-driven motor compressors in place of combustion-driven units.
 - We use electric glycol circulation pumps on dehydration units.
- We use a closed vent system on both condensate and produced water storage tanks at newer condensate producing sites to minimize VOC emissions.
- We install and use white-colored storage vessels at condensate producing sites to reduce VOC losses.
- As part of the drilling process, VOC emissions rates are relatively low and are combusted as required for safety by using a flare with a continuous pilot.

Spill Prevention

Industry-leading spill prevention measures are important to Range, and we take very seriously our commitment to protect the people and the land where we operate. By closely adhering to our Environmental Incident Response Compliance Plan, our ultimate goal is to minimize and eliminate the potential for environmental incidents. This plan outlines protocols to prevent and effectively respond to any potential incidents and includes an eight-component process.

As part of this compliance plan, designated operations groups across the organization are responsible for maintaining oversight of their activities. In the event that an accidental spill occurs, trained members of our in-house Environmental Compliance Department work with key operations groups to rapidly respond and coordinate spill management and remediation efforts, limiting any environmental damage or safety concerns to the extent possible.

8

Component Process

Our ultimate goal is to minimize and eliminate the potential for environmental incidents and closely adhere to our Environmental Incident Response Compliance Plan, which outlines strict protocols to prevent and effectively respond to incidents in the event they occur. This plan includes a rigorous eight-component process:



1. Awareness

All employees and contractors are expected to act in accordance with this Plan, which supports Range's philosophy to be "good stewards for our shareholders and the environment."



2. Recognition

Employees and contractors are expected to recognize environmental incidents.



3. Assessment

When employees or contractors cause, observe, witness, or become aware of situations involving real, potential, or alleged incidents, they must review the situation and make early assessments.



6. Remediation:

Consistent with Range's commitment to serving as a good steward of the environment, proper remediation of spills, leaks, or releases is required.



5. Reporting:

Every environmental incident, without exception, must be reported to the Environmental Compliance Department. The Environmental Compliance Department will make notification to external regulatory agencies as appropriate.



4. Immediate Response:

If an environmental incident has occurred, immediate response actions are necessary to reduce the real or potential impacts. Consistent with Range's contingency plans, such as PPC and SPCC, employees and contractors are expected to take standard initial steps following an incident.



7. Investigation:

Whether coordinated by the Environmental Compliance or Safety Department, all staff and contractors must communicate openly and participate actively to ensure that all relevant facts and details are captured by the process, and that corrective actions are established, as needed.



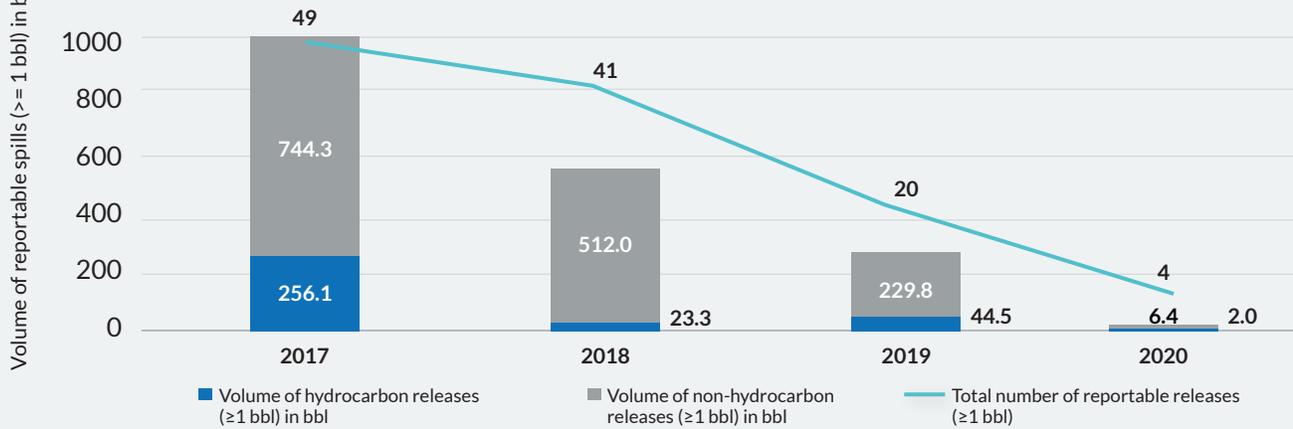
8. Analysis and Prevention:

On at least a monthly basis, the Environmental Compliance Department reviews statistics of Environmental Incidents to identify trends or recurring issues. Based on these findings, the Environmental Compliance Department may make recommendations to affected or involved departments.

Figure 9.2

RANGE RESOURCES VOLUME AND NUMBER OF REPORTABLE SPILLS

Volume of reportable spills (≥ 1 bbl) in bbl by type of spill and total number of reportable spills



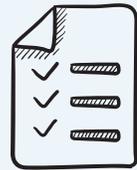
In 2020, Range Resources completed the sales of our North Louisiana and conventional assets. To enable benchmarking of data in the future, the 2020 environmental data throughout the report excludes data from this asset. Prior year data has not been restated and reflects ownership of the asset.

To satisfy regulatory requirements and minimize potential impact of any accidental spills, we incorporate industry leading practices and state-of-the-art technology. These processes and protocols include in part secondary containment, containment under refueling, thorough inspections of containment and facilities, and storage level guidelines. However, Range's commitment to spill prevention and containment goes above and beyond industry requirements. For example, in areas that have a higher potential for incidents, we analyze those locations and utilize extra containment practices. We also conduct additional well development pipeline inspections and install enhanced impoundment liner systems, among other practices.

When it comes to these incidents, timely and accurate data is of utmost importance. Range's stringent reporting requirements help ensure that we are immediately made aware of all incidents so that we can properly address and report them. Our process and the data that result from it help us develop reliable metrics and effective, ongoing enhancements to our prevention and response processes and protocols. In recent years, we have demonstrated improved performance in spill management, with three consecutive years of reductions in the total volume and the total number of spills greater than or equal to 1 bbl (Figure 9.2).

INVESTIGATIONS AND IMPROVEMENTS

Range acts swiftly and purposefully to correct and implement process changes when incidents occur. For example, during a routine inspection by Range staff in December 2020, flowback water was observed outside of an onsite tank. Though nearly all of the released water was captured by secondary containment, and only minor cleanup activities were necessary to remediate the impacted graveled area, Range performed a thorough investigation of the incident, which resulted in four improvements to prevent future occurrences:



- Flowback tank containment will be increased in size, specifically along the back berm to ensure that potential overflow or splash will remain in containment.
- High level tank alarm has been adjusted to allow for additional freeboard space to account for tank placement variability.
- Responsibility to conduct frequent equipment, tank, and containment inspections has been reviewed with vendors.
- Frequency of routine walk-arounds of the flowback tank area has been increased.

In 2020, the total volume of hydrocarbon and non-hydrocarbon releases greater than or equal to 1 bbl was 99 percent lower compared to 2017, while the total number of reportable releases greater than or equal to 1 bbl was 92 percent lower compared to 2017 levels (Figure 9.2). Our 2020 data reflects the sales of our North Louisiana and conventional assets and our overall commitment to improved performance in spill management.

Further to these initiatives, we are committed to continuous improvement and incorporating learning and new approaches in our processes and procedures to enhance spill management.

Waste Management

Responsible waste management is a sustainable practice at Range and we believe that waste management presents a significant opportunity to reduce cost and gain efficiencies in our operations. Through each part of our operating processes and across all our operating facilities, we manage, dispose, and characterize wastes in compliance with strenuous regulatory requirements.

Range's Environmental Compliance Department monitors waste management and reports our progress in waste reduction and reuse. Our management teams continually research methods to improve our reuse and reduction of wastes, specifically regarding synthetic liner materials and drill cuttings. Just recently, Range created an inter-departmental task force committed to the long-term study and implementation of the beneficial use of drill cuttings. A comprehensive study performed by the Pennsylvania Department of Environmental Protection in cooperation with other public and private organizations, determined that NORM and TENORM materials associated with the oil and gas Industry are well managed and do not present a risk to the public.¹ Range monitors and characterizes waste types for TENORM concentration and disposes them at appropriate permitted facilities. Once waste is taken to a third-party permitted facility, it is scanned prior to acceptance and disposal.

Additionally, we have developed processes and procedures for the reuse of drilling fluids. After analyzing drilling fluids, any fluids that are deemed to still be viable to develop future wells are reused. However, these fluids may not be able to be used right away. As a result, we

use our own storage facilities to safely store these fluids until they can be reused at a future location. Without these permitted facilities, these fluids would require disposal.

Finally, as part of our waste management program, we have developed internal procedures that cover monthly and annual reporting and auditing of landfills and treatment facilities and the evaluation of waste transporters. All facilities are audited prior to use and all audits are documented.

Water Management

For Range, our water use goal is simple: use only what we need and recycle and reuse to the fullest possible extent. Investments in various technologies and solutions have advanced the Company's water management program, enabling us to reduce our water consumption needs.

Range pioneered water recycling in the Marcellus shale in 2009 and reused nearly 100 percent of the water across our Pennsylvania operations. More recently, we began recycling other operators' water in Pennsylvania, helping to reduce overall fresh water needs and improve well costs. Today, Range is an industry leader in developing large-scale water recycling technologies and capabilities, and we implement a comprehensive water

RESPONSIBLY SOURCING WATER

Over 10 years ago, Range invested in a permanent waterline system in Pennsylvania. Spanning more than 34 miles, this waterline runs from the Ohio River to a series of nine water storage facilities. The system virtually eliminates the need for freshwater withdrawals from smaller streams, has eliminated more than 400,000 truck trips, and has supplied over 40 MMbbls of fresh water for development activities. The waterline system also has the potential to serve nearby operators, creating additional economic benefit to Range.

