

# 2022 ESG REPORT





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# About This Report

## Reporting Timeline

This environmental, social and governance (ESG) report provides an overview of ARC Resources Ltd.'s (ARC or the Company) 2021 ESG performance, highlighting key metrics, initiatives and accomplishments that were achieved from January 1 to December 31, 2021.

**On April 6, 2021, ARC and Seven Generations Energy Ltd. (Seven Generations) successfully combined to form the premier Montney producer and leader in responsible development (the Business Combination).**

Unless otherwise stated, this report includes historical performance data inclusive of the Business Combination. ARC's historical performance can be found on our [website](#).

## Scope

The scope of this document includes all businesses, assets, and partnerships that are owned and operated by ARC as at December 31, 2021. Unless otherwise noted, all dollar amounts are expressed in Canadian dollars; all references to "dollars," "\$" or "C\$" are to Canadian dollars. All amounts are provided on a before-tax basis, unless otherwise stated.

## Assurance

ARC maintains a detailed greenhouse gas (GHG) emissions inventory that covers emissions sources across the Company's operations. ARC's GHG emissions are externally verified in accordance with ISO 14064-3 and ISO 14065. Millennium EMS Solutions has provided a limited and reasonable level of assurance report on ARC's 2021 scope 1 and scope 2 emissions for its Alberta facilities. Stantec has undertaken a reasonable level of assurance verification of ARC's 2021 scope 1 and scope 2 emissions for its facilities in British Columbia (BC).

[Independent Auditors' Statements](#)

## Standards & Frameworks

Where applicable, indicators used in this report are aligned to internationally recognized standards and frameworks relevant to the energy industry. This report is aligned to the Task Force on Climate-Related Financial Disclosures (TCFD), Sustainability Accounting Standards Board (SASB) and Global Reporting Initiative (GRI) reporting frameworks.

In addition to this document, further information about our commitment to sustainability, performance and ESG-related policies and initiatives is available on our [website](#), [SEDAR profile](#), or via our additional reporting and disclosure:

[Information Circular](#)

[Annual Report](#)

[Annual Information Form](#)



# Corporate Profile

ARC Resources is a leading Canadian energy producer committed to delivering strong operational, financial and ESG performance.

Our diverse portfolio of resource-rich properties are located in the Montney - one of the most profitable plays in North America. Our investment-grade credit profile is supported by commodity and geographic optionality, and robust risk management practices around all aspects of our business.

Through the production of low-cost, low-emissions energy, our strategy is to be the best-in-class responsible energy producer.

## ARC at a Glance

- Largest pure-play Montney producer
- Canada's largest condensate producer and third-largest natural gas producer
- Operations based in northeast BC and northern Alberta
- Diverse transportation portfolio provides connectivity to North American markets



TSX Symbol

**ARX**



Current Production Profile

**~340,000**  
boe/day



Commodity Mix

**~60%**  
Natural Gas

**~40%**  
Crude Oil & Liquids



Our People

**~850**  
Permanent Employees  
+ Contractors



# Our Purpose & Values

## Our Purpose

ARC's purpose is "our energy creates a better world for everyone." Our purpose encompasses who we are, how we operate, how we make decisions, and the important role ARC plays in delivering the energy the world needs. This is even more critical today, as the world is challenged to meet its energy needs and take steps to address climate change. With ARC's leading ESG performance and the resources we have in place, we are well-positioned to play a meaningful role in creating a better world for everyone.

"Our energy" goes beyond the critical commodities we produce to include the passion and commitment of our people who deliver this work. It refers to how we respectfully engage with one another and with the stakeholders and Indigenous communities that neighbour our operations. Through our purpose, we strive to produce our energy in a sustainable manner, and contribute to a thriving environment, prosperous communities, and a better quality of life for all.

# Our energy creates a better world for everyone.

## Our Values

Our core values guide our actions and highlight what's important to us. These values are at the heart of every decision we make and every interaction we have because we believe how we work is just as important as the work itself.



### Respect

We care about each other, our communities, and the environment. We treat everyone with fairness and respect, and create a place where diverse perspectives and individual differences are valued.



### Integrity

We are honest and respectful in our words and our actions. We do the right thing, even if it's the harder thing to do, and we are accountable for our actions.



### Trust

We are good partners and always deliver on our promises. We are open and honest in our communications and seek to listen first to understand.



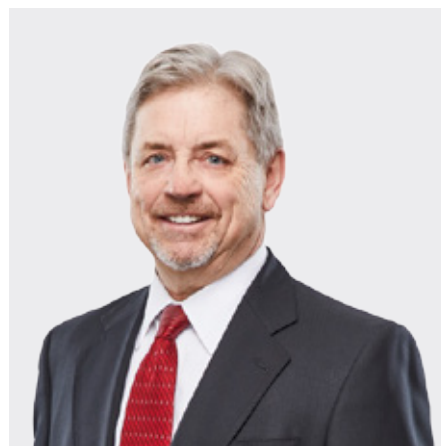
### Community

We recognize it is a privilege to work in the communities we do. We try to make a positive impact through our business activities, and ensure the impacts of our decisions are considered every step of the way.

# Message From Our CEO & Board Chair



**Terry Anderson**  
President & Chief Executive Officer



**Harold Kvisle**  
Board Chair

## Our strategy is to be the best-in-class responsible energy producer.

Responsible energy development and profitable returns have always defined how we do business at ARC. Today, this focus has become even more imperative. Global events over the past year have stressed the importance of having access to reliable and affordable energy. And while energy security is at the forefront, the broader discussion around lowering emissions and the energy transition continues. We believe Canadian energy, and the energy ARC produces, can help play a critical role in solving these complex challenges.

Over the long term, natural gas will be a pivotal component of the global energy mix. As energy demand increases worldwide, many nations are looking to natural gas as the affordable, reliable and cleaner option. In developing economies in particular, natural gas can displace more carbon-intense sources currently being used, meet growing energy demand, and reduce emissions on a global scale.

This presents a compelling opportunity for Canadian energy. Canadian natural gas is abundant, responsibly produced, low-cost, and low-emissions. This makes Canada an attractive trade partner for countries seeking to address security of supply, have a reliable back-up energy source, and advance their climate ambitions.

## Delivering on our purpose

Our strategy positions ARC as the energy producer of choice within this global context. Our organizational purpose – our energy creates a better world for everyone – serves as our north star. In 2021, we made great progress towards these aspirations. With the completion of the Business Combination,

we became Canada's largest producer of condensate and third-largest producer of natural gas. We established a larger, more relevant energy company with leading ESG performance. These characteristics, underpinned by our investment-grade credit rating, have opened the door to key opportunities for ARC.

In November 2021, we advanced our LNG strategy by entering into a long-term natural gas supply agreement with an LNG Canada proponent. We recently continued this momentum with a supply agreement with Cheniere Energy, Inc. on the U.S. Gulf Coast. These agreements will see our low-emissions natural gas help meet energy demand in international markets, and provide ARC with exposure to premium prices. This demonstrates it is possible to balance economic and environmental priorities, and ultimately, deliver a win-win-win for the environment, governments, and businesses.

Looking to the future, we will continue to advance our strategy to be the best-in-class responsible energy producer and deliver on our [organizational purpose](#). We remain disciplined in following our guiding principles and committed to the continuous improvement of our performance.



## Industry-leading performance

Following the Business Combination, we completed a formal materiality assessment and set new ESG targets to inspire and create accountability for realistic and measurable improvement. Our [environmental targets](#) prioritize reducing the carbon-footprint of every molecule we produce. In 2021, we maintained our leading GHG emissions intensity, and delivered one of the lowest methane intensities of our Canadian peer group. On an absolute basis, we have reduced methane emissions by 18 per cent since 2019.

Innovation and the application of clean technologies continue to be the major drivers behind our leading emissions performance, with electrification playing a significant role. Today, three of six of our facilities in northeast BC are powered with clean hydroelectricity from the BC grid. We also plan to electrify our Dawson III and IV facilities. Our sights are now set on becoming the lowest GHG emissions intensity upstream energy producer in North America. We encourage you to review our [emissions reduction approach](#) to learn how we intend to get there.

## Culture of caring and strong governance

Our people are key to the success of our Company. Since our inception, we have built a high-performance culture that prioritizes caring for one another and caring for the communities in which we operate. Safety is ARC's #1 priority, and we are extremely proud of our historical record of eight years without an employee lost-time incident. In 2021, we delivered our strongest [safety performance](#) on record, outperforming targets for total recordable injury frequency and lost-time incident frequency. This was a considerable achievement given the incredible year of activity our people faced as we integrated two companies and continued to navigate the COVID-19 pandemic.

Within the dynamic environment we are operating, sound governance and robust risk management is paramount to the long-term viability of a company. This has been a hallmark of ARC over our 26 years. [Diversity](#) is also important to ensure effective decision-making. In 2021, we surpassed our 30 per cent target for gender diversity at the Board level, achieving 42 per cent female representation. Management has done an excellent job identifying key risks, and putting in place measures that increase our resilience. As a result, as global demand for low-carbon energy increases, ARC is well-positioned to thrive in this environment.

## Proudly Canadian

Our business success to-date can be attributed to our talented team, whose contributions and support for delivering performance and sustainability stretch across the Company. On behalf of our Board of Directors and Management team, we'd like to thank our employees, shareholders, stakeholders, Indigenous communities, service providers and partners for their continued support. We are proud to produce Canadian energy and look forward to sharing our progress with you in the years to come.

Sincerely,

**Terry Anderson**  
President &  
Chief Executive Officer

**Harold Kvisle**  
Board Chair

# Our Approach to Sustainability

ARC's corporate strategy is to be the “Best-in-Class Responsible Energy Producer.”