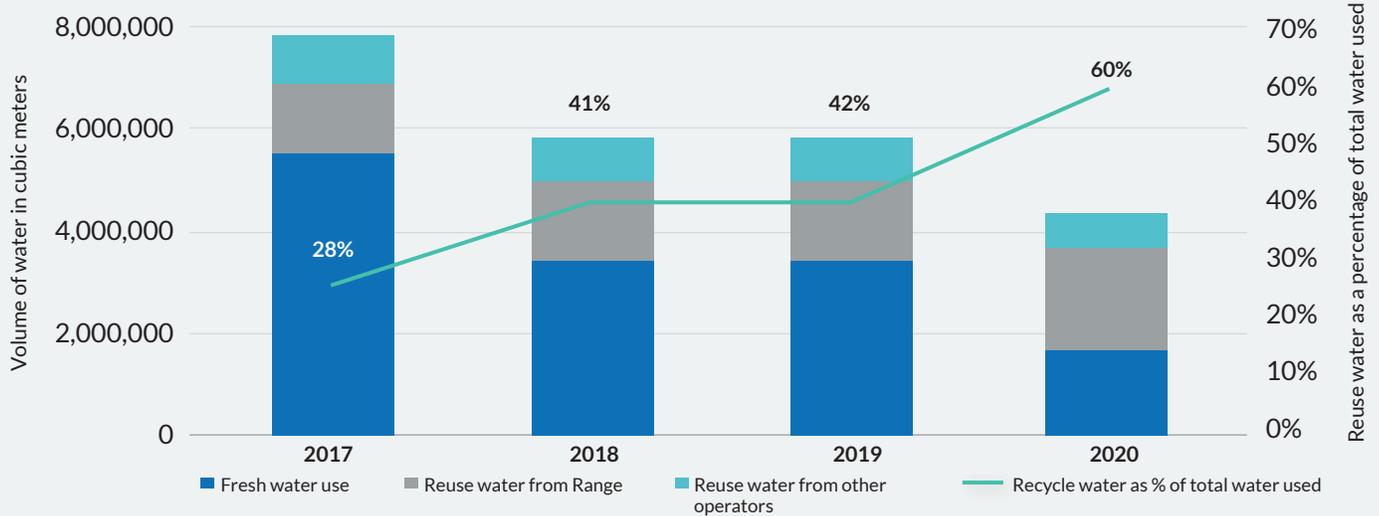


1. Radiation Protection Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM) Study by the Pennsylvania Department of Environmental Protection

Figure 9.3

RANGE RESOURCES FRESH WATER AND RECYCLED WATER USE

Total fresh water use and recycled water used from Range and other operators in m³



In 2020, Range Resources completed the sales of our North Louisiana and conventional assets. To enable benchmarking of data in the future, the 2020 environmental data throughout the report excludes data from this asset. Prior year data has not been restated and reflects ownership of the asset.

management plan that is strategically guided by best practices and applicable laws and regulations.

Range recycles water from other operators, significantly reducing our freshwater usage, and allowing us to recycle 148% of our produced water and flowback volume through our water sharing program. Range has saved about \$10 million per year since 2018, for a combined savings of \$32.6 million as a result of this program.

Importantly, for any fresh water that is required for our operations, it is responsibly sourced from multiple abundant, drought-tolerant sources that include public water utility companies, as well as the Ohio and Susquehanna rivers in Pennsylvania in compliance with state agencies and river basin regulatory commissions. None of our projects or operations are in water-scarce areas.

In 2020, 60 percent of the total water we used for our operations was recycled flowback and produced water from Range and other operators (Figure 9.3). In Pennsylvania, we recycled close to 100 percent of the 1,775,265 m³ of flowback and produced water from our operations.

Water Discharges

Range does not discharge any produced water, flowback, drilling fluids, or liquids of any kind. Our industry-leading reuse program allows us to recycle more than 99 percent of our produced water in Pennsylvania as well as water from other area operators. The remaining small portion that is not reused typically consists of drilling fluid residuals, tank bottoms, and other non-reusable substances; this material is solidified and sent to landfills.

Well Construction & Hydraulic Fracturing Best Practices

Hydraulic fracturing or “fracking” is a safe, proven technology that the natural gas and oil industry has been leveraging for over 70 years. Although often mischaracterized in the media, more than a million wells across the United States safely and efficiently utilize fracking technology. In order to stimulate oil and natural gas production from rock that otherwise will not produce hydrocarbons, the process involves pumping sand and water, along with a small percentage of additives, at a high pressure to create paper thin fractures in hydrocarbon-bearing rock formations. These small fractures are held open by sand and they create pathways for the natural gas to flow from the shale formation to the well.

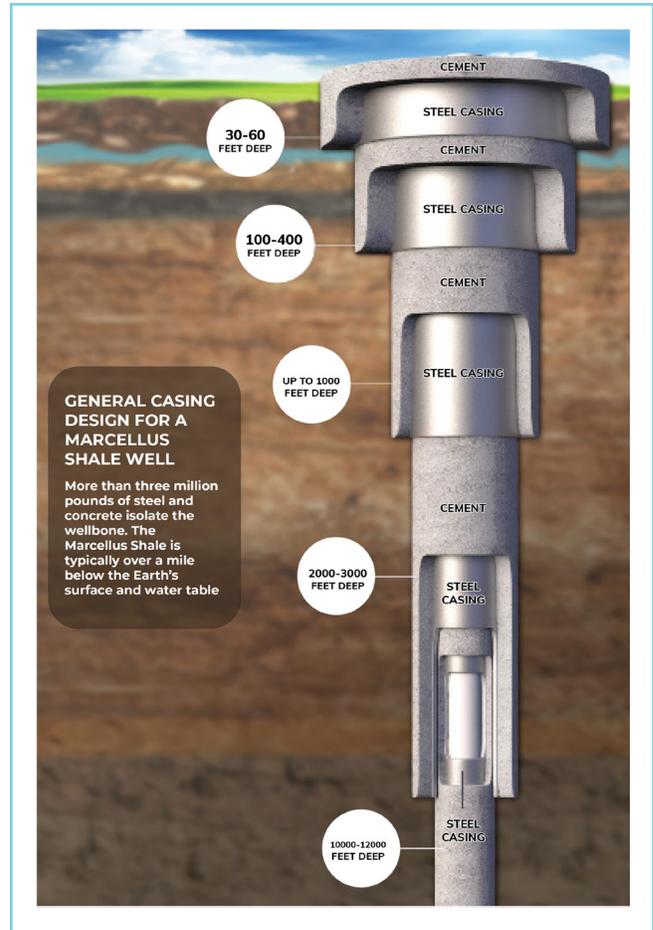
Well Integrity

Safety and sustainability are at the heart of our operations. Range designs, constructs, and operates our wells using innovative and advanced technology and industry practices in accordance with regulatory specifications and requirements.

Multiple layers of protective steel casing are inserted deep below the surface and cemented back to the surface to ensure optimum well integrity. Strict state regulations and industry standards govern the casing, cement specifications, and process.

The steel casings are specially designed, manufactured, and installed to provide long-term protection against certain rock strata elements that may corrode equipment during the drilling process. When necessary, additives or special cement blends may be used to help inhibit naturally occurring external forces, such as hydrogen sulfide or carbon dioxide, from causing corrosion on steel casings.

Once the cement has set, the wellbore is drilled from the bottom of the previously cemented steel casing to the next depth. This process is repeated using smaller diameter steel casings until the well has reached its horizontal target. To put this in perspective, more than three million pounds of steel and cement are utilized in a well that stretches almost two miles to isolate the wellbore with several layers of casing cemented in place. This is critical because it protects surrounding groundwater aquifers and promotes the safe production of oil and gas.



Water Protection

Water is a vital resource shared by all in the communities in which we operate, and Range is deeply committed to the protection of water sources. Our best practice approach is founded on protecting water throughout the lifecycle of development, from baseline pre-drill testing of water supplies to frequent wellbore integrity assessments. Our casing and cementing designs are developed in accordance with applicable regulations and industry standards.

Range tests water sources within a minimum (though often beyond) 2,500-foot radius of a well site prior to any operations taking place in Pennsylvania. An approved, third-party consultant and state certified laboratory conducts these tests, and the results are sent to the landowners, state regulatory agencies, and kept on file with Range. This data ensures that all stakeholders have access to more information about their water resources and baseline water quality before drilling takes place.



During operations, active monitoring and evaluation of well bore integrity also ensures that drilling and completion activity occurs in a safe, isolated environment that protects groundwater resources. Range utilizes several techniques in the Marcellus region specifically in advance of hydraulic fracturing to test well bore integrity. This process ensures the multiple layers of steel casing and cement system are fully secure and prevents any fluid or methane from escaping the wellbore.

Chemicals Used and Disclosed

Through the use of FracFocus, a national disclosure registry for oil and gas exploration founded by the Ground Water Protection Council and the Interstate Oil & Gas Compact Commission, Range is able to provide disclosure of every completed well's fracturing fluid. Range was the first in the industry to voluntarily disclose the composition of the fracturing fluid for each completed well on our website. We did so as part of our ongoing commitment to the core Company value

of transparency. For shale gas development, a typical fluid design is comprised of more than 99 percent water and sand, with a small proportion of common, highly diluted additives used to clean the wellbore and prevent bacterial growth and scaling in the well.

By using FracFocus, we provide regulators, landowners, and citizens an account of the highly diluted additives used at each well site, along with their classifications, volumes, dilution factors, and common, everyday purposes. Range does not use diesel fuels as defined by the EPA or BTEX in any of our hydraulic fracturing fluids. Despite the fact that fracturing additives are carefully managed and injected through multiple cemented strings of steel casing, Range takes the extra step of encouraging all vendors to utilize the most environmentally friendly additives whenever technically possible. We consistently work with scientists, government agencies, and contractors to constantly improve our processes, including the use of "green completions," food grade fluids, and biodegradable additives.

10. HUMAN CAPITAL MANAGEMENT

Section Highlights

12

Average of 12 hours of
talent development
training per employee



Formed
MERG and RENEW
employee resource groups for
multi-ethnic employees and
female employees, respectively



Annual
diversity & inclusion
training for all
employees

Our employees define us as a Company, they are the fabric of who we are. We have a deep commitment to creating the safest and most supportive workplace environment for our employees to thrive in. We look for every opportunity to live out our core values, including upholding the highest levels of transparency and integrity, in the work we do every day. Our success is directly tied to the contributions of our employees, and we rely on their ingenuity, dedication, and feedback to ensure we are creating every opportunity to be a best place to work.

With the support of the Company's Human Resources Department, the Senior Management Team regularly assesses our Human Capital Management efforts. This includes workforce engagement, employee benefits, diversity, equity and inclusion, training programs, and workforce non-retaliation. The Compensation Committee of the Board reviews salaries, cash bonuses, equity compensation, and employee benefits. Together, this structure provides Range with strong oversight of all Human Capital Management related matters.

Workforce Engagement

Range employees are the driving force behind everything we do. Every decision we make as a business is guided by performance, innovation, integrity, and transparency. Integrity is reflected by our employees on a daily basis, from principled business decision-making to community partnerships. Employee engagement and translating feedback from employees into actionable items allows us to constantly seek opportunities to further improve. Because Range believes an open-door approach leads to the greatest level of transparency, we offer numerous ways in which employees, managers, senior leadership, and our Human Resources Department can communicate and engage with each other.

Our dedication has resulted in several innovative programs, with formation of the Multi-Ethnic Employee Resource Group (MERG) being the latest example of this. Over the years, we have developed several initiatives and resources to support our employees' professional development and generate opportunities for growth, such as:

- Leadership Excellence and Development (LEAD) program
- Ladies in Leadership Luncheons

- Manager Chat sessions
- Employee Focus Groups
- Internal and External Trainings
- Range Energy Network of Women (RENEW) Resource Group
- All Hands Meetings hosted by Senior Management

Employee Benefits

To ensure equitable compensation for all employees in every role at the Company, Range bases our compensation philosophy on industry- and position-driven data for market competitiveness. Individual pay decisions throughout the year undergo a comprehensive review and approval process. Managers are empowered to consider market data, performance, contribution, and expertise, among other factors, in their decision process. Outlier and trend analysis is performed to ensure fairness enterprise-wide.

In addition, Range offers a number of employee benefits, including some created as a direct result of employee feedback and surveys:

- **Insurance:** Employees of Range Resources are eligible to enroll in health insurance and life insurance through their employment with the Company.
- **Paid Vacation:** All full-time employees receive a minimum of three weeks' vacation.
- **Stock Compensation and 401(k) Match:** All full-time employees at Range are awarded stock in the Company as part of their total compensation. As a result, our employees are stockholders in our Company, creating an environment for everyone to think like a business owner and to participate in Range's long-term success. This compensation is in addition to our 401(k) match program, enabling our employees to save toward financial security during retirement.
- **Paid FMLA:** Range offers two weeks of paid FMLA leave for employees per year to care for a spouse, child, or parent, maternity/paternity leave, and adoption/foster care.¹
- **Grandparent's Leave:** Range's grandparents receive paid time off up to three days per year, per event

RANGE ENERGY NETWORK OF WOMEN (RENEW)

A culture of teamwork, inclusion and shared value has always been a key goal for Range. Efforts to evaluate where and how to improve our culture are always underway. After receiving feedback through our employee focus group sessions, Range took a big step forward in 2020 by creating a women's resource group – RENEW. RENEW currently boasts 80 members across our company's female employees.



"The feedback we received during focus group meetings resulted in a number of cultural enhancements, including the interest in having a group focused on women's issues."

- Kara Peterson, Divisional HR Director for Pennsylvania

Since its inception, RENEW has hosted ice breaker exercises for members to get to know each other, developmental workshops and pop-up discussions hosted by RENEW members. In 2020, RENEW hosted Leanne Meyer of Carnegie Mellon University's Accelerate Leadership Center for a developmental workshop devoted to "Your Personal Presence & Power". The group also hosted a panel discussion with Range's Board of Directors and holiday happy hours. During an extraordinary year, the moments created by RENEW have helped Range's female employees gain a better sense of connection and inclusivity from Texas to Pennsylvania.

A few heartfelt moments from members were shared during the last meeting of 2020 that expressed happiness on the personal connections made over the year.



"I love how easy it is to get all of the women in our company together. It's a great way to share stories or thoughts whether it's about work or personal life. It's always exciting on the calls to get to know everyone on a personal level without business involved."

- Brittany Thomas, Operations Accountant II PA

To be eligible for FMLA leave, an employee must have worked for Range for at least 1 year and for at least 1,250 hours during the previous 12 months.



(separate from vacation) to a maximum of two events in a rolling 12-month period. This must be used within 60 days of a grandchild's birth.

- **Adoption Assistance:** Range will provide adoption assistance reimbursement on expenses incurred, up to a max of \$10,000 per adoption and a \$20,000 lifetime maximum to employees with 12 months tenure.
- **Cariloop:** This is a Range-paid caregiver support benefit that gives employees a resource to assist with elder and childcare.
- **Paid Volunteer Days:** Full-Time Employees receive two paid days per year to pursue volunteer opportunities in the communities where we live and operate.
- **Year-Round Flex Schedule:** Employees have the option to work a year-round 9/80 or 4/36 work schedule.

- **Spot Bonus:** Our employees, other than directors and above, are eligible for spot bonuses awards recognizing exemplary performance and contributions.
- **Tuition Assistance:** Range will reimburse employees up to \$5,250 per calendar year for tuition and book costs.

In addition to the above benefits, Range provided additional benefits in response to the COVID-19 pandemic. Copays were suspended for any telemedicine visits. Access to mental health resources were expanded and highlighted within employee communication platforms. Additionally, loan repayment suspensions were implemented within the Company's 401(k) plan.

Diversity, Equity, and Inclusion

A workforce comprised of diverse backgrounds and experiences is something we value at Range. We embrace the unique contributions made by our employees from all walks of life and without regard to gender, race, ethnicity, or sexual orientation.

Our Approach to Diversity, Equity, and Inclusion

We strongly believe in supporting all of our employees and their families while promoting a culture of inclusion across our business. We are committed to being a company where all our employees have access to career-advancing training, mentoring and development so every employee has a real opportunity to advance - whatever their race, gender or sexual orientation. As we look forward to our future hires, we see an opportunity to improve our workforce diversity. In some ways, we recognize we may be limited as our assets are concentrated and our line of work requires specific skill sets, qualifications and relative workforce experience. However, we are committed to recruiting from a wider, more diverse population of highly qualified candidates that can enhance our culture and diversity.

Range takes a dual approach to Diversity, Equity, and Inclusion with management actively participating in these efforts while also fostering the development of employee resource groups and other “grassroot” efforts led by employees. Range’s Employee Resource Groups are led by our employees to foster diversity, inclusion, and greater awareness of our colleagues’ viewpoints and experiences. The combination of management-led and employee-driven initiatives enable us to promote employee dialogue, education, and improved understanding of one another. We are committed to

Figure 10.1

Gender Breakdown of Employees by Role			
	Mgmt ¹	Technical ²	All Other
Male	82%	63%	63%
Female	18%	37%	37%

Figure 10.2

Gender Breakdown of Employees by Field or Office		
	Field	Office
Male	97%	53%
Female	3%	47%

Data represents full-time employees as of June 15th, 2021.

¹ Management defined as Supervisor, Manager, Director, Officer, Senior Officer job categories and aligns with the SASB definition for Managers

² Technical defined as IT Professional Staff, Engineers, and Engineering Technicians and aligns with the SASB definition for Technical Staff.

FINALIST FOR THE 2020 OBSERVER-REPORTER'S BEST PLACE TO WORK

A talented workforce is the bedrock upon which Range’s success is built, and that success is only ensured if we are able to attract and retain top talent. We prioritize cultivating a workplace where our people can thrive, and we’re proud to be recognized as a top workplace, having been named a finalist for the Observer-Reporter’s Best Place to Work for the second consecutive year.



enhancing an inclusive culture and we have empowered our employees to be leaders and help guide the Company on these topics. We recognize DE&I is a continuous evolution, and we look forward to growing our efforts in this area.

Backed by our commitment to DE&I, we seek to continue to foster a culture of inclusiveness, and to that end, all employees participate in annual diversity and inclusion training. Additionally, managers attend annual inclusion training based on a separate curriculum specifically for individuals with supervisory responsibilities.

These programs and procedures are put into practice to bring awareness to our DE&I program. Our employee focus groups, employee resource groups, and manager chats are just some examples of how we can further integrate DE&I into our culture. These groups remain employee-driven efforts that serve as a way for



Randi Robertson, a Drilling Engineer who joined Range in 2017, is currently responsible for the engineering support on two of Range's rigs. On an average workday, Randi is preplanning logistics and tech support for drilling operations. With a role that requires both office time and time on location, Randi interacts with numerous teams within Range and has come to value the supportive and open culture:

“The open communication and amount that we get to see our Senior Management is unique. It feels everyone is on the same team and it’s not as siloed as other companies.”

This “open-door” culture is a pillar of Range’s values, which encourages open conversations between employees and supervisors. These transparent and open conversations extend beyond career goals and development opportunities to the emphasis on an inclusive workplace:

“Based solely on appearances, some people may be surprised to learn of my job title and duties. However, everyone I have had the pleasure of working with at Range has made me feel like a valuable team member. The fact that I am the only female engineer in the Drilling Department gives me a unique perspective and I would like to be a role model for other young women pursuing careers in historically male-dominated industries.”

employees to support, network and connect with one another while focusing on achieving important goals and initiatives, both inside the Company as well as in the communities where we operate.

Diversity Levels

Diversity, equity, and inclusion is part of the culture at Range and is only further engrained into our culture with the addition of new programs and initiatives. The goal of our efforts is to foster an inclusive environment that leverages our employees’ diversity of background, thought, and skill to operate more efficiently. We

believe an inclusive and equitable environment brings out the best in our employees and teams, which ultimately drives our success.

To this end, we are proud of our achievements on diversity, equity, and inclusion to date, and we are excited about the opportunity to evolve in this regard. Gender diversity remains an area of focus for Range, and we continue to make progress on representation across employee roles (Figure 10.1).

Range has worked hard to ensure that our diversity, equity, and inclusion priorities are represented through the make-up of our workforce, including the make-up of

Figure 10.3

Ethnic/Racial Background Breakdown of Employees by Role			
	Mgmt ¹	Technical ²	All Other
White	93%	86%	91%
Minority	7%	14%	9%

Figure 10.4

Age Breakdown of Employees by Role			
	Officers	Managers	All Other
Age Under 30	0%	1%	12%
Age 30 - 50	39%	72%	67%
Age Over 50	61%	27%	21%

Data represents full-time employees as of June 15th, 2021.

¹ Management defined as Supervisor, Manager, Director, Officer, Senior Officer job categories and aligns with the SASB definition for Managers

² Technical defined as IT Professional Staff, Engineers, and Engineering Technicians and aligns with the SASB definition for Technical Staff.

RANGE FORMS MULTI-ETHNIC EMPLOYEE RESOURCE GROUP (MERG)

Recently, a group of employees created MERG, the Multi-Ethnic Employee Resource Group. This group formed organically with goals of providing a network of support for under-represented employees, increasing awareness of cultural differences, and further enhancing a culture of diversity and inclusion within Range. The group, which is led by employees, meets regularly with open dialogue on topics to help bring awareness and elicit solutions to aid multi-ethnic team members in achieving their fullest potential in the workplace. This group is working towards creating networking opportunities as well as getting involved in community outreach and philanthropic efforts to help under-represented members of our communities.



"I wanted to help start this group after speaking with my sons about race relations. Recent racial issues continue to show how divided we are as a country, and I wanted to help with that change. We are creating an environment to have those tough discussions and share our life experiences with the goal of helping each other while advocating for change within our communities and company."

- Gerald Prejean, Drilling Fluids Supervisor

our office-based employees (Figure 10.2). We are proud of our office employee gender diversity progress to date.

Racial and ethnic diversity across all levels of our business is another area of focus. Range supports an inclusive culture that welcomes employees of all backgrounds and provides a work environment that enables our people to succeed both personally and professionally (Figure 10.3).

Employee representation across experience and age is also an area Range monitors closely (Figure 10.4). Various backgrounds and experiences bring fresh perspectives

to the discussion, allowing us to ensure we're including important and relevant points of view in our decision-making processes.