Our approach to running a profitable, long-term business begins with our commitment to continuous improvement and delivering industry-leading performance in all aspects of our business. Through sustainable business results, innovation and responsible development activities, we create long-term value for communities, partners, employees and shareholders.



## Our Purpose

Our Energy Creates a Better World for Everyone

## Our Corporate Strategy

Best-in-Class Responsible Energy Producer

## Our ESG Framework

Environment / Social / Governance  
Focus Areas and Guiding Principles

## OUR ESG FRAMEWORK

To support ARC's broader strategy and risk management framework, we have established specific guiding principles to maintain leading ESG performance. These principles inform our approach to business activities and provide specific and measurable guidelines and targets to embed ESG practices across the organization.

### Environment

**Minimize our environmental impact, with a focus on being the lowest emissions intensity producer in North America**

ARC is a global leader in environmental stewardship. Through continuous improvement, innovation, and the application of clean technology, we are committed to further minimizing our environmental impact.

#### Guiding Principles:

- Provide low-carbon energy for the future
- Protect water resources – Secure, Reduce, Recycle
- Restore land

Goals & Targets

### Social

**Deliver shared value for our people, stakeholders, and Indigenous communities**

Our unwavering commitment to the health and safety of our people, contractors and communities is core to our approach. Through our operations, we aim to create positive and lasting impacts by providing meaningful employment, local contracting, and community support.

#### Guiding Principles:

- Be an industry leader in health, safety, and environmental practices and performance
- Form strong relationships with Indigenous communities
- Create shared value for society
- Develop a diverse, equitable, and inclusive workforce

Goals & Targets

### Governance

**Commit to sound governance practices and strong corporate leadership**

ARC's commitment to sound governance practices and strong corporate leadership guides our efforts and ensures alignment with the interests of our stakeholders.

#### Guiding Principles:

- Ensure appropriate focus and oversight of ESG strategies and practices
- Continually improve governance structure and processes
- Ensure a strong link between executive compensation and performance, including the assessment of ESG metrics

Goals & Targets

## Prioritized and Transparent Disclosure

Our ESG goals and targets will be supported by our policies and commitment to transparency. We will maintain ARC's position as an ESG leader through enhanced reporting and disclosure. Our reporting will be grounded in relevant reporting frameworks and standards, and our performance will be assessed through our participation in prioritized ESG ratings and in alignment with the Equitable Origin EO100™ Standard for Responsible Energy Development.

## Materiality Assessment

Our success requires critical input and feedback from stakeholders and Indigenous communities. Through the Business Combination, our asset base has grown and our stakeholder base has evolved. To reflect our combined business and better understand what matters most to our stakeholders and Indigenous communities, we partnered with a third-party independent consultant to conduct a formal materiality assessment to identify key ESG issues.

As part of our materiality assessment, we developed a list of candidate ESG topics as informed by global reporting frameworks (GRI, SASB, and EO100™), regulators third-party ratings agencies, media and trend analyses. We gathered feedback from a comprehensive group of internal and external stakeholders through interviews, focus group discussions, and surveys. Stakeholders engaged included employees, senior leaders, customers, regulators, and investors. These stakeholders prioritized key ESG topics with consideration of their impact on enterprise value, ARC's business activities, and risk management, as follows:



Given these topics emerged as key areas through the materiality assessment, we have ensured these key topics are addressed throughout the report. In addition, other important topics have been included in the report to align with internationally recognized standards and frameworks relevant to the energy industry.

### Other Topics to be Monitored

There are several other sustainability topics such as human rights, child labour, forced or compulsory labour, freedom of association and collective bargaining, cybersecurity, and others that are managed internally, but are either not covered, or simply only addressed at a high level in this report. Additional information on these topics can be found on our [website](#)





# Performance at a Glance

## Environment

**Innovation and the application of clean technologies continued to play a critical role in driving our leading environmental performance.**

Through instrument air and pneumatic conversions, waste heat recovery and flare reduction initiatives, we achieved an 18 per cent reduction in absolute methane emissions. Over the past decade, electrification of three of six of our natural gas processing facilities in northeast BC, resulted in approximately 275,000 tCO<sub>2</sub>e avoided each year. Through improvements made in our drilling and completions activities, we have reduced freshwater use by approximately 30 per cent.

<b>18%</b> Reduction in Absolute Methane Emissions Since 2019	<b>225,905</b> Trees Planted in 2021
<b>\$34 MM</b> Invested in Asset Retirement Activities 2020 - 2021	<b>0.37</b> Pipeline Incident Rate

Over the last year, we have continued to progress toward our ESG goals. Our performance is bolstered by environmental stewardship, a commitment to building meaningful relationships throughout our operations, and sound governance with strong corporate leadership.

[See full 2021 ESG Performance Data](#)

## Social

**ARC delivered strong health and safety results, while continuing to create value for our people, stakeholders and the Indigenous communities we work with.**

ARC outperformed its targets for total recordable injury frequency and lost-time incident frequency. In the community, we donated approximately \$1.7 million, supporting causes including mental health, children, education, and culture. Through strong succession planning, 94 per cent of leadership roles and 42 per cent of all roles were filled by internal candidates.

<b>0.36</b> Total Recordable Injury Frequency (employees and contractors combined)	<b>30%</b> of Leadership Roles Were Held by Women
<b>\$1.7 MM</b> Donated to Communities	<b>15</b> Scholarships Awarded to Indigenous Students through Indspire

## Business Ethics & Corporate Governance

**Sound governance practices and a focus on increasing board diversity resulted in positive momentum.**

Our target of 30 per cent female representation on the Board was exceeded with 5 of 12 directors or 42 per cent being women. Shareholders voted 96.68 per cent in favour of our approach to executive compensation, which includes the evaluation of performance against several ESG metrics.

<b>10 of 12</b> Directors Were Independent	<b>42%</b> Directors Were Women
<b>99%</b> Director Meeting Attendance	<b>96.68%</b> Shareholders Voted in Favour of Say-on-Pay



# Environment

ARC is committed to leading environmental stewardship, continuous improvement, and the responsible development of our assets. This is possible through innovation, the application of clean technologies, and collaboration amongst our people, service providers and industry partners.

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**18%**  
Reduction in Absolute  
Methane Emissions  
Since 2019

**225,905**  
Trees Planted in 2021

**\$34 MM**  
Invested in Asset  
Retirement Activities  
2020 - 2021

**0.37**  
Pipeline Incident Rate

# Guiding Principles

## Provide low-carbon energy for today and for the future

- **Create a resilient and sustainable** business with a lower carbon intensity profile.
- **Long-term focus** on natural gas as a transition fuel.
- **Pursue further economic opportunities** to electrify ARC's facilities and well sites to reduce emissions.
- **Drive innovation** through the application of clean technologies.

## Protect water resources – Secure, Reduce, Recycle

- **Continue to invest in water infrastructure** to ensure water security for future operations.
- **Explore new technologies** that will increase the amount of recycled water used in ARC's operations.

## Restore land

- **Reduce ARC's asset retirement obligations** by prioritizing activities based on the degree of environmental impact.
- **Identify opportunities for cost reductions of abandonment, reclamation, and remediation activities** to maximize the number of reclaimed sites.



# Goals & Targets



- Reduce ARC's corporate GHG emissions intensity and strive to be the lowest GHG emissions intensity upstream oil and gas producer in North America.
- Reduce GHG emissions intensity by 20 per cent by 2025, relative to the Company's 2019 baseline.
- Reduce methane emissions intensity by 20 per cent by 2025, relative to the Company's 2019 baseline.
- Implement a minimum of 70,000 metric tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) emission reduction projects by 2025.
- Reinvest up to 100 per cent of carbon offset revenues into clean technology development and application to further reduce our corporate emissions profile.
- Invest an average of \$15 million per year in asset retirement activities over the next 10 years to actively manage our corporate environmental liability.
- Reduce average abandonment, reclamation, and remediation costs by 10 per cent through the application of new technologies, area-based closure programming, and procurement strategies.



# Scenario Analysis

ARC leverages the comprehensive annual scenarios defined by the International Energy Agency (IEA) to stress test our business plans and align our long-term strategy. As an energy producer, we focus on supply and demand trends for all energy sources in North America and globally.

In our strategic planning, we consider the IEA's Stated Policies, Announced Pledges and Sustainable Development Scenarios, while analyzing our business, key risks, and long-term plans. By assessing our business plans under different climate scenarios, we can validate our corporate strategy and understand our resilience to climate-related risks.

All three scenarios support ARC's existing strategy as a low-cost, low-carbon intensity energy producer with high-quality assets that exhibit considerable natural gas resource growth potential. We expect considerable investment in both natural gas and crude oil will still be necessary to meet absolute demand, and we will continue to assess energy efficiency measures to reduce the emissions intensity of our assets.

## Stated Policies Scenario

ARC's base case aligns with the IEA's Stated Policies Scenario, which reflects current policies already in place, as well as those that are under development by various international governments. In this scenario, global energy demand is projected to increase by 27 per cent between 2019 and 2050. The majority of demand growth is expected to occur in emerging economies as policy initiatives and shifts in consumer behaviour keep North American demand relatively flat. Between 2019 and 2050, global demand for oil and natural gas is projected to grow by 7 per cent and 25 per cent, respectively.

By 2050, renewable energy is expected to comprise 26 per cent of global energy supply as compared to 11 per cent in 2019. Despite the growth in renewable energy production, the decline of coal and overall increase in energy demand will allow natural gas to maintain its current 23 per cent share of world energy production by 2050. In order to facilitate increased international gas movements, global liquefied natural gas (LNG) trade is expected to account for 60 per cent of internationally traded volumes by 2050, as compared to approximately 50 per cent today.