We are committed to treating all employees and consultants with honesty, fairness, and respect, while providing a safe and healthy work environment. These values are in accordance with our anti-harassment policies. Abusive, harassing, or offensive conduct is unacceptable, regardless of whether it is verbal or physical.

REMOTE WORKING FLEXIBILITY

Range embraces a culture that consists of balancing work and personal life priorities. As a result, we continue to be flexible with employees by accommodating unique needs in the workplace and encouraging a quality work-life balance.

Range regularly looks for ways to meet the evolving needs of its employees. By maximizing our technology resources and infrastructure, we are able to offer remote-work flexibility when practical. We believe that this flexibility will continue to empower and engage our workforce and will in turn support and enhance their commitment to helping Range meet short-term and long-term objectives.



Range is an equal opportunity employer that maintains a policy of nondiscrimination with respect to all employees and applicants for employment. Employment decisions will be made without regard to race, color, sex (including pregnancy), religion, national origin, sexual orientation, age, disability, military service, genetic information, or any other status protected by applicable law.

Employment decisions, subject to the business requirements of the Company, are based on the individual's qualifications, merit, and performance. In addition to compliance with federal equal employment laws, the Company complies with applicable state and local laws governing nondiscrimination.

Training Programs

Providing our employees with the opportunity to improve their skills and enhance their career is extremely important to Range. When our employees are able to learn a new skill or fine-tune an existing skill, this benefit extends beyond the individual employee and improves overall operations at Range. Training and development initiatives are core to ensuring we are cultivating a competitive, skilled, and safety-minded workforce. The courses and programs we offer our employees span all levels, from new hire orientations to manager and leadership programs.

In 2020, we offered classes to our employees covering a wide range of topics. Courses offered to employees included situational leadership, personality and

work style approaches, presentation skills, conflict management, and more. These trainings go beyond several of our externally taught courses, which are industry-based on topics such as gas marketing and petroleum economics. Range's 533 employees average 12 hours of talent development training per year, helping expand their skillsets and grow their careers.

We also provide a targeted leadership curriculum to ensure best practices are used within our organization. Through this program, Range is able to prepare high performers who aspire to become senior leaders within our organization and cover the full life cycle of a leader's career at Range. These programs benefit both the leaders taking the courses and fellow colleagues who work on teams with these individuals. Examples of the different types of trainings we provide to our employees include:

- **Leadership Readiness Assessment:** Identifies and evaluates high potential front-line employees with an interest in future leadership roles to determine developmental opportunities.
- **Leadership Excellence and Development (LEAD) program:** Nominated by Senior Leadership, 8-10 current leaders participate in a 12-month executive coaching program to develop and prepare to take on high-level roles at Range.
- **Internal and External Trainings:** A wide variety of courses on topics such as professional development, leadership, legal and compliance, impromptu speaking, managing conflict, and more.

Range also provides customized resources for technical training, professional certifications, and continuing education. This includes educational reimbursements for employees that choose to pursue further college education, as detailed in our employee benefits section.

Our approach in everything we do is never simply “check the box,” including the training and development of our employees. Each division, office location, and department may have very different training styles, timelines, and needs. We strive to offer the most effective training opportunities possible by customizing each training to fit each specific need. These include traditional instructor-led trainings (IT), computer-based trainings (CBT), or a hybrid of both.

For our teams who are unable to participate in the Company-wide classes due to time constraints or work commitments, we offer courses for an entire department. This added element of flexibility and customization is crucial to balance training with continued operations, enabling managers to offer training to their employees in a format and a time that works for them. We also have capitalized on the opportunity to convert our in-house trainings into smaller online modules over multiple days to further enhance flexibility and accessibility for our employees.

Workforce Non-retaliation and Grievance

To provide an avenue for employees, external stakeholders, and members of the public to anonymously report issues, Range utilizes the services of a third-party reporting system Ethicspoint, which accepts submissions through a web-based portal and via phone.

Any reports involving financial fraud or conduct by Senior Management are provided directly to the members of the Audit Committee of the Board. In addition to the reporting of financial issues, Range has chosen to use this system to further enhance our reporting of human resources issues, such as harassment or violations of other policies.

The reporting system is managed independently by Ethicspoint, which is contractually bound to ensure the system is completely confidential unless reporters choose to make their identity known.

The Vice President of Human Resources first reviews any reports to determine appropriate steps for managing each inquiry. To ensure a full and independent



investigation can be conducted, the Ethicspoint system is designed to exclude from the process anyone who may be involved directly with the issue reported.

To file a report, employees and other stakeholders may access the Ethicspoint website at www.ethicspoint.com and click on “File a Report” or call Ethicspoint’s toll-free hotline at 1-866-384-4277.

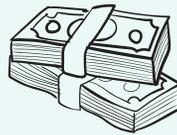
11. COMMUNITY IMPACT



Section Highlights



Charitable contributions totaled
\$460,000



In response to COVID-19, invested over
\$100,000
into a Community Stimulus Package for surrounding communities



In our 7th year hosting the 2000 Turkeys Drive, Range raised
\$68,000
in one hour for hunger-related causes in Washington County

Range is deeply committed to supporting the communities in which we operate, and that commitment is driven by our active employee base. Our dedication to community is guided by our “Invest, Inform, and Educate” platform, which creates a strategic framework that ensures we are delivering the greatest impact to the communities we serve. Community priorities change from year to year, and this platform allows us to evaluate our giving priorities in real-time to identify opportunities to build upon and enhance our contributions.

Range has also established civic engagement programs, in parallel with our community engagement strategy, intended to have long-term positive impacts on organizations within our core operating footprint. The Range Corporate Partnership platform takes a long-term perspective and aims to build relationships with those who seek to enhance the standard of living in our community.

Community Engagement and Impact

We take seriously our responsibility to be a reliable, preferred resource for the communities that live near our operations. This is a primary focus of the inform pillar of our community engagement platform.

Throughout the year, we facilitate a series of programs intended to maintain two-way communications with

residents in the communities where we operate. Through these programs, we seek to provide essential information and timely updates to residents and initiatives that allow us to be engaging and responsive to feedback from community members.

We seek to inform and foster feedback from community members through coffee break discussions, Community Advisory Panel (CAP) meetings, field tours, meetings with non-profits, presentations to rotary groups, tech schools, and local chambers, and other outreach efforts. In 2019, our CAP meeting included 75 community leaders, in addition to our core 30 members, and featured a Legislative & Regulatory update in partnership with the Government Affairs department. In September of 2020, the CAP meeting was held virtually in lieu of an in-person event, with another great turnout of participants from the community.

Beyond our efforts to be a reliable resource for our surrounding communities, Range is also an industry leader in pioneering our operations in order to be a good neighbor. This is a critical aspect of our business and one where we regularly work to find new solutions.

Traffic Coordination: Range makes every attempt to minimize any temporary impact of our operations on traffic patterns. We work closely with local

governments and safety officials when possible to develop traffic coordination plans. We also coordinate with nearby schools to consider their school bus schedules and routes when managing our operations.

Once traffic coordination plans are developed, Range clearly communicates traffic plans and guidelines to all of our contractors and employees for every location. GPS technology, roving traffic monitors, restricted speed limits, signage on local roadways, and more are leveraged to ensure the traffic coordination plans are followed.

Light, Sound and Dust: Range works closely with local communities, townships, and residents to best eliminate, mitigate, and reduce any possible inconveniences that could be associated with our work. We work with local governments and the community to conduct our work in the most responsible and sensitive manner possible. As a result, techniques we may utilize include but are not limited to:

- Light shielding equipment to focus light on the location and not on surrounding areas
- Dust control for roads
- Sound engineering modeling and analysis prior to beginning any work

Landowner Communications: Range also conducts proactive outreach to landowners to inform them about our operations, their lease, and other related information. We provide multiple communication platforms for landowners to contact us, including email and telephone.

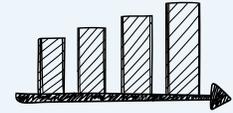
Social Investments

Our philanthropic and charitable giving efforts make the following groups a priority in the communities where we operate:

- Public safety/first responders
- Organizations that benefit veterans
- Education-based programs with a math and science focus
- Youth programs
- Conservation groups
- Programs that enhance the standard of living in our operating communities
- Organizations to which one or more of our employees are substantially committed

ECONOMIC IMPACT

In addition to our community engagement efforts, Range positively impacts the communities we operate in through the economic activity brought to the region. Since 2011, Range has paid more than \$240 million in impact fees including \$26.5 million in 2020 alone. We've also paid more than \$2.9 billion in royalty and lease payments in the state of Pennsylvania through 2020. These payments and the economic activity from our operations benefit the landowners and local governments with whom we share communities and engage frequently.



Range's charitable giving model is carefully administered through specific categories, including conservation, education, and youth activities. In addition, we operate our employee volunteer program, employee grant matching program, and our Good Neighbor program to maximize resources and opportunity to provide the most benefit in our community. We also support our local communities through the participation of our leadership team on local boards and advisory committees including the Greater Washington County Food Bank, Transitional Paths to Independent Living, Southwest Corner Workforce Advisory Board, Washington County Chamber of Commerce Board, and Dress for Success, among others.

Over a 12-year span, Range has proudly donated more than \$10 million, and our employees have volunteered more than 12,000 hours to support causes in our local communities. But to meet the needs of the

communities in which we operate, we regularly review the effectiveness of our programs through qualitative and quantitative measures, which includes evaluating program effectiveness based on community and employee participation. We also conduct surveys among participants to learn how certain programs can improve.

To maintain a transparent and forthright process regarding the organizations we support, charitable giving requests that exceed \$1,500 require a review and approval by a panel of employees from across the Company who assess the merits of each project based on potential impact and the project's overall relevance for Range. Listed below are just some examples of projects discussed and approved by the panel for funding in 2020:

- **Burgettstown Area Youth Soccer Association (BAYSA):** \$5,000 for field maintenance
- **Burgettstown Senior Citizens Center:** \$2,500 for an air conditioning unit
- **Heinz History Center:** \$10,000 for free admission days at the Meadowcroft Rockshelter and Historic Village
- **South Side Area School District:** \$1,450 for Wall of Honor to recognize graduates who served in the military
- **Western PA STEM Fest:** \$2,500 for sponsorship of the event
- **West Allegheny School District:** \$2,000 for rock and mineral kits for elementary students to learn geology
- **Aging Services of Washington County, Washington, and Burgettstown:** \$3,000 for gas gift cards for Meals on Wheels volunteers
- **Canonsburg Chamber of Commerce:** \$1,500 for Farmer's Market sponsorship

In 2020, our total charitable contributions amounted to \$460,000 towards more than 230 non-profit and civic organizations across our core operating footprint. Due to event cancellations as a result of the COVID-19 pandemic, the number of hours volunteered by our employees last year decreased to 516 hours. However, Range continued to focus on our charitable contributions through a balance of volunteering, donations, and virtual events, including some of the examples detailed below:

- **Virtual Community Events:** Restrictions to public gatherings due to COVID-19 prevented Range from hosting many in-person events, but we were

VIRTUAL FIELD TOURS

A testament to how Range's outreach has evolved throughout the pandemic, we began offering virtual tours of our rigs to students, residents, and Range families. Range has a long history of inviting neighbors to drilling sites for tours and collaborative information sessions. These tours often involved busing students to and from our sites, securing enough hard hats and other safety equipment for the group, and other items to run events that can run up to six hours in length.



During the pandemic, we used our investments in technology to enable our neighbors to go on virtual field visits. Our Range staff members utilized technology to broadcast live from the site, enabling the audience to get a quality tour of our operations without leaving their couch or classroom. When providing the tour, Range's Environmental Compliance employee was able to have discussions with students and answer any questions they had.

COMMUNITY STIMULUS PACKAGE

Range invested more than \$100,000 into our operating areas during the initial phase of the pandemic to provide about 20 of our closest non-profit partners with the funding they needed to bridge the gap created by the interruption of events and fundraising opportunities. Few knew the scope and duration of the pandemic in its early days, but all felt the economic hardship. This program was designed to ease some of those burdens as non-profits navigated their new normal.

able to continue our community outreach through a series of virtual field tours, a science fair, panel discussions, and career workshops for students, as well as Coffee to Go online meetings with members of the community. For example, in March of 2020, we hosted “The Rally Forward” program for local high school students in partnership with the Washington County Chamber of Commerce, which included a virtual career panel discussion with local business representatives. We were also able to partner with groups like the Washington County 4-H Club and Southwest PA STEM Fest for interactive tours and panel discussions. With CDC and state guidance changing, we have been able to attend events in person this year and host a few Coffee Breaks with community members as well. We plan to continue to engage the community through various platforms in the year ahead to reach more students and community members safely and efficiently.

- **Good Neighbor Program:** Despite Range’s Good Neighbor Charity Golf Outing and Clay Shoot being canceled due to COVID in 2020, the generosity of Range’s business partners did not wane, and a number of companies still contributed \$90,000 toward Range’s Washington County Community Foundation Fund for local first responders.
- **2000 Turkeys Food Drive:** 2020 marked Range’s 7th year hosting the 2000 Turkeys Food Drive benefitting the Washington County Food Bank. In one hour, Range raised \$68,000 for hunger-related causes in Washington County. Together with our sponsoring partners, we produced a telethon that brought together local performers, elected officials, and service company partners for a one-hour telethon to benefit the community food bank, where Range has been contributing for more than a decade. We plan on getting creative once again this year to help raise funds for food insecure families.
- **United Way of Washington County:** Since 2007, Range has partnered with the United Way to give back to a number of its nonprofit partners. Last year, Range participated in the United Way of Washington County’s LIVE UNITED Day of Service, benefiting several local nonprofits. For more than a decade, Range has been recognized by United Way as one of the top 5 contributing companies to the organization.
- **City Mission:** Range has been a long-time supporter of City Mission, an organization which provides everything from shelter to career services for the homeless. Although the annual Range Resources City Mission Softball Game was canceled in 2020 due to the pandemic, Range invested \$2,500 in COVID emergency funds through the Range Community Stimulus Package to the organization. This year, Range is able to participate in the event and help continue our longstanding support for the organization while building camaraderie with City Mission residents.
- **Washington County Fair:** Range has been involved in the local youth 4-H and Future Farmers of America programs dating back to 2008. Despite the cancellation of the 2020 Washington County Agricultural Fair, students were still able to sell their livestock projects safely in the Fair’s Show Arena. Range representatives attended the auction to bid on animals, and Range invested nearly \$35,000 total in purchased animals, individual donations to each student and helped to cover the Fair Board’s costs of hosting the auction. Even during challenging times, the partnership demonstrates Range’s deep commitment and appreciation for local landowners, farmers, and youth agriculture.

WAYNESBURG CENTER FOR CORPORATE SOCIAL RESPONSIBILITY (CSR)

Range partnered with Waynesburg University to conduct an Impact Assessment of COVID-19 on local non-profit organizations. Together with the Waynesburg CSR Center, we conducted a survey of 83 local non-profits and found that 60% had to decrease services since March 2020 due to an inability to fundraise. Additionally, non-profits faced staffing challenges as much-needed volunteers were difficult to find. Range and other members of the Waynesburg CSR Center made a financial commitment to help. Partnering with the Washington and Greene County Community Foundations and the Bayer Center for Non-Profit Management, we developed a two-month leadership program curriculum for 10 non-profits focused on networking, fundraising, and leadership.



MEALS ON WHEELS OF TARRANT COUNTY



Range volunteers in our Fort Worth office gather twice a week to deliver hot lunches and the next day's breakfast to homebound residents of Tarrant County, Texas. In many cases, the COVID-19 pandemic exacerbated the need for programs like this, but it also posed health and safety challenges for the volunteers and those in need. Range employees rose to the challenge, and volunteer numbers increased during the pandemic. In addition to the meals themselves, this program offers companionship to many in the community.

- **Dress for Success:** Range supports Dress for Success's Washington Branch FAB (fill-a-bag) semi-annual sale each year, where shoppers pay a flat fee to fill-a-bag with new or lightly used donated clothing and accessories. Due to COVID-19, Dress for Success was only able to hold one FAB sale in 2020. In addition to a financial contribution, in 2020 Range employees turned out to help set up and manage the sale, which raised more than \$7,000. Volunteers sort through, organize, and display thousands of pieces of inventory in preparation for the sale and help facilitate the re-donation of unsold items to other local nonprofits after the sale.
- **Variety – The Children's Charity of Pittsburgh:** Following all CDC recommendations, Range was still able to host a private bike ceremony at the Southpointe office on in December 2020 for two families and their children with special needs. The Company also invested \$5,000 in 2020 toward Variety's mission of providing adaptive bikes, strollers, and communication devices for families with special needs children.
- **Cystic Fibrosis Foundation:** Range has supported and partnered with the Cystic Fibrosis Foundation (CFF) since 2010. For more than a decade, Range has invested in CFF's mission to find a cure for cystic fibrosis, and the relationship has been strengthened through much more than monetary donations. While all events during the pandemic were canceled, Range remained engaged with CFF and supportive of the mission of finding a cure for Cystic Fibrosis. The



Company invested \$3,500 and continued to serve on a special event planning committee throughout the year in anticipation of bringing back the Corporate Cup in September 2021.

- Magee Women's Research Institute and Foundation:** Since 2012, Range has supported Magee Women's Research Institute and Foundation, investing more than \$100,000 toward Magee's world-leading research in women's health and biology. In 2020, Magee was able to safely host its annual Fly-Fishing Classic, and Range invested \$10,000 in the event, which raised a total of \$60,000 toward the Research Institute and Foundation's mission of reducing the incidence of death from women's cancers.

- Toys for Tots Drive-Thru Fundraiser:** In December, Range hosted a fundraising event at their Southpointe office for the U.S. Marine's Toys for Tots program. Range had employee volunteers shop for \$5,000 worth of toys for the local Marines program. Several of Range's vendors also purchased and delivered toys with us. To remain socially distant, families were escorted through a four-stop drive-thru experience that included a donation center, a dozen specialty donuts and hot cocoa ingredients, a curbside greeting from Santa and Mrs. Claus, and a family photo booth hosted by professional photographers. Range is proud to support this annual cause that provides holiday toys to children in need.

12. ADDITIONAL FACTORS

Not all topic areas recommended under the various frameworks directly apply to our Company. However, in an effort to be fully transparent, below is a brief discussion of some additional factors that we took into consideration. We did not find these factors to have a significant impact on our business and operations.

- **Human rights management.** Day in and day out, the decisions we make as a business are guided by our core values – Performance, Innovation, Integrity, and Transparency. These core values extend to our respect for human rights throughout our business operations and our conduct, as detailed in our [Human Rights Policy](#). Adherence to human rights

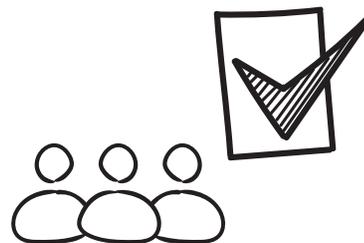


laws and the underlying principles are also reflected in our Code of Business Conduct and Ethics and our Vendor Hiring Standards. As an oil and gas producer operating solely in the United States, we comply with applicable federal and state laws related to human rights and labor rights and, while we do not operate internationally, as a United States Company our approach to human rights is consistent with the United Nations' Universal Declaration of Human Rights and the Guiding Principles on Business and Human Rights, and the International Labor Organization's Declaration on Fundamental Principles and Rights at Work.

- **Indigenous peoples and land acquisition and involuntary resettlement.** Our operations do not impact any areas of indigenous peoples, First Peoples, or First Nations. Our activities do not involve any involuntary settlement of people or their economic activities. While we do not have any operations on lands of indigenous peoples, First Peoples, or First Nations, we are committed to respecting the culture, history, and customs of indigenous peoples. We commit to act in accordance with applicable laws and to consult with local community leaders and residents, should our activities affect any areas of importance to such people.
- **Product stewardship.** This guidance primarily applies to petroleum products. Our communications to our customers and communities concerning the risks related to use, handling, and transport of our products are in compliance with state and federal rules and regulations.
- **Security risk management.** Given our areas of operations and scope of work, we do not believe that we are materially affected by security threats dealing with social or political unrest, terrorism or armed conflict, sabotage, theft, hijackings, or other Company or individual attacks. As discussed in the Health and Safety section of this report, we promote and maintain a strong safety culture throughout our operations and daily activities.



- **Transparency of payments to host governments.**
Our Code of Business and Ethics, as discussed in the relevant sections of this report, covers a robust set of policies around relationships with government officials, including conflicts of interests, gifts, political contributions, and record retention, in accordance with our ethical guidelines that go beyond mere compliance with state and federal laws and regulations. Importantly, we do not operate outside the United States.



13. PERFORMANCE INDICATORS

Environmental

In 2020, Range Resources completed the sales of our North Louisiana and conventional assets. To enable benchmarking of data in the future, the 2020 environmental data throughout the report excludes data from this asset. Prior year data has not been restated and reflects ownership of the asset.