## Announced Pledges Scenario

The IEA's Announced Pledges Scenario assumes that all climate commitments and longer-term net zero targets made by governments around the world are fulfilled. In this scenario, global energy demand is expected to increase by 11 per cent between 2019 and 2050. Energy demand in emerging markets is projected to rise significantly, but large efficiency gains in North America and Europe will act as a partial offset.

By 2050, developed economies are expected to lead a 21 per cent decline in global oil demand as low-carbon sources penetrate the transportation sector. Global natural gas demand will continue to grow through 2025, then taper off gradually, falling a total of 5 per cent by 2050 as compared to 2019 levels. Renewable energy is projected to rise from 11 per cent of total global energy supply in 2019 to 37 per cent by 2050. This scenario requires low-carbon energy investment and financing to double over the next decade.

Despite a relatively flat global natural gas demand outlook, the Announced Pledges Scenario puts significant emphasis on a growing LNG trade. In this scenario, LNG is expected to account for 70 per cent of globally traded natural gas volumes by 2050.



## Sustainable Development Scenario

The IEA’s Sustainable Development Scenario assumes all net zero pledges are realized and the necessary policies and innovations to limit global median temperature increases to 1.7 degrees Celsius are achieved. This scenario depends heavily on the development of technologies that have yet to be developed or are currently not commercially viable. Alignment with the objectives of the Paris Agreement and universal energy access for a growing global population are also key tenets of this scenario.

Between 2019 and 2050, global energy consumption is projected to decline by nine per cent. Crude oil and natural gas demand levels begin to decline significantly after 2030, with total oil and gas demand declines reaching 51 per cent and 40 per cent respectively by 2050. To meet the growing energy needs of emerging economies, renewable energy production is expected to grow at an annual rate of five per cent, comprising 55 per cent of global energy supply by 2050. This scenario assumes dramatic investment and improvements are made in energy efficiency, electrification and broader low-carbon energy innovation.

## ARC’s Perspective

We believe there is a significant runway for global energy demand. Both developed and emerging economies will continue to call on all sources of energy supply to meet growing needs. In scenarios where global demand for oil and/or gas is projected to flatten or decline, considerable investment would still be required in cost and emissions-competitive sources of supply to replace declining production elsewhere.

As economies develop and geopolitical conditions evolve, we expect the growing emphasis on energy security will provide added support for natural gas demand from stable regions such as Western Canada.

LNG provides an effective means to bolster energy security and displace more carbon-intense sources like coal, currently being consumed in other countries around the world. ARC has entered into two long-term natural gas supply agreements to participate in the North American LNG export market, and will continue to seek opportunities resulting from anticipated increased global demand.

## Carbon Pricing

Governments have implemented carbon pricing to be an efficient signal across the economy to reduce GHG emissions. ARC regularly engages with provincial and federal governments on their approach to carbon pricing to ensure we efficiently achieve our shared goals of reducing emissions, foster continuous improvement and innovation, and ensure Canadians have access to a reliable and affordable energy supply.

The federal government has updated the national benchmark for carbon pollution pricing that sets Canada’s minimum carbon price from 2023 (\$65/tCO<sub>2</sub>e) to 2030 (\$170/tCO<sub>2</sub>e). [Our approach to emissions reduction](#) aids in lowering our tax liability as carbon pricing escalates, and guides us towards our goal of being the lowest-emissions intensity energy producer in North America.

# Climate Risks and Opportunities

## Climate Risks

The global energy system continues to undergo change, creating risks and opportunities for energy producers. To ensure the resilience of our business, we carefully consider these potential impacts in our planning and risk management activities. In alignment with TCFD’s recommendations, we have outlined several climate-related risks and opportunities, along with how we address them at ARC.

FACTOR	DESCRIPTION	OUR RESPONSE
Physical	There are potential physical risks resulting from climate change, which can be event-driven (acute), or longer-term (chronic). In some cases, there could be financial implications if there is a disruption to operations or supply chain. Physical risks include severe weather or natural events like floods, wildfires, extreme temperatures, and earthquakes.	<ul style="list-style-type: none"><li>• Consideration of severe weather events is incorporated into infrastructure design, construction, and operation.</li><li>• ARC has diversified operations across several major facilities over a large, geographic area which limits concentration risk.</li><li>• Annual business continuity planning, emergency response plans, and other contingency planning mitigate disruption risk to operations.</li></ul>
Policy and Legal	Governments are implementing policies, including carbon mechanisms, to reduce emissions which could increase the cost of producing more carbon-intensive resources. Organizations are being asked to adopt energy-efficiency solutions, greater water efficiency measures, and more sustainable land-use practices. The nature and timing of policy changes could have significant financial impacts on energy producers. In recent years, courts have seen an increase in climate-related litigation from community members, governments, insurers, shareholders, and public interest organizations.	<ul style="list-style-type: none"><li>• ARC proactively engages with all levels of government to position the Company as the best-in-class responsible energy producer, and as a ‘thought and action leader’ on the need to balance climate commitments, Indigenous reconciliation and a competitive business environment.</li><li>• Active participation in public policy dialogue, industry collaboration, and investor engagements.</li><li>• Integration of climate-related scenarios and federal carbon pricing policies into ARC’s enterprise-level risk assessments.</li><li>• We are proud to be one of the lowest emissions intensity producers among our peer group, and continue to improve our performance.</li></ul>
Technological	There is a rapid change of pace for technology in the energy industry, with new and emerging technologies in renewable energy, battery storage, energy efficiency, and carbon capture. Adoption of new technology will impact the competitiveness of some organizations, as end-users could demand improvements in the way products and services are produced. Uncertainties regarding the timing of technology development, deployment and costs are key in assessing technology risk.	<ul style="list-style-type: none"><li>• Partnerships with Clean Resource Innovation Network (CRIN), Natural Gas Innovation Fund (NGIF), and relevant industry associations to share best practices and support commercialization of emerging technologies.</li><li>• Pilot programs to assess risk and incorporate early and emerging technologies in existing operations before full-scale development and implementation.</li><li>• Proactive and early adoption of clean technologies to further reduce our environmental footprint, with dedicated internal resources evaluating CCUS, hydrogen and other new ventures.</li></ul>
Markets	Climate-related risks and opportunities are shifting supply and demand for certain commodities, products, and services, as end-users are bringing ESG considerations and performance into their decision-making.	<ul style="list-style-type: none"><li>• ARC’s diversified production portfolio helps mitigate rapid changes in consumer demand and is a reliable back stop when local infrastructure is impacted due to weather or constraints.</li><li>• Publication of reports and investor communications designed to disclose ESG performance and climate-related risks and opportunities.</li><li>• ARC uses a portfolio approach to actively manage hedge positions in changing market conditions.</li></ul>
Reputational	In the transition to a lower-carbon economy, organizations could encounter reputational risk related to ESG performance with stakeholders expecting positive contributions to climate challenges. For organizations, there are increased expectations of frequent and enhanced disclosure of positive contributions to a lower carbon economy.	<ul style="list-style-type: none"><li>• Proactive engagement and involvement of local stakeholders and Indigenous communities in operational decisions, including supporting local community initiatives and priorities.</li><li>• Transparent and consistent disclosure of our ESG performance, with tangible progress towards our ESG goals.</li><li>• Through electrification, clean technology adoption and other emissions reduction initiatives, ARC has continued to reduce the emissions intensity of our operations, delivering top-decile performance amongst our Canadian energy peer group.</li></ul>



# Climate Risks and Opportunities

## Climate Opportunities

FACTOR	DESCRIPTION	OUR RESPONSE
Resource Efficiency	Through innovation and continuous improvement, organizations have an opportunity to reduce costs through the identification of efficiencies. Some examples include production, transportation, water, waste management, recycling, and energy-efficient buildings.	<ul style="list-style-type: none"><li>• ARC will continue to dedicate resources to drive operational efficiencies in design, including instrument air, waste heat recovery, and electrification.</li><li>• Established water infrastructure throughout Alberta and BC to leverage produced water use and minimize freshwater use for operations.</li></ul>
Energy Source	Demand for low-emissions energy sources is expected to grow. This includes low-emissions crude oil and natural gas, as well as alternative energy sources including wind, solar, hydro, geothermal and biofuels. Electrification and carbon capture and storage provide important opportunities to displace emissions related to gas- or diesel-powered operations.	<ul style="list-style-type: none"><li>• Electrification of natural gas processing facilities at Dawson, Parkland, and Sunrise will result in annual carbon tax savings and reduced GHG emissions.</li><li>• Established a dedicated team to identify and lead emissions reduction projects. The team’s mandate is to evaluate opportunities that reduce ARC’s carbon and methane emissions across various operating facilities.</li></ul>
Products and Services	Consumer preferences are shifting to energy producers that provide lower carbon products with a focus on emission reductions efforts. By meeting this demand, organizations have an opportunity to improve their competitive position.	<ul style="list-style-type: none"><li>• ARC has received certification under EO100™ Standard for Responsible Energy Development for our northeast BC and Kakwa assets.</li><li>• ARC reinvests revenue from carbon offsets into technology aimed at reducing our environmental footprint.</li><li>• Evaluation and adoption of new technologies on an ongoing basis to drive emission improvements.</li></ul>
Markets	With a global shift towards a lower-carbon economy, new markets and alternative products present an opportunity to diversify current activities to ensure strong positioning in the energy transition. Collaborations with governments, industry peers, stakeholders, and Indigenous communities provide opportunities to explore new markets, partnerships and alternative products.	<ul style="list-style-type: none"><li>• Canadian energy can play a key role in displacing more carbon-intense sources of energy such as coal around the world through LNG exports.</li><li>• ARC has signed two long-term natural gas supply agreements with LNG proponents.</li><li>• With CRIN and NGIF, we are working closely with industry peers and leveraging government funding to advance the application of clean technologies across our field.</li><li>• Our diversified production portfolio helps mitigate rapid changes in consumer demand.</li></ul>
Resilience	By responding quickly to evolving market conditions, organizations can improve efficiencies, enhance production practices, and develop new products for broader markets. With adaptive capacity and a nimble approach, organizations can better manage risks and capitalize on opportunities as they arise.	<ul style="list-style-type: none"><li>• Feasibility assessments of external opportunities for emerging technologies and products that improve our performance.</li><li>• External partnerships with relevant industry associations to share best practices and support commercialization of emerging technologies.</li><li>• ARC's long-term, proactive approach to planning and understanding new ventures allows it to prepare and respond to changing market conditions.</li></ul>

# Climate Change Strategy

As a responsible energy producer, we have an important role to play in the transition to a lower-carbon economy. Through the production of lower-emitting fuel sources such as natural gas, we can support the world’s climate ambitions and ensure energy security, affordability, and reliability.



## Emissions Reduction Approach

ARC takes a multi-pronged approach to emissions management. At a high level, our approach is focused on the strategic evaluation of current and emerging technologies to proactively meet or exceed regulations (REDUCE), the electrification of our facilities (SHIFT), and the generation of carbon credits and offsets to fund additional environmental initiatives (OFFSET).



Through waste heat recovery, more than **35,000 tCO<sub>2</sub>e** was avoided in 2021.



## Reduce: Clean Technology

Our primary focus is to reduce our scope 1 emissions through the application of clean technologies, process optimization, low-emissions facility design, and retrofitting existing assets.

Clean technologies including waste heat recovery, water recycling, electricity optimization and lower carbon fuel and engine conversions, play an important role in our operations. The waste heat recovery system at our Dawson III and IV facilities utilize the exhaust heat from turbines to provide heat throughout our facilities. By capturing and reusing this heat, more than 35,000 tCO<sub>2</sub>e was avoided in 2021.

The success of our emissions reduction strategy is dependent upon the development of technology on a commercial scale. We have identified several technology pilot projects which will be progressed to further our understanding of their operability, scalability, cost and overall impact to environmental performance.

Moving forward, we will continue to work closely with technology providers, governments, industry associations, service providers and peers, to evaluate the feasibility and potential impact of new technology applications across our operations.



## Shift: Electrification

Following our focus on reduction, we look to shift emissions from scope 1 and scope 2 through electrification. Connecting to the BC provincial grid provides access to renewable hydroelectricity which has contributed to the leading emissions performance of our northeast BC assets.

Our focus on electrification began in 2011, with the electrification of our Dawson I and II facilities. Over the last decade, we have continued to electrify additional facilities by adding infrastructure to our Parkland and Sunrise facilities including a substation. The investments we have made, combined with access to renewable electricity, have resulted in infrastructure that can deliver industry-leading, low-emissions production.

Moving forward, we will continue to increase electrification across our asset base, from small-scale projects like the conversion of a natural gas-fired compressor at our Parkland 3-9 asset to full facility conversions or new builds.

### Learn More

- [Emissions Management](#)
- [ESG Leadership: Leading Emissions Performance in Northeast BC](#)



## Offset: Carbon Credits

For emissions that cannot be eliminated or shifted due to operational safety concerns and/or economic limitations, offsets are required to achieve low emissions. Through facility design and the adoption of technology, ARC generates carbon offsets, the proceeds of which we aim to reinvest in improving environmental performance.

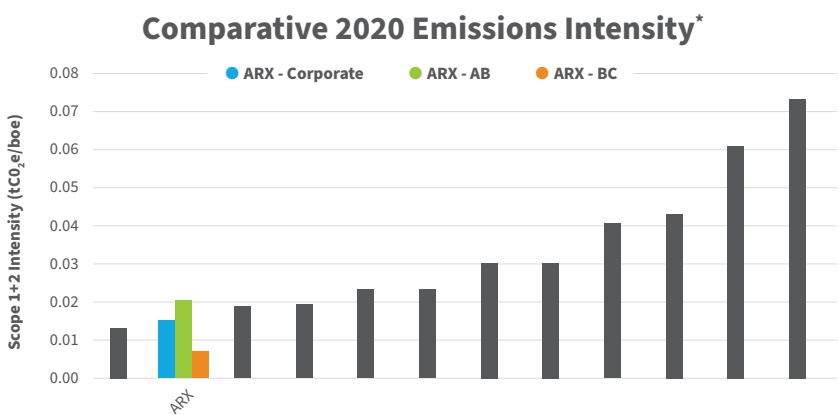
Over the past decade, projects such as instrument air conversions, high-to-low bleed pneumatic conversions, waste heat recovery and electrification have generated carbon offsets. All carbon offset projects are verified through an independent third-party, measuring the reduction or removal of GHG emissions from a certified reduction project.

In 2020 and 2021, we generated approximately \$15.8 million in carbon offset revenue. These dollars will be used to fund future emissions reduction projects, that may include carbon capture and storage, power generation, and additional electrification.

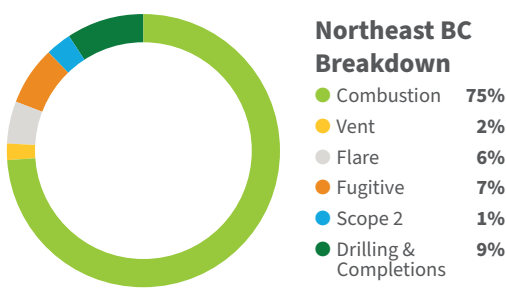
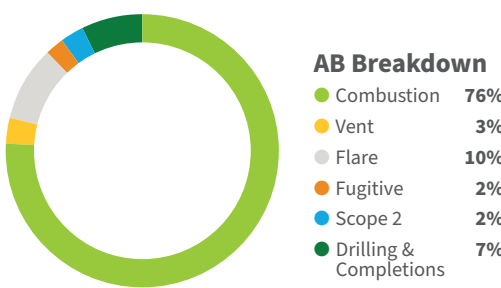
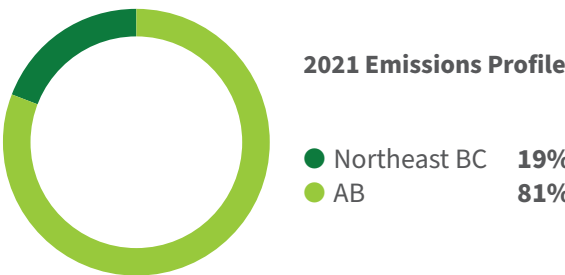
**In 2020 and 2021, we generated approximately \$15.8 million in carbon offset revenue.**

# Emissions Management

At the core of our efforts to reduce the environmental footprint of our activities is emissions management. We are proud to have one of the lowest GHG emissions intensities in our Canadian peer group.



\*Source: Publicly available information. Peer group includes: BIR, CNQ, CPG, CVE, NVA, PEY, POU, OW, TOU, VET, WCP



## Scope 1 Emissions

Scope 1 emissions comprise approximately 98 per cent of our emissions profile, which are generated primarily by combustion, flaring, venting, fugitive emissions, drilling and completions activities. In 2021, our scope 1 emissions remained relatively flat compared to 2019, while our absolute methane emissions decreased by 18 per cent. This decrease was driven largely by instrument air conversions, pneumatic conversions, waste heat recovery, and flare reduction initiatives.

In BC, all new facilities and well pads are designed with future emissions reduction opportunities in mind, and process optimization built in. This includes electrification which historically has resulted in significant emissions reductions at ARC. In addition, new facilities and well pads will include zero-vented pneumatic designs.

In Alberta, we are developing an emissions reduction plan that includes retrofitting existing assets. The implementation of this plan will require broad cooperation and engagement with government and industry partners.

## Combustion Emissions

Approximately 75 per cent of ARC's scope 1 emissions are generated from combustion. Through electrification, our combustion emissions are significantly reduced in northeast BC, which positively impacts scope 2 emissions. In 2023, we anticipate completing the electrification of our Dawson III and IV facilities, which we estimate will reduce emissions by approximately 125,000 tCO<sub>2</sub>e/year.

Currently, we are developing a strategy to reduce our scope 1 combustion emissions for our Alberta assets, including Kakwa and Ante Creek. New facilities are being designed to reduce combustion emissions using higher efficiency engines, waste heat recovery systems, centralized heat medium boilers, and process optimization. Facility designs also contemplate future emissions reduction opportunities, including carbon capture and electrification.

In 2021, absolute methane emissions decreased by **18%** since 2019.



### Flaring Emissions

Flaring emissions account for nine per cent of our total emissions. At our Kakwa asset, we are optimizing our systems to minimize overall flaring activity. Focusing on 11 facilities with routine flaring sources, this resulted in a reduction of approximately 14,000 tCO<sub>2</sub>e emissions in 2021.

Moving forward, the learnings from the optimization of these 11 locations will be used to develop a flaring standard that can be applied throughout our asset base. This standard will be a part of low-emissions design on greenfield developments, and used to identify retrofiting opportunities on existing facilities.

To further reduce our overall flaring, we are assessing the use of a Vapor Recovery Unit (VRU) to redirect product that would typically be flared or vented. These captured emissions would be reintroduced into the process, allowing for lower flaring emissions.

### Drilling & Completion Emissions

Drilling and completions emissions account for eight per cent of our total emissions. To offset emissions related to the use of diesel in our drilling and completions activities, we have adopted the use of bi-fuel engines. These engines utilize both diesel and natural gas, with the switch to natural gas occurring once the required load threshold has been met. The ability to displace diesel with natural gas has generated significant fuel cost-savings and has reduced emissions by approximately 15 per cent on a per pad basis.