Emissions

	2020	2019	2018	2017
Total Direct GHG Emissions (metric tons CO ₂ e)	182,118	366,280	473,164	543,091
GHG Emissions Intensity (metric tons CO ₂ e/Mmcfe)	0.23	0.44	0.59	0.74
<i>Greenhouse Gas Emissions by Gas Type</i>				
CO ₂ Emissions (metric tons)	142,680	213,890	252,722	269,214
CH ₄ Emissions (metric tons CO ₂ e)	39,270	152,063	220,042	273,421
N ₂ O Emissions (metric tons CO ₂ e)	168	327	400	456
CH ₄ Emissions (metric tons)	1,571	6,083	8,802	10,937
CH ₄ Emissions intensity (as % from total gas production from wells)	0.0124%	0.0398%	0.0636%	0.0860%
<i>Greenhouse Gas Emissions by Source (metric tons CO₂e)</i>				
Energy/Combustion Emissions	125,493	181,892	215,176	251,127
Other Vented Emissions	21,443	76,055	148,869	182,047
Fugitive Emissions	4,707	47,843	55,651	75,796
Emissions from Flared Hydrocarbons	20,863	33,054	43,765	21,842
Process Emissions	9,612	27,436	9,703	12,279
Indirect Emissions (Scope 2) (metric tons CO ₂ e)	2,807*	2,276	1,717	2,137
<i>Sources of Flared Hydrocarbons</i>				
Volume of Hydrocarbon Flared in PA (mmcfe)	277.53	253.64	391.40	231.05
Volume of Hydrocarbon Flared in LA (mmcfe)	-	82.82	123.68	15.14
Total Quantity of Hydrocarbon Gas Flared (mmcfe)	277.53	336.46	515.08	246.19
Range GHG Emissions due to Flaring (MT CO ₂ e)	20,863	33,054	43,765	21,842
Contribution to Overall GHG Emissions	11%	9%	9%	4%

* Consistent with other data provided throughout this report, the calculation of scope 2 emissions in 2020 excludes scope 2 emissions from our North Louisiana assets that were sold during the year.

	2020	2019	2018	2017
<i>Other Air Pollutants</i>				
NO _x Emissions (metric tons)	1,335	3,327	3,733	4,177
VOC Emissions (metric tons)	1,327	3,182	3,176	3,314
PM ₁₀ Emissions (metric tons)	36.8	65.6	68.9	73.0
SO _x Emissions (metric tons)	2.1	10.0	9.6	9.7

Historical Production Emissions and Production Emissions Intensity

	2020	2019	2018	2017
Net Production (Mmcfe)	776,786	833,354	803,408	733,231
Production-only Emissions (MT CO ₂ e) (excluding boosting and gathering)	179,656	329,799	429,355	494,559
Production GHG Intensity (MT CO ₂ e/ Mmcfe)	0.23	0.40	0.53	0.67
Total GHG Emissions (including boosting and gathering)*	182,118	366,280	473,164	543,091

Water

All figures expressed in cubic meters (m ³).	2020	2019	2018	2017
<i>Fresh Water Withdrawn</i>				
Pennsylvania	1,725,173	3,068,615	2,917,652	3,681,934
North Louisiana	-	338,709	528,938	1,910,487
Total Fresh Water Withdrawn	1,725,173	3,407,324	3,446,590	5,592,421
<i>Fresh Water Withdrawn by Source</i>				
Pennsylvania – Surface Water	630,665	1,743,463	1,512,942	2,459,569
Pennsylvania – Municipal Water	1,094,508	1,325,152	1,404,710	1,178,812
Pennsylvania – Rainwater	-	---	---	43,582
North Louisiana – Surface Water	-	338,709	528,938	1,910,487
<i>Reuse Water (including from other Operators) in m³</i>				
Pennsylvania	2,627,738	2,440,094	2,428,831	2,216,874
North Louisiana	-	-	-	-
Total Water Used in m³	4,352,911	5,847,418	5,875,421	7,809,295
<i>Pennsylvania Water Recycling Program</i>				
PA Flowback and Produced Water Generated	1,775,265	1,658,132	1,588,671	1,360,740
Range-Generated PA Flowback Water Reused	1,771,784	1,644,561	1,581,686	1,350,504
Percentage of Range-Generated PA Flowback Reused	99.8%	99.2%	99.6%	99.2%
Total Reuse Water (including other operators)	2,627,738	2,440,094	2,428,831	2,216,874
Total Reuse Water as Percentage of Total Water Used	60%	42%	41%	28%

APPENDIX

Spills

	2020	2019	2018	2017
Number of Hydrocarbon Releases ≥ 1 bbl	1	7	5	17
Volume of Hydrocarbon Releases ≥ 1 bbl (in bbl)	2.0	44.5	23.3	256.1
Number of Non-Hydrocarbon Releases ≥ 1 bbl	3	13	36	32
Volume of Non-Hydrocarbon Releases ≥ 1 bbl (in bbl)	6.4	229.8	512.0	744.3
Number of Total Spills Resulting in Release ≥ 1 bbl	4	20	41	49
Volume Total Spills Resulting in Release ≥ 1 bbl (in bbl)	8.4	274.3	535.3	1000.4

Waste

	2020	2019	2018	2017
<i>Hazardous waste (tons)</i>	N/A	N/A	N/A	N/A
<i>Non-Hazardous Waste</i>				
Reuse (m3)	2,627,738	2,440,094	2,428,831	2,216,874
Recycled	-	-	-	-
Recovered	-	-	-	-
Composting	-	-	-	-
Incineration	-	-	-	-
Landfill (tons)	103,278	210,000	229,500	277,000
On-site storage	-	-	-	-

Health and Safety

	2020	2019	2018	2017
Range Employees Total Recordable Injury Rate	0.30	0.62	0.58	0.12
Range Employees Days Away, Restricted, or Transferred	0.30	0.00	0.23	0.00
Employee Fatalities	-	-	-	-
Number of Contractor Reportable Incidents	5	25	35	46
Contractor Fatalities	-	-	-	-
Recordable Preventable Vehicle Incident Rate	1.79	3.50	3.39	4.30

Economic

	2020*	2019	2018	2017
Total revenues and other income	\$2.0 billion	\$2.8 billion	\$3.3 billion	\$2.6 billion

<i>Production</i>				
Natural gas (Mmcf)	574,529	578,114	548,085	490,253
Natural gas liquids (Mbbbls)	37,492	38,850	38,325	35,709
Crude oil and condensate (Mbbbls)	2,829	3,690	4,228	4,787
Total (Mmcf)ⁱ	816,456*	833,354	803,408	733,231

<i>Average Sales Prices (excluding derivative settlements)</i>				
Natural gas (per mcf)	\$1.64	\$2.40	\$3.04	\$2.75
Natural gas liquids (per bbl)	\$15.43	\$17.53	\$24.30	\$16.93
Crude oil and condensate (per bbl)	\$30.22	\$50.26	\$60.52	\$46.30
Total (per mcf)ⁱ	\$1.97	\$2.71	\$3.55	\$2.97

<i>Proved Reserves</i>				
Natural Gas (Mmcf) (Total)	11,148,560	12,114,977	12,027,702	10,263,649
Developed	6,350,057	6,486,211	6,451,012	5,437,674
Undeveloped	4,798,503	5,628,766	5,576,690	4,825,975
NGLs (Mbbbls) (Total)	951,466	938,236	921,594	763,264
Developed	550,771	535,007	512,318	448,258
Undeveloped	400,695	403,229	409,276	315,006
Oil (Mbbbls) (Total)	57,626	74,532	85,856	69,854
Developed	22,976	34,369	38,658	36,808
Undeveloped	34,650	40,163	47,198	33,046
Proved Reserve Value (PV-10)ⁱⁱ	\$3.0 billion			

ⁱ Oil and NGLs volumes are converted at the rate of one barrel equals six mcf based upon the approximate relative energy content of oil to natural gas, which is not indicative of the relationship between oil and natural gas prices.

ⁱⁱ PV-10 is considered a non-GAAP financial measure as defined by the U.S. Securities and Exchange Commission (the "SEC"). We believe that the presentation of PV-10 is relevant and useful to our investors as supplemental disclosure to the standardized measure, or after-tax amount, because it presents the discounted future net cash flows attributable to our proved reserves before taking into account future corporate income taxes and our current tax structure. While the standardized measure is dependent on the unique tax situation of each company, PV-10 is based on prices and discount factors that are consistent for all companies. Because of this, PV-10 can be used within the industry and by creditors and security analysts to evaluate estimated net cash flows from proved reserves on a more comparable basis. The difference between the standardized measure and the PV-10 amount is the discounted estimated future income tax of \$134.4 million at December 31, 2020. PV-10 for December 31, 2020 was determined using NYMEX benchmark prices of \$1.98 per mcf for natural gas and \$39.77 per bbl for oil.

* 2020 production and average sales prices include the results of our North Louisiana assets, which were sold in August 2020.

14. ALTERNATIVE SCOPE 1 EMISSIONS SOURCE CALCULATION

The table below compares how Range Resources calculates Scope 1 emissions by source with an alternative calculation method.

The AXPC’s definition of “flaring” is used for the alternative calculation method. AXPC defines flaring as the flaring of wellhead gas from the primary separator at assets operated by Range Resources.

This definition specifically does not include:

- (i) combustion of low-pressure gas volumes from crude oil/condensate and produced water storage vessels or other low-pressure separators for the purpose of controlling emissions, or
- (ii) flaring from drilling and/or well completion, which are either
 - (a) exempt from reporting to the EPA (e.g., flaring gas during the drill-out phase of completing a well), or
 - (b) disclosed in our EPA emissions inventory reports under emissions from other sources (e.g., flaring associated with the operation of VDUs is captured under combustion emissions, and flaring associated with the operation of glycol dehydrators is captured under process emissions).

	2020: As Displayed in Report	2020: Alternative Calculation
Total Direct GHG Emissions (metric tons CO₂e)	182,118	182,118
GHG Emissions Intensity (metric tons CO₂e/Mmcfe)	0.23	0.23
<i>Greenhouse Gas Emissions by Source (metric tons CO₂e)</i>		
Energy/Combustion Emissions	125,493	137,580
Other Vented Emissions	21,443	21,443
Fugitive Emissions	4,707	4,707
Emissions from Flared Hydrocarbons	20,863	0
Process Emissions	9,612	18,388
<i>Flared Hydrocarbon Gas</i>		
Volume of Hydrocarbons Flared (Mmcfe)	277.53	0



15. CONTENT INDICES TO REPORTING STANDARDS AND GUIDELINES

The following tables provide content indices for several sustainability reporting frameworks and standards. When the title of a relevant document is not explicitly mentioned, it is implied that the relevant disclosure resides in the 2020 Corporate Sustainability Report, with the report section and relevant page numbers listed under Range’s relevant disclosures.

SASB

Issue	Metric	Indicator	Relevant Range Resources Disclosures
<i>Environmental Topics</i>			
Greenhouse Gas Emissions	Gross Global Scope 1 emissions, percentage of methane, percentage covered under emissions-limiting regulations	EM-EP-110a.1	Greenhouse Gas Emissions, pp. 41-50 Performance Indicators, pp. 78-79
	Amount of gross global Scope 1 emissions from: (1) flared hydrocarbons, (2) other combustion, (3) process emissions, (4) other vented emissions, and (5) fugitive emissions	EM-EP-110a.2	Greenhouse Gas Emissions, p. 41-50 Performance Indicators, pp. 78-79
	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	EM-EP-110a.3	Our Strategic Response to the Climate Policy Discussion, pp. 33-40 Greenhouse Gas Emissions, pp. 41-50
Air Quality	Air emissions of the following pollutants: (1) NO _x (excluding N ₂ O), (2) SO _x , (3) volatile organic compounds (VOCs), and (4) particulate matter (PM ₁₀)	EM-EP-120a.1	Air Quality & Other Emissions, pp. 54-55 Performance Indicators, p. 79
Water Management	(1) Total fresh water withdrawn, (2) total fresh water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	EM-EP-140a.1	Water Management, pp. 58-59 Performance Indicators, p.79
	Volume of produced water and flowback generated; percentage (1) discharged, (2) injected, (3) recycled; hydrocarbon content in discharged water	EM-EP-140a.2	Water Management, pp. 58-59 Performance Indicators, p. 79
	Percentage of hydraulically fractured wells for which there is public disclosure of all fracturing fluid chemicals used	EM-EP-140a.3	Hydraulic Fracturing, pp. 60-61
	Percentage of hydraulic fracturing sites where ground or surface water quality deteriorated compared to a baseline	EM-EP-140a.4	Hydraulic Fracturing, pp. 60-61
Biodiversity Impacts	Description of environmental management policies and practices for active sites	EM-EP-110a.1	Biodiversity and Ecosystems, pp. 53-54
	Number and aggregate volume of hydrocarbon spills, volume in Arctic, volume impacting shorelines with ESI rankings 8-10, and volume recovered	EM-EP-110a.2	Spill Prevention, pp.55-58 Performance Indicators, p.80

SASB (cont)

Issue	Metric	Indicator	Relevant Range Resources Disclosures
<i>Health, Safety, Social and Economic Topics</i>			
Security, Human Rights & Rights of Indigenous Peoples	Discussion of engagement processes and due diligence practices with respect to human rights, indigenous rights, and operation in areas of conflict	EM-EP-210a.3	Additional Factors, pp. 76-77
Community Relations	Discussion of process to manage risks and opportunities associated with community rights and interests	EM-EP-210b.1	Community Impact, pp. 70-75
Workforce Health & Safety	(1) Total recordable incident rate (TRIR), (2) fatality rate, (3) near miss frequency rate (NMFR), and (4) average hours of health, safety, and emergency response training for (a) full-time employees, (b) contract employees, and (c) short-service employees	EM-EP-320a.1	Safety Leadership, pp. 24-31 Performance Indicators, p. 80
	Discussion of management systems used to integrate a culture of safety throughout the exploration and production lifecycle	EM-EP-320a.2	Safety Leadership, pp. 24-31
Reserves Valuation & Capital Expenditures	Sensitivity of hydrocarbon reserve levels to future price projection scenarios that account for a price on carbon emissions	EM-EP-420a.1	Scenario Analysis and Climate Change Risk Management, pp. 34-40
	Discussion of how price and demand for hydrocarbons and/or climate regulation influence the capital expenditure strategy for exploration, acquisition, and development of assets	EM-EP-420a.4	Scenario Analysis and Climate Change Risk Management, pp. 34-40
Business Ethics & Transparency	Description of the management system for prevention of corruption and bribery throughout the value chain	EM-EP-510a.2	Code of Business Conduct and Ethics and Political Engagement, pp. 20-21
Management of the Legal & Regulatory Environment	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	EM-EP-530a.1	Political Engagement, p. 21 Climate Change, p. 32-51
Critical Incident Risk Management	Description of management systems used to identify and mitigate catastrophic and tail-end risks	EM-EP-540a.2	Safety Leadership, pp. 24-31 Spill Prevention, pp. 55-58

IPIECA

Modules	Issues	Indicators	Range Disclosure
Governance and business ethics	Governance and management systems	GOV-1: Governance approach	Our Core Values, p. 9 Our Approach to Sustainability, pp. 14-15 Corporate Governance, 16-23
		GOV-2: Management systems	Multiple report sections
	Business ethics and transparency	GOV-3: Preventing corruption	Code of Business Conduct and Ethics and Political Engagement, pp. 20-21
		GOV-4: Transparency of payments to host governments	Additional Factors, p. 77
		GOV-5: Public Advocacy and Lobbying	Political Engagement, p. 21

APPENDIX

IPIECA (cont)

Modules	Issues	Indicators	Range Disclosure
Climate change and energy	Climate strategy and risk	CCE-1: Climate governance and strategy	Climate Change, pp. 32-40
		CCE-2: Climate risk and opportunities	Climate Change, pp. 40-41
	Technology	CCE-3: Lower-carbon technology	Greenhouse Gas Emissions, pp. 41-50
	Emissions	CCE-4: Greenhouse gas (GHG) emissions	Greenhouse Gas Emissions, pp. 41-50 Performance Indicators, pp. 78-79
		CCE-5: Methane emissions	Climate Change, pp. 32-51 Performance Indicators, pp. 78-79
	Energy use	CCE-6: Energy Use	Greenhouse Gas Emissions, pp. 41-50
	Flaring	CCE-7: Flared Gas	Flared Gas, p. 50
Environment	Water	ENV-1: Freshwater	Water Management and Hydraulic Fracturing, pp. 58-61
		ENV-2: Discharges to water	Water Management and Hydraulic Fracturing, pp. 58-61
	Biodiversity	ENV-3: Biodiversity policy and strategy	Biodiversity and Ecosystems, pp. 53-54
		ENV-4: Protected and priority areas for biodiversity conservation	Biodiversity and Ecosystems, pp. 53-54
	Air emissions	ENV-5: Emissions to air	Air Quality & Other Emissions, pp. 54-55
	Spills	ENV-6: Spills to the environment	Spill Prevention, pp. 55-58
	Materials management	ENV-7: Materials management	Waste Management, p. 58
Safety, health, and security	Workforce protection	SHS-1: Safety, health and security engagement	Safety Leadership, pp. 24-31
		SHS-2: Workforce health	Safety Leadership, pp. 24-31
		SHS-3: Occupational injury and illness incidents	Safety Leadership, pp. 24-31 Performance Indicators, p. 80
		SHS-4: Transport safety	Safety Leadership, pp. 24-31
	Product health, safety, and environmental risk	SHS-5: Product stewardship	Additional Factors, p. 76
	Security	SHS-7: Security Risk Management	Additional Factors, p. 76
Social	Human rights management	SOC-1: Human rights due diligence	Additional Factors, p. 76
		SOC-2: Suppliers and human rights	Additional Factors, p. 76
		SOC-3: Security risk management	Additional Factors, p. 76
	Labor practices	SOC-4: Site-based labor practices and worker accommodation	Human Capital Management, pp. 62-69
		SOC-5: Workforce diversity and inclusion	Diversity, Equity, and Inclusion, pp. 65-68
		SOC-6: Workforce engagement	Workforce Engagement, pp. 62-63
		SOC-7: Workforce training and development	Training Programs, pp. 68-69
		SOC-8: Workforce non-retaliation and grievance mechanisms	Workforce Non-retaliation and Governance, p. 69

IPIECA (cont)

Modules	Issues	Indicators	Range Disclosure
Social	Community engagement	SOC-9: Local community impacts and engagement	Community Impact, pp. 70-75
		SOC-10: Indigenous peoples	Additional Factors, p. 76
		SOC-11: Land acquisition and involuntary resettlement	Additional Factors, p. 76
		SOC-12: Community grievance mechanisms	Community Impact, pp. 70-75
		SOC-13: Social Investment	Community Impact, pp. 71-75
	Local content	SOC-14: Local procurement and supplier development	Community Impact, pp. 70-75
		SOC-15: Local hiring practices	Community Impact, pp. 70-75

GRI Standards Index

Issue	Metric	Indicator	Relevant Range Resources Disclosures
<i>General Topics</i>			
General Disclosures	Name of the organization	GRI 102-1	Range Resources Corporation
	Activities, brands, products, and services	GRI 102-2	Exploration, development and acquisition of natural gas and oil properties.
	Location of headquarters	GRI 102-3	Fort Worth, Texas
	Location of operations	GRI 102-4	United States
	Ownership and legal form	GRI 102-5	Publicly listed company
	Markets served	GRI 102-6	United States
	Scale of the organization	GRI 102-7	2020 Annual Report, 10-K Form ^(a)
	Information on employees and other workers	GRI 102-8	2020 Annual Report, 10-K Form ^(a)
	Supply chain	GRI 102-9	2020 Annual Report, 10-K Form ^(a)
	Significant changes to the organization and its supply chain	GRI 102-10	2020 Annual Report, 10-K Form ^(a)
	Precautionary Principle or approach	GRI 102-11	2020 Annual Report, 10-K Form ^(a)
	External initiatives	GRI 102-12	2021 Sustainability Report, multiple sections
	Membership of associations	GRI 102-13	Political Engagement, p. 21 Company Website – Political Engagement ^(e)
	Statement from Senior Decision-Maker	GRI 102-14	Range disclosure: Letters from the Board and the CEO, pp. 4-7
	Key impacts, risks, and opportunities	GRI 102-15	2020 Annual Report ^(a) and 2021 Corporate Sustainability Report
	Values, principles, standards, and norms of behavior	GRI 102-16	Our Core Values, p. 9
	Mechanisms for advice and concerns about ethics	GRI 102-17	Company Website - Code of Conduct & Business Ethics ^(d)
	Governance structure	GRI 102-18	2020 Annual Report ^(a) , 2021 Proxy Statement ^(b) , Company Website and 2021 Corporate Sustainability Report

APPENDIX

GRI Standards Index (cont)