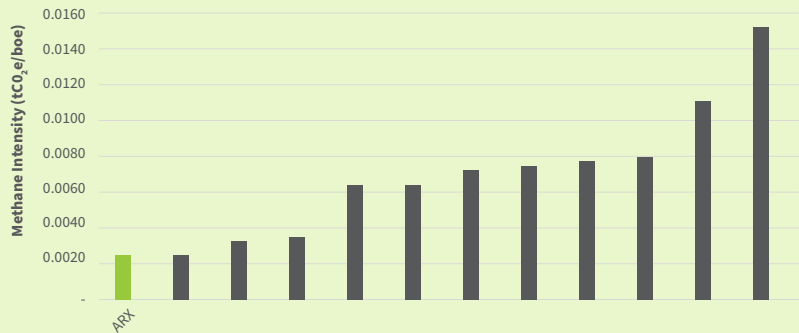
We continue to optimize bi-fuel operations through enhanced data collection and analytics with the intent of maximizing natural gas substitution rates. Looking ahead, we are evaluating new technologies including electrification and batteries that will stabilize load profiles and further reduce emissions. In addition, as part of our development strategy, pipeline infrastructure will be built to new well pads prior to drilling and completions activities. This allows for the use of natural gas in place of diesel, and eliminates flaring of new wells by directing natural gas produced during testing back to processing facilities.

Displacing diesel with fuel gas has reduced emissions by approximately **15%** per pad.

### Methane Management

ARC has one of the lowest methane emission intensities across its Canadian peer group.

Comparative 2020 Methane Emissions Intensity\*

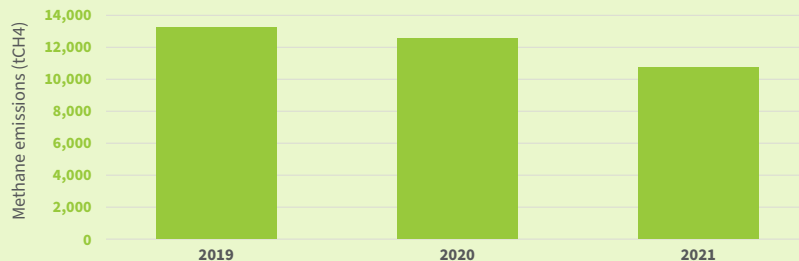


\*Source: Publicly available information. Peer group includes: BIR, CNQ, CPG, CVE, NVA, PEY, POU, OVV, TOU, VET, WCP

The majority of our methane emissions are generated through incomplete combustion from fuel consumption and flaring. Emissions reduction projects that target methane sources are able to realize significant benefits on a CO<sub>2</sub>e basis, as methane has a global warming potential 25 times higher than CO<sub>2</sub>. Initiatives that focus on reducing fuel consumption, electrification and flaring optimization result in tangible methane emissions reductions. Additionally, we are undertaking several initiatives aimed to reduce methane emissions from both venting and fugitive sources.

Since 2019, ARC has reduced its absolute methane emissions by 18 per cent, while simultaneously increasing production by five per cent. Future electrification opportunities will further reduce methane and support ARC's pursuit of both our corporate methane intensity reduction target and the federal government's long-term target to reduce methane emissions by 75 per cent.

Corporate Methane Emissions





## Fugitive Emissions

Fugitive emissions account for three per cent of our total emissions. Through facility design and continuous monitoring, we aim to avoid and mitigate any potential for the unintentional release of fugitive methane emissions.

In Alberta, we operate an alternative Fugitive Emissions Management Program (Alt-FEMP) across our Kakwa asset. Enlisting the help of aerial surveying along with ground-based comprehensive surveying, we have improved our methane leak detection through Alt-FEMP. Our program utilizes two key technologies, Optical Gas Imaging (OGI) Camera and Gas Mapping Light Detection and Ranging (LiDAR), to scan ARC's infrastructure for trace methane emissions.

By implementing the Alt-FEMP program, we have improved our integrity and inspection programs with data to prevent or minimize future leaks. This supports our commitment to transparency and continuous improvement, particularly for mitigating environmental impacts.

At 14 facilities in Alberta and BC, we have deployed Continuous Emissions Monitoring networks to mitigate potential leaks. Partnering with Qube Technologies, this program brings artificial intelligence and continuous monitoring to our emissions management program. These units will continuously scan the facility for methane emissions, using inputs from the Qube sensor system and air quality data including wind direction. This information will be used to reduce repair times once a leak is detected and support further methane reductions.



## Vented Emissions

Vented emissions account for three per cent of our total emissions. ARC strives to reduce the volume of vent gas emitted within our operations. Vented emissions are intentional uncombusted methane sources that occur as part of daily operations. On a monthly basis, internal venting verifications are conducted to identify and explore vent reduction opportunities. In 2021, we conducted a thorough pneumatic inventory, converted 99 high-bleed pneumatic devices to low-bleed, converted eight facilities to instrument air, and tied three compressor seal vents to flare. These efforts reduce vented emissions by 7,000 tCO<sub>2</sub>e/year.

In 2022, we are conducting approximately 400 high-bleed pneumatic conversions, tying in approximately 10 additional compressor seal vents to a VRU, and exploring new technologies to eliminate vented methane emissions at our existing well pads. New facilities and well pads are also being installed with zero-vented methane designs to further reduce our impact.

## Instrument Air Conversions

At select legacy facilities, our instrument systems use high-pressure natural gas to power pneumatic valves and machinery which results in vented methane emissions. To mitigate this, air compressors are being installed to replace this high-pressure natural gas, and eliminate methane emissions associated with site operations. In 2021, instrument air conversions accounted for more than 175,000 tCO<sub>2</sub>e avoided.

In 2021, instrument air conversions accounted for more than **175,000 tCO<sub>2</sub>e** avoided.



## Scope 2 Emissions

Scope 2 emissions comprise approximately two per cent of our total emissions profile, which include indirect emissions resulting from purchased electricity based on a grid average intensity. In BC, 94 per cent of the provincial grid is powered by hydroelectricity. As a result, our efforts to reduce scope 2 emissions have focused primarily on the electrification of our northeast BC field. To-date, we have electrified three of six of our major facilities at Greater Dawson and Sunrise, which were previously powered by natural gas-fired turbines.

Electrification has led to approximately 275,000 tCO<sub>2</sub>e avoided per year – the equivalent of taking 60,000 cars off the road. To further reduce GHG emissions, we plan to electrify our Dawson III and IV facilities and additional well sites across our asset base.

Through electrification, we avoided approximately **275,000 tCO<sub>2</sub>e** per year – the equivalent of taking 60,000 cars off the road.

## Scope 3 Emissions

Scope 3 emissions include all indirect emissions (not included in scope 2 emissions), that occur both upstream and downstream of a company's value chain. Currently, we are exploring indirect emissions associated with our value chain. Our objective is to better understand our upstream and downstream scope 3 emissions to define tangible ways to reduce these indirect emissions.

## Air Emissions

### Reduction Initiatives

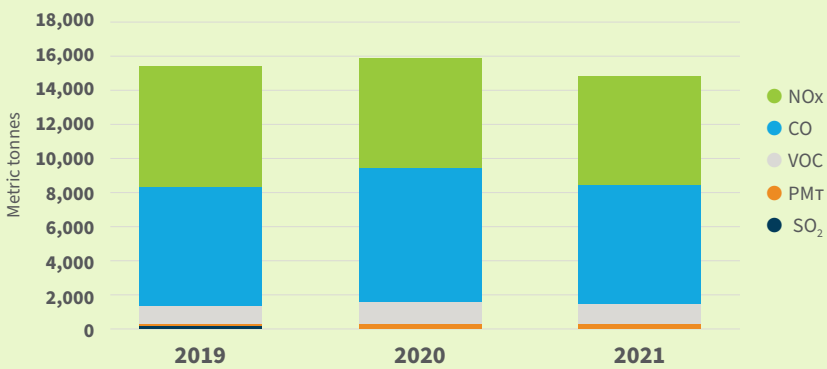
Atmospheric emissions from our operations include sulphur dioxides (SO<sub>x</sub>), nitrogen oxides (NO<sub>x</sub>), volatile organic compounds (VOCs), and particulate matter (PM<sub>10</sub>). These emissions arise largely from combustion processes, mainly fuels consumed in production activities, flaring operations and from company vehicles. In support of protecting regional air quality, ARC has undertaken several initiatives aimed to reduce these emissions, including acid gas disposal, rich burn engine conversions, fuel switching from diesel to natural gas, and process optimization such as waste heat recovery.

### Emissions Monitoring

We are an active member of the Peace Airshed Zone Association (PAZA) which aims to create transparent collaboration with members to provide solutions to address local air quality concerns. PAZA is a non-profit, multi-stakeholder organization that conducts ambient air quality monitoring in northwestern Alberta. ARC conducts additional ambient air quality monitoring at multiple regulated facilities. This information is collected monthly and utilized to ensure alignment with Alberta's Ambient Air Quality Objectives.

In addition to provincial regulations, the federal Multi-Sector Air Pollutants Regulations (MSAPR) aims to limit the amount of NO<sub>x</sub> emitted from fuel-fired boilers, heaters and engines. In preparation to meet federal MSAPR requirements in 2026, ARC has completed a detailed inventory, conducted required air sampling, and initiated overhauls and upgrades of its existing boiler, heater and engine fleet.

### Air Emissions Trend



# Water Management

We recognize the importance of protecting water resources. Over the last several years, we have taken steps to improve our water recycling capabilities and minimize freshwater use across our asset base.

## Our Approach

Water management at ARC is focused on three core areas: enhancing water security through infrastructure investments (SECURE), reducing freshwater use in our drilling and completions activities (REDUCE), and reusing produced water (RECYCLE).