Issue	Metric	Indicator	Relevant Range Resources Disclosures
<i>General Topics</i>			
General Disclosures	Delegating authority	GRI 102-19	Corporate Governance ^(c) , pp. 16-23
	Executive-level responsibility for economic, environmental, and social topics	GRI 102-20	Corporate Governance ^(c) , pp. 16-23
	Consulting stakeholders on economic, environmental, and social topics	GRI 102-21	2021 Corporate Sustainability Report, multiple sections
	Composition of the highest governance body and its committees	GRI 102-22	Corporate Governance – Company Website ^(c)
	Chair of the highest governance body	GRI 102-23	Greg. G. Maxwell
	Nominating and selecting the highest governance body	GRI 102-24	Corporate Governance Section of Company Website ^(c)
	Conflicts of interest	GRI 102-25	Company Website - Code of Conduct & Business Ethics ^(d)
	Role of highest governance body in setting purpose, values, and strategy	GRI 102-26	2020 Annual Report ^(a) , 2021 Proxy Statement ^(b) , Company Website and 2020 Corporate Sustainability Report
	Collective knowledge of highest governance body	GRI 102-27	2021 Proxy Statement ^(b) , Corporate Governance – Company Website ^(c) and 2021 Corporate Sustainability Report
	Evaluating the highest governance body's performance	GRI 102-28	Proxy Statement ^(b) and Corporate Governance ^(c) – Company Website
	Effectiveness of risk management processes	GRI 102-30	2020 Annual Report ^(a) , 2021 Proxy Statement ^(b) , and 2021 Corporate Sustainability Report
	Review of economic, environmental, and social topics	GRI 102-31	Corporate Governance, pp. 16-23, Climate Change, pp. 32-33
	Highest governance body's role in sustainability reporting	GRI 102-32	Board of Directors, see Corporate Governance, pp. 16-23
	Communicating critical concerns	GRI 102-33	2020 Annual Report ^(a) , 2021 Proxy Statement ^(b) , and 2021 Corporate Sustainability Report
	Nature and total number of critical concerns	GRI 102-34	2020 Annual Report ^(a) and 2021 Proxy Statement ^(b)
	Remuneration policies	GRI 102-35	2021 Proxy Statement ^(b)
	Process for determining remuneration	GRI 102-36	2021 Proxy Statement ^(b)
	Stakeholders' involvement in remuneration	GRI 102-37	2021 Proxy Statement ^(b)
	Annual total compensation ratio	GRI 102-38	2021 Proxy Statement ^(b)
Percentage increase in annual total compensation ratio	GRI 102-39	2021 Proxy Statement ^(b)	
List of stakeholder groups	GRI 102-40	2021 Corporate Sustainability Report, multiple sections	
Collective bargaining agreements	GRI 102-41	2020 Annual Report ^(a)	
Identifying and selecting stakeholders	GRI 102-42	2021 Corporate Sustainability Report, multiple sections	
Approach to stakeholder engagement	GRI 102-43	2021 Proxy Statement ^(b)	
Key topics and concerns raised	GRI 102-44	2021 Corporate Sustainability Report, multiple sections	

GRI Standards Index (cont)

Issue	Metric	Indicator	Relevant Range Resources Disclosures
<i>General Topics</i>			
	Entities included in the consolidated financial statements	GRI 102-45	2020 Annual Report ^(a)
	Defining report content and topic Boundaries	GRI 102-46	Our Approach to Reporting, p.12
	Reporting period	GRI 102-50	2020 fiscal year
	Date of most recent report	GRI 102-51	August 26th, 2020
	Contact point for questions regarding the report	GRI 102-53	Scott Roy, Senior Vice President, 724-873-3218 sroy@rangeresources.com
<i>Economic Topics</i>			
Economic Performance	Direct economic value generated and distributed.	GRI 201-1	Economic Impacts, p. 71
	Financial implications and other risks and opportunities due to climate change.	GRI 201-2	Climate Change, pp. 32-51
Indirect Economic Impacts	Significant indirect economic impacts.	GRI 203-2	Economic Impacts, p. 71
Anti-Corruption	Communication and training about anti-corruption policies and procedures.	GRI 205-2	Code of Business Conduct and Ethics and Political Engagement, pp. 20-21

^(a) 2020 Annual Report: <https://ir.rangeresources.com/static-files/64ff7245-a777-4c03-81d8-78c80ea8ecf9>

^(b) 2021 Proxy Statement: https://www.sec.gov/Archives/edgar/data/315852/000130817921000155/lrrc2021_def14a.htm

^(c) Company Website: Corporate Governance Page - <http://www.rangeresources.com/company/corporate-governance>

^(d) Company Website – Code of Conduct and Business Ethics: <https://www.rangeresources.com/about-us/corporate-governance/code-of-business-conduct-ethics/>

^(e) Company Website – Political Engagement: <https://www.rangeresources.com/about-us/corporate-governance/political-engagement/>

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GRI Standards Index (cont)

Issue	Metric	Indicator	Relevant Range Resources Disclosures
<i>Environmental Topics</i>			
Materials	Recycled input materials used.	GRI 301-2	Waste Management, p. 58
Water	Interactions with water as a shared resource.	GRI 303-1	Water Management and Hydraulic Fracturing, pp. 58-61
	Management of water discharge-related impacts.	GRI 303-2	Water Management and Hydraulic Fracturing, pp. 58-61
	Water withdrawal.	GRI 303-3	Water Management and Hydraulic Fracturing, pp. 58-61
	Water discharge.	GRI 303-4	Water Management and Hydraulic Fracturing, pp. 58-61
	Water consumption.	GRI 303-5	Water Management and Hydraulic Fracturing, pp. 58-61
Biodiversity and Ecosystem	Significant impacts of activities, products, and services on biodiversity	GRI 304-2	Biodiversity and Ecosystems, pp. 53-54
	Habitats protected or restored.	GRI 304-3	Biodiversity and Ecosystems, pp. 53-54
Emissions	Direct (Scope 1) GHG emissions.	GRI 305-1	Performance Indicators, p. 78
	Energy indirect (Scope 2) GHG emissions.	GRI 305-2	Performance Indicators, p. 78-79
	GHG emissions intensity.	GRI 305-4	Greenhouse Gas Emissions, pp. 41-50 Performance Indicators, pp. 78-79
	Reduction of GHG emissions.	GRI 305-5	Greenhouse Gas Emissions, pp. 41-50
	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions.	GRI 305-7	Performance Indicators, p. 79
Effluents and Waste	Waste by type (hazardous and non-hazardous) and disposal method.	GRI 306-2	Performance indicators, p. 80
<i>Health and Safety</i>			
Employment	Benefits provided to full-time employees that are not provided to temporary or part-time employees.	GRI 401-2	Employee Benefits, pp. 63-64
	Parental leave.	GRI 401-3	Employee Benefits, pp. 63-64
Occupational Health and Safety	Occupational health and safety management system.	GRI 403-1	Safety Leadership, pp. 24-31
	Hazard identification, risk assessment, and incident investigation.	GRI 403-2	Safety Leadership, pp. 24-31
	Occupational health services.	GRI 403-3	Safety Leadership, pp. 24-31
	Worker participation, consultation, and communication on occupational health and safety.	GRI 403-4	Safety Leadership, pp. 24-31
	Worker training on occupational health and safety.	GRI 403-5	Safety Leadership, pp. 24-31
	Promotion of worker health.	GRI 403-6	Safety Leadership, pp. 24-31
	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships.	GRI 403-7	Safety Leadership, pp. 24-31

GRI Standards Index (cont)

Issue	Metric	Indicator	Relevant Range Resources Disclosures
<i>Health and Safety</i>			
Local and Social Impacts	Workers covered by an occupational health and safety management system.	GRI 403-8	Safety Leadership, pp. 24-31
	Work-related injuries.	GRI 403-9	Safety Leadership, pp. 24-31 Performance Indicators, p. 80
Training and Education	Programs for upgrading employee skills and transition assistance programs.	GRI 404-2	Training Programs, pp. 68-69
<i>Local and Social Impacts</i>			
Diversity and Equal Opportunity	Diversity of governance bodies and employees.	GRI 405-1	Corporate Governance, pp. 16-23 Human Capital Management, pp. 62-69
Local Communities	Operations with local community engagement, impact assessments, and development programs.	GRI 413-1	Community Impact, pp. 70-75
Public Policy	Political contributions.	GRI 415-1	Political Engagement, p. 21

Task Force on Climate-related Financial Disclosures

Issue	Metric	Relevant Range Resources Disclosures
Governance	Describe the board's oversight of climate-related risks and opportunities.	Climate Change – Board and Management Oversight, pp. 32-33
	Describe management's role in assessing and managing climate-related risks and opportunities.	Climate Change – Board and Management Oversight, pp. 32-33
Strategy	Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	Our Strategic Response to the Climate Policy Discussion, pp. 33-40
	Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	Climate Change, pp. 32-51
	Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Our Strategic Response to the Climate Policy Discussion, pp. 33-40
Risk Management	Describe the organization's processes for identifying and assessing climate-related risks.	Climate Change Risks and Opportunities, pp. 40-41
	Describe the organization's processes for managing climate-related risks.	Climate Change Risks and Opportunities, pp. 40-41
	Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management.	Climate Change Risks and Opportunities, pp. 40-41
Metrics and Targets	Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	Climate Change, pp. 32-51 Performance Indicators, pp. 78-82
	Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas emissions and the related risks.	Climate Change, pp. 32-51 Performance Indicators, pp. 78-82
	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	Climate Change, pp. 32-51

16. ADDITIONAL DISCLOSURES

Forward-Looking Statements

This report includes certain “forward-looking statements” within the meaning of the federal securities laws, including the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, as amended, that are not limited to historical facts, but reflect Range’s current beliefs, expectations or intentions regarding future events, performance and business strategy and statements regarding Range’s practices, programs, policies, initiatives, plans, goals, ambitions and targets with respect to environmental, social and governance matters. Words such as “may,” “will,” “could,” “should,” “expect,” “plan,” “project,” “intend,” “anticipate,” “believe,” “outlook,” “estimate,” “predict,” “potential,” “pursue,” “target,” “continue,” and similar expressions are intended to identify such forward-looking statements.

Although Range believes the expectations reflected in our forward-looking statements are reasonable and are based on currently available information, no assurance can be given that such expectations will be achieved (in full or at all) or will prove to be correct, particularly given that such further performance is subject to a wide range of business risks and uncertainties and there is no assurance that these goals and projections can or will be met, particularly given the standards and metrics used in preparing this Corporate Sustainability Report (CSR) continue to evolve. Any number of factors could cause actual results to differ materially from those in the forward-looking statements. Unless required by law, Range undertakes no obligation to publicly update or revise any forward-looking statements to reflect circumstances or events after the date they are made.

Further information on risks and uncertainties is available in Range’s filings with the Securities and Exchange Commission (SEC), including its most recent Annual Report on Form 10-K available from our website at www.rangeresources.com or by written request to 100 Throckmorton Street, Suite 1200, Fort Worth, Texas 76102. You can also obtain this Form 10-K on the SEC’s website at www.sec.gov or by calling the SEC at 1-800-SEC-0330.

Third-Party Scenarios and Frameworks

The scenarios discussed in this report from the International Energy Agency’s World Energy Outlook 2020 reflect a variety of potential circumstances based upon a number of assumptions about the future. The use or inclusion herein of a third-party scenario reflects those assumptions and outputs in connection with that scenario and is not an endorsement by Range of the accuracy of the scenario or its likelihood. Range intends to continue to evaluate other potentially relevant future outlooks and scenarios and how those may involve our business goals.

In addition, while we seek to align the information in the CSR with the recommendations of various third-party frameworks and standards, we cannot guarantee strict adherence to these framework recommendations. Furthermore, our reporting based on these frameworks is subject to change, particularly should there be revisions to the frameworks, changes in policy or applicable laws, changes in our business and other factors, some of which may be beyond our control.





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