### Secure: Water Infrastructure

Since 2016, we have invested more than \$125 million in water infrastructure to secure water required for our operations. These investments provide long-term, sustainable solutions to address challenges with water management across our asset base.

Throughout our Kakwa field, we have constructed a water trunk line that connects water resources to our operations. Currently, the water line supports approximately 80 per cent of sites in the area, displacing up to 5,800 m<sup>3</sup> per day of water that would otherwise be trucked in. In addition to reduced traffic from the Kakwa trunk line, we have raised sections of the pipe to reduce disruption to wildlife corridors. Small bridges have also been installed to enable amphibians and small mammal access, as needed.

Another way we effectively manage freshwater use and emissions related to transporting water to site, is through water storage reservoirs. Freshwater storage ponds at our Sunrise and Dawson facilities in northeast BC store water pumped from the Kiskatinaw River during high run-off periods, and have sufficient capacity to support annual development activities. In Alberta, we have six freshwater reservoirs that store water taken from the Kakwa River during high flow run-off periods for year-round use in our Kakwa operations.

The Kakwa trunk line supports **80%** of sites in the area, displacing up to **5,800 m<sup>3</sup>** of water delivered by ~190 trucks per day.

### Reduce: Drilling & Completions

Water is critical to our operations, and we aim to reduce our water use each year through innovation and the use of emerging technologies. Optimization of our hydraulic fracturing design and drilling fluids significantly reduced water usage in our drilling and completions operations.


We developed a solution to reduce freshwater usage in our Kakwa-area drilling operations through the use of produced water. Through this process, we have reduced our freshwater use by approximately 5,000 m<sup>3</sup> per year, as well reduce our use of oil-based fluids on our lateral sections. This simplifies our drilling operations and lowers costs, while reducing our reliance on freshwater in the Kakwa area.

In addition, we have reduced our freshwater use by approximately 30 per cent through hydraulic fracturing design optimization in our completion activities. By optimizing our overall chemistry and operating procedures, we continue to increase produced water recycling while decreasing overall water use in this area of the business.



## Recycle: Produced Water Recycling

Water treatment and ultrafiltration processes have enabled greater reuse of produced water from energy production, resulting in reduced freshwater use. In 2021, we reused more than 300,000 m<sup>3</sup> of produced water in our operations through recycling and filtration processes. At our Parkland facility, our water recycling hub uses settling tanks to remove contaminants from produced water. Produced water flows through a filter to remove any remaining oil droplets and suspended solids, ensuring high-quality output with no risk of a negative interaction with chemicals used in our completions activities. Once the water has undergone full treatment, it can be reused, resulting in enhanced water recycling capabilities.

In partnership with Swirltex Inc., we are piloting an ultrafiltration clean technology project that is expected to enhance our water recycling capabilities at Parkland. [Read more about this project](#) 

More than **300,000 m<sup>3</sup>** of produced water was recycled in 2021.

## Industry Collaboration

In Alberta, ARC participates in the Foothills Stream Crossing Partnership which is a conduit for industry and the Alberta Energy Regulator (AER) to work together on water issues. More than 40 companies representing 1,300 crossings have worked together to protect watersheds through the allocation of resources to safeguard high-risk crossings.



# Asset Integrity

Maintaining the integrity of our pipelines and associated infrastructure is critical in preserving the safety of our operations and protecting the environment. Prevention is the first line of defence.

## Asset Integrity Program

Our robust and comprehensive asset integrity program includes several key measures to safeguard the environment and our assets. These include preventative measures like corrosion inhibitors and frequent internal pipeline inspections, along with routine activities including pipeline right-of-way surveillance and ongoing monitoring.

### Program Overview

- Smart pigging to conduct internal pipeline inspections
- Pipeline right-of-way surveillance
- Application of corrosion inhibitors
- Water flow and flood monitoring tool with real-time data
- Ongoing geotechnical and hydro-technical monitoring
- Evaluation of leak detection technologies

Our facilities and assets are designed, maintained and operated with a primary focus on process safety and asset integrity to realize safe, reliable operational performance. ARC's portfolio management strategy and recent divestiture of aging assets have significantly lowered the risk associated with older infrastructure. ARC is committed to public and environmental safety, through investment in maintenance and asset integrity projects. In 2021, we invested more than \$7 million in our maintenance and asset integrity program.



Since 2017, ARC has increased its daily average production by **~150%**, while reducing net well count by **45%**. This has resulted in a significant reduction in corporate liability.

## Pipeline Integrity

By owning and operating our infrastructure, we have more direct control over the integrity of our assets. We proactively map the risk profile of our facilities and prioritize the removal or upgrade of legacy infrastructure. Recently, we have increased the frequency of monitoring through inline inspections and integrity digs. Using incident findings and evaluating industry trends, we continue to advance our asset management program.

For water crossings, our inspection activities are more frequent to validate pipeline positioning and water flow conditions. Using a water flow and flood tool, we leverage real-time data to prevent issues before they occur. Through Internal Mapping Units and smart pipeline inspection gauges (PIG), we use geospatial mapping to better understand asset integrity risks.

## Spill Management

We recognize that spills and leaks have the potential to impact local communities and can reduce biodiversity through habitat loss. In the event of a spill, our comprehensive procedures and training programs ensure a timely response, prioritizing the safety of our people, the community, and the environment. In 2021, we had 11 reportable spills with three pipeline spills, totalling 577 m<sup>3</sup> of released product. Due to a ramp-up in our smart PIG program and preventative maintenance, we were able to achieve a pipeline incident rate of 0.37 incidents per 1,000 kilometres of pipe.

In addition, in partnership with Western Canadian Spill Services, we have access to a network for control points in water systems across our asset base. We have also established 85 control points to minimize any environmental impacts associated with a potential release.



# Biodiversity

Protecting and promoting biodiversity near our operations is a priority for us. We mitigate potential impacts of our operations with careful planning, continuous monitoring and a robust asset integrity program.

In our development planning, we find opportunities to minimize our land disturbance. Through multi-well pad design, we have significantly reduced the land required for our operations. We work closely with regulators, local stakeholders, and Indigenous communities to understand limitations and considerations for our activities.

Following construction of facilities and well pads, we typically re-establish some of the surrounding land to reduce surface land disturbance and soil erosion in the area.

[Learn more about progressive reclamation](#)



## Monitoring

Through environmental site assessments, we monitor local wildlife, plant species, and natural water crossings in our field. To ensure habitats are kept intact, we construct a series of bridges, culverts, and wildlife corridors. In partnership with Halfway River First Nation (HRFN), we have installed wildlife cameras along key wildlife corridors. Through this program, HRFN's land office can monitor how local wildlife is adapting to development in the area.

[Learn more about this partnership](#)

## External Research

In partnership with the Alberta Biodiversity Monitoring Institute (ABMI), ARC supported a preliminary assessment of the biodiversity of the Kakwa region in northwest Alberta. Focusing on forestry and energy industry activities, the assessment evaluated the area for biodiversity impacts and land cover. Read more about the study and related findings on [ABMI's website](#) .



# Asset Retirement & Reclamation

Our goal is to return impacted land to its original or equivalent state once operations are complete. This involves working closely with stakeholders and Indigenous communities, front-end design that minimizes impacts, and a proactive well abandonment and reclamation program.

## Progressive Reclamation

When developing our projects, we minimize disturbance, reduce our environmental impact and protect biodiversity. To effectively manage land disturbances related to our operations, we have adopted several best-in-class practices, including progressive reclamation and multi-well pad sites.

Progressive reclamation is the process of partially reclaiming disturbed areas that are no longer required for ongoing operations. By re-establishing some of the land around a well pad, we can reduce the surface land disturbance, while minimizing soil erosion in that area. In addition, the overall footprint in an area will be assessed to identify opportunities to return land to pasture or field, which can be used for agricultural purposes.

## Dormant Site Regulation

### Liability Management in BC

Under the BC Oil and Gas Commission's Comprehensive Liability Management Plan, there is a renewed focus on returning inactive sites to their pre-activity state at a faster rate. To achieve this, producers are required to meet defined timelines for inactive site clean-up.

In 2021, we made significant strides to exceed required timelines for dormant site liabilities. By December 31, 2021, licensees were obligated to abandon 30 per cent of dormant wells to meet the first stage gate. We exceeded this requirement early, abandoning 37 per cent of our dormant wells in BC before the end of the year. The next stage gate is December 31, 2024, which requires 40 per cent of dormant wells restored through reclamation earthworks. At the end of 2021, more than 50 per cent of our dormant sites had been restored, exceeding the requirement three years early. Moving forward, we have a comprehensive plan to continue exceeding dormancy stage gates requirements.

## Liability Management in Alberta

In Alberta, we opted into the voluntary Area-Based Closure (ABC) program in 2020. This provided producers with the option to manage liabilities in a specific geographic area, instead of managing liabilities by lease expiry dates. By encouraging industry-wide collaboration and decreased equipment mobilization, both industry and Albertans benefit from improved closure cost-efficiency and reduced dormant inventory.

Due to the COVID-19 pandemic, the AER suspended 2020 targets to provide producers with an additional year to meet targeted spend requirements. Despite this suspension, ARC exceeded the target before the end of the first quarter of 2020.

In 2021, we reported a spend 40 per cent higher than the target for the year. When combined with the carry-forward amount from 2020, more than double the inactive liability reduction target was spent. Going forward, the AER has implemented mandatory and voluntary spend targets. These programs and outcomes are similar in nature to the previous ABC program. Currently, we are on-pace to meet or exceed our mandatory spend targets.





# Accelerated Reclamation

In recent years, ARC has aimed to bring sites to closure quicker to further minimize our liability. By ensuring sites are not sitting idle, we progress sites through to full reclamation faster. We anticipate our accelerated reclamation program will reduce cycle-time from five to seven years to approximately three to four years.

In 2021, we progressed 34 locations through downhole abandonment to vegetation monitoring, with a broader program planned to leverage the initial success. Currently, approximately 60 per cent of our reclamation and remediation portfolio is in the vegetation management or later stage, meaning a large portion of our sites are close to reclamation certification.

152

Hectares of Land Reclaimed in 2021

225,905

Trees Planted in 2021

# Industry Partnerships

ARC continues to be an active member of industry partnerships focused on managing liability obligations for Canadian energy producers. We actively participate on two Canadian Association of Petroleum Producers committees including the Senior Liabilities Issues Committee and the Western Canada Reclamation and Remediation Committee. Stewarded by the Petroleum Technologies Alliance Canada, we also serve as a technical champion for several research projects. These projects have broad industry benefits by providing further optionality with respect to wellsite assessment and, ultimately, closure.

Through organizations like Alberta’s Orphan Well Association and BC’s Orphan Site Reclamation Fund, we support reclamation and remediation efforts to minimize overall impacts to landowners. By collaborating with industry peers and governments, we are working collectively to reduce cumulative impacts through coordination of activities and knowledge sharing.



## Status of Operated Wells

Active	74%
Inactive	14%
Abandoned	12%

*An operated well is an asset for which ARC is the party responsible for operating the asset, and typically is also the licensee (owner).*

# ESG Leadership: **Applying Clean Technology**

Significant environmental progress has been achieved through the adoption of clean technology. Innovation has led to lower emissions, improved water management, and enhanced asset integrity.



## **Reducing Emissions through Continuous Monitoring**

Through Qube Technologies' sensor system, air quality around select ARC sites will be constantly measured, providing real-time data that supports remediation efforts and lower fugitive methane emissions. This will enable ARC to meet or potentially exceed provincial and federal methane targets.

In collaboration with Qube and Clean Resource Innovation Network (CRIN), we are introducing this high-impact digital solution to our current emissions monitoring program. With the help of artificial intelligence, Qube's system analyzes field data by combining gas measurements, atmospheric data, and other operational inputs to locate and quantify different leaks by emission source and severity. Real-time data allows immediate response from field teams to address issues, leading to fewer fugitive emissions across our field.

[Read more about ARC's partnership with Qube](#)



## **Preventing Fugitive Methane Emissions**

Enlisting the help of aerial sensors along with ground-based comprehensive surveying, we have improved our methane leak detection through an Alternative Fugitive Emissions Management Program (Alt-FEMP). Our program utilizes two key technologies, optical gas imaging (OGI) camera and gas mapping light detection and ranging (LiDAR), to scan our infrastructure for trace methane emissions.

By implementing the Alt-FEMP program, we have improved our integrity and inspection programs with real-time data to prevent or minimize future leaks. This supports our commitment to transparency and continuous improvement, particularly for mitigating environmental impacts.



## Improving Produced Water Recycling

In partnership with Swirltex Inc. and CRIN, we will be piloting enhanced produced water recycling capabilities. The Swirltex system is housed in modular containerized units, which offers a mobile and flexible solution to support site-specific configuration. Water quality is predictable and stable, allowing for enhanced water recycling and decreased freshwater use in oil and gas operations. Through a single Swirltex unit, it is anticipated approximately 300,000 m<sup>3</sup> of produced water can be treated annually.

Conventionally, produced water is trucked offsite for treatment or disposal into depleted reservoirs. Through this technology, water treatment occurs on location through an ultra-filtration process, resulting in reusable recycled water from our operations and an overall reduction in freshwater use.

[Learn more about ARC's partnership with Swirltex](#)

## Industry Partnerships

Technology advancement and innovation have greater impacts when industry collaborates on solutions. We are proud to be a member of several industry partnerships and working groups aimed at driving our industry forward.

## Natural Gas Innovation Fund

In 2021, ARC committed to investing in NGIF Cleantech Ventures (the Fund). The Fund's investment focus is on existing natural gas production, transmission, distribution, storage, and end-use applications, as well as projects that will lead to the expanded production of emerging fuels such as renewable natural gas and hydrogen.

[Read about innovation and clean technology at ARC](#)

## Montney Producers Group

With a significant footprint in the Montney, ARC was a founding member of the Montney Producers Group. We also participate in the Montney Water Operators Group which includes several northeast BC producers. The primary objective of these groups is to coordinate activities to limit impacts and profile technologies that can address industry-wide challenges.





# Social

In communities where we operate, we strive to create positive benefits through employment, local contracting, and community support. At the core of our business, is a deep care for people and a strong safety culture.

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0.36

Total Recordable Injury Frequency  
(employees and contractors combined)

30%

of Leadership Roles Were Held by Women

\$1.7 MM

Donated to Communities

15

Scholarships Awarded to Indigenous Students Through Indspire



# Guiding Principles

## Be an industry leader in health, safety and environmental practices and performance

- **Continue ARC's strong focus on safety**, ensuring employees and contractors have the tools they need to develop and operate our assets in the safest manner possible.
- **Evaluate and implement new technologies** that improve personal and process safety.

## Form strong relationships with Indigenous communities

- **Recognize the rights of Indigenous Peoples** and ensure appropriate consultation and engagement for all development projects.
- **Identify opportunities** to create employment for local Indigenous community members.

## Create shared value for society

- **Provide meaningful employment opportunities** and work for local suppliers and partners.
- **Support the communities in which ARC operates** through community investment, employment, taxes, and royalty payments.

## Develop a diverse, equitable and inclusive workforce

- **Create and maintain a workforce that is inclusive, equitable and diverse**, which requires upfront efforts to identify, recruit, retain and train.
- **Ensure ARC has the best talent to deliver results** and maintain our strong culture of performance.
- **Continue to pursue gender diversity** targets at the Board and Management levels with appropriate processes and oversight.



# Goals & Targets



- Deliver industry-leading safety performance in total recordable injury frequency (TRIF) and lost-time incident frequency.
- Reduce incidents with the potential to seriously harm people and the environment.
- Acknowledge the role of business in reconciliation and form meaningful relationships with Indigenous communities where we operate.
- Continue to demonstrate leadership through active engagement with stakeholders and impacted Indigenous community members on subjects such as noise mitigation and induced seismicity.
- Commit a minimum of \$3 million annually to community development initiatives.
- Create a formal strategy to build a diverse and inclusive workforce and strong culture of belonging.

# Workforce

## Health & Safety

The health, safety and well-being of our employees, contractors, and the communities in which we operate is our main priority. Safety is embedded in our core values and fundamental in delivering our organizational purpose. Our commitment to safety excellence begins with our strong safety culture, and is backed by robust systems and programs.

### Safety Culture

People are at the core of ARC's safety culture. Our people-centric approach is underscored by our Company culture of caring and high-performance. While we believe safety starts at the top, we value strong safety leadership at all levels of the organization. Through open communication, trust and respect, we strive to create an environment where employees and contractors feel supported to do their best work safely.

Our objective is to achieve industry-leading health and safety performance – continuous improvement is critical. Last year, following the Business Combination, we conducted a safety perception survey to better understand how our people viewed safety at ARC. The feedback identified three focus areas: 1) stronger systems, 2) trained and empowered teams, and 3) visible and accountable safety leadership. These focus areas will inform our efforts moving forward to improve our health and safety performance and effectively manage risks.



### Focus Areas

#### Stronger Systems

Enhancing our systems to effectively manage risk and prevent harm on our worksites.

#### Training and Empowerment

Ensuring our people are set-up for success and clearly understand safety expectations at all levels of the organization.

#### Visible and Accountable Leadership

Fostering a boots-on-the-ground approach to leadership, with a focus on accountability and empowerment as safety leaders.

### Safety Performance

2021 was a year of change and incredible activity. While navigating the impacts of the ongoing COVID-19 pandemic, our people successfully managed the integration resulting from the Business Combination. Through this complexity, our team maintained strong employee engagement, and demonstrated proactive safety leadership and a commitment to reducing harm. As a result, the team successfully integrated our operations and systems, advanced technology applications, and delivered a record-year of safety performance.

SAFETY PERFORMANCE METRICS	TARGET	RESULT
<b>Total Recordable Injury Frequency</b> (employees and contractors)	0.60	0.36
<b>Lost-time Incident Frequency</b> (employees and contractors)	0.10	0.06
<b>Potential Hurt (PH) 3+ Frequency</b>	0.20	0.11
<b>Audits, Inspections &amp; Life Saving Rule Verifications</b>	3,750	6,000



Frequency rate measures how often these injuries occur per 200,000 hours worked, which is the equivalent of a 100-person workforce over one year.

# Integration

Through the Business Combination, it was critically important to ensure alignment and clarity of expectations was established for our employees and contractors. Our integration efforts focused on training our team on our health and safety management system, and supporting tools and processes. We reviewed each organization's safety systems and standards, then developed a single approach to safety which was rolled out to employees to ensure clarity and consistency across our operations. Embedded in our safety culture is an emphasis on mental health, and during this time of change this was another important area of focus.

[Read more about mental health initiatives at ARC](#)

ARC will continue to ensure our people have easy to access safety tools, safe operating procedures, and standard work instructions. Through training and mentorship, we can advance our safety performance and put in place effective controls to address safety issues.

# The Potential Hurt Approach

Our goal is 'Zero Harm' to employees, contractors, and the communities in which we operate. We have a 'Potential Hurt Approach' to safety, which focuses on caring for individuals and preventing future incidents by investigating the cause and potential for harm.

When an incident occurs, we assign a hurt level based on what could have happened regardless of recordability, severity, or injury. Using this approach, we focus on events that have the potential to severely injure people to put mitigations into place. Based on a scale of one to five (PH1 to PH5), we classify any incident above a level three as serious and an independent third-party incident investigation is conducted.



By leveraging data to inform our approach, we made significant progress against our Potential Hurt (PH) 3+ target. In 2021, we achieved a frequency of 0.11 against a target of 0.20 for PH3+ incidents.

# Leveraging Technology

Throughout 2021, we leveraged our strong foundation of technology to enhance our reporting capabilities, manage incident investigations, and support staff with e-learning opportunities. Technology enables data-driven analysis of our safety performance, allowing us to track leading and lagging indicators to better manage our safety programs.

Our teams use a centralized health and safety reporting system to record all incidents, near misses, hazard identifications, inspections, verifications, and audits. This data is analyzed and used to identify trends and potential safety issues, which can then inform timely and targeted risk mitigation.



# AIMS - ARC's Integrated Management System

Our approach to health and safety is guided by AIMS, which is a unified system that enables streamlined information access for our people. Through AIMS, information such as standards, policies and procedures, is readily available to employees and contractors to ensure safe work. Ultimately, we seek to create clarity of expectations and to narrow the gap between work as imagined versus work performed. This system brought together several standalone management systems that previously covered safety, asset integrity, emergency management, security and environmental practices.

Teams are able to access critical safety information through a mobile application, using QR codes that provide instructions for safe use of equipment. With a role-based set-up, procedures are filtered to specific locations, providing relevant safety information at our people's fingertips.

# Life Saving Rules

In 2020, we adopted Energy Safety Canada's Life Saving Rules to provide workers with a common and consistent approach in the prevention of serious injuries and fatalities. While many of these rules were already embedded in our policies, standards and procedures, the implementation of this program provides additional focus on critical hazards and work activities.

The Life Saving Rules allow for standardization, support, accountability, continuous improvement and shared learning across our organization and industry, leading to safer worksites. Our leaders have taken a key role in verifying these rules are followed, providing positive recognition, and ensuring appropriate safeguards are in place.

## Life Saving Rules



# Key Highlights

- Efficiently integrated two companies during a global pandemic, while achieving **record safety performance**.
- ARC is proud of our safety achievements, including an **LTI frequency of 0.06**, and zero fatalities or permanent disabilities.
- Conducted nearly 6,000 audits, inspections and Life Saving Rule verifications, **exceeding the target of 3,750**.

## Emergency Preparedness

Our [Emergency Management Program](#) includes detailed and site-specific Emergency Response Plans (ERPs) that guide how to prevent and respond to incidents should they occur. Our plans prioritize the protection of the public, our employees and contractors, and the environment. Updated annually, our ERPs include protocols for a wide range of potential emergencies, including natural disasters and extreme weather.

Extensive training is provided for our people on how to activate our ERPs and respond in the event of an emergency. Full-scale emergency response exercises are conducted every three years, and table-top exercises are conducted annually.

Through the Business Combination, we have integrated our ERPs, the Emergency Response Assistance Plan (ERAP), spill contingency plans, and our environmental emergency (E2) plans. With the added size and scale of our combined Company, our emergency preparedness training program has expanded to ensure alignment and comprehensive training for our people. In 2021, ARC conducted 20 ERP training sessions and exercises that involved a total of 240 participating staff, an increase from eight training sessions and exercises combined in 2020.

**20** ERP training sessions held  
with **240** staff participating





# Community Engagement

We value the relationships we have built with our stakeholders and Indigenous communities, and recognize the importance of responding to community concerns. Before conducting our activities, we complete a thorough assessment of the surrounding area to identify potentially impacted stakeholders, and provide details of our planned activities.

As a responsible energy producer, it is incumbent upon us to maintain our social license to operate with the communities we are privileged to work in. Through thoughtful engagement with our stakeholders and Indigenous communities, we seek to understand their priorities and build positive relationships with open, two-way communication.



## Mitigating Impacts

ARC manages community feedback through a stakeholder management tool. Using the tool, we can identify trends and track significant concerns for the community. By understanding individual concerns and needs, we can adjust our plans to directly address issues. Each year, our Operations teams work closely with our Surface Land team to coordinate activities to minimize impacts to community members.

Through consultation, we make every effort to go above and beyond by engaging early and often with community members near our operations. In our operational design and development planning, we strive to minimize impacts resulting from our activities.

## Development Planning

ARC has a robust community engagement process with local team members that inform residents of our activities in the area and directly address concerns. As part of our engagement process, we host annual community open houses to provide an opportunity for community members to learn more about development plans in their area. Major projects are presented, and members of the Operations and Surface Land teams are available to address questions or concerns. For broad industry issues, we proactively reach out to stakeholders and Indigenous communities to provide information on topics such as seismic activity, noise, odour, and traffic.

When assessing development opportunities, we consider proximity to residents or livestock, along with access routes for high-traffic phases during construction, drilling and completions, thereby minimizing impacts to community members.



## Noise

During more active phases of our operations, and where practical, we minimize noise impacts by adding noise reduction panels to our sites. Based on noise assessments, we have installed 12', 24' or 32' sound suppression panels to the perimeter of our operations. In addition to proactive noise mitigation, we also monitor noise in surrounding residences during our operations and will address issues accordingly.

Onsite teams are available and quickly deal with issues to reduce or eliminate impacts to neighbouring residents.



## Traffic

We manage traffic impacts for community members in several ways, including route management, notification, and dust control. We recognize this is a critical concern for residents and have taken proactive actions to be a good neighbour on shared roads.

During high-activity periods, we implement a traffic management program to mitigate and monitor our traffic on shared roads. A pilot truck is used to manage the speed of vehicles and to coordinate traffic. Through our notification and engagement process, we track school routes, industry activities, and local road closures to minimize disruptions associated with increased traffic within the area and ensure community safety.

To manage dust from high-traffic phases of project work, we follow a Dust Management Plan which outlines the use of an environmentally friendly dust suppressant for extended dust control. We also use water trucks to reduce dust in the short-term, often re-using recycled water from our operations.



## Air Quality

We recognize the importance of reducing our offsite impacts, particularly when it comes to air quality. Our Field Operations team ensures testing and facility maintenance are tied into production instead of venting and flaring, which results in less overall flaring and a lower risk of offsite odours.

To better manage potential odours from our operations, we have employed a closed loop system for flowback operations. The system uses treatment units, tanks, and scrubbers on the effluent prior to being shipped inline through pipeline infrastructure. In certain cases, we may install air monitoring on a resident's property to measure air quality.



# Indigenous Engagement

We value maintaining positive relationships with Indigenous communities near our operations and creating long-term economic and social value through our activities. Through early engagement and ongoing dialogue, we strive to strengthen our relationships and deepen our understanding of each community's unique goals.

## Proactive Engagement

Throughout the lifecycle of our development activities – planning, development, operations and reclamation – ARC engages with Indigenous communities. We believe that projects should be designed and implemented to minimize impacts, generate shared value, and enhance relationships with Indigenous Peoples. To facilitate this, our approach includes a team dedicated to understanding each community through regular engagements, and the opportunity to visit our sites to learn more about our operations and development plans.

We have built positive relationships with Indigenous communities near our operations by meeting regularly with leaders and community members. We have also expanded our radius for notification on activities to go beyond base-level requirements, and address any potential concerns or impacts, recognizing the importance of proactive engagement.

At a minimum, ARC follows established government consultation requirements for engaging with Indigenous communities. The nature of our engagement is specific to each community based on their own unique requirements, project location, environmental knowledge, traditional land use, and opportunities for partnership.

[Learn how ARC engages with Indigenous communities](#) 

## Our Approach

We acknowledge the role of business in reconciliation and commit to forming meaningful relationships with Indigenous communities where we operate. To achieve this, ARC will:

- Recognize the constitutional rights possessed by Indigenous Peoples in Canada and work with Indigenous communities in a manner that respects those rights.
- Work with Indigenous communities to promote economic inclusion by identifying opportunities to create employment for local Indigenous community members and local Indigenous suppliers.
- Promote awareness and education to senior leaders and employees on the culture and history of Indigenous Peoples, including the impact of residential schools.

## Indigenous Community Investment

We recognize that every Indigenous community has its own unique goals and interests, and we work closely with elected leadership and elders to understand the priorities for the community. Through Indigenous community investment, we support initiatives that help create safe and vibrant communities, provide education opportunities, and support positive mental health.

In 2021, we contributed to seven Indigenous communities near our operations, along with three Indigenous friendship centers in Fort St. John, Dawson Creek, and Grande Prairie. Our donations enabled community events, youth sports activities, and community capacity-building through education and wildlife conservation programs.

We are a proud partner of Indspire, an organization that provides post-secondary scholarships to Indigenous youth. By supporting Indspire's Building Brighter Futures: Bursaries, Scholarships and Awards program, the ARC Resources Indigenous Scholarship award was established. This award is designed to support individuals from communities in and around our operations in Alberta and BC, to bolster skills and enable future employment in the energy sector. In 2021, our contribution provided 15 scholarships to Indigenous youth.



### Wood for Warmth

Through the Wood for Warmth program, we donated firewood to an Indigenous community near our Kakwa operations. Loads of wood were delivered directly to the community, where they were split into smaller bundles to heat homes.



### Emerging Leaders Program

In collaboration with CDN Controls, last year we contributed to the Emerging Leaders Program for Alberta's Indigenous Communities. In the program, participants learn from industry leaders and academia through engaging panel discussions and workshops to grow leadership skills. The program's focus is to provide participants with the skills needed for promotion into supervisory and leadership roles.

## Indigenous Vendor Management

ARC actively seeks ways to positively contribute to Indigenous communities through opportunities our business creates. When approaching our development activities, we procure local materials and partner with local service providers wherever possible. Through a competitive process, we strive to hire and work with companies and contractors who meet the technical and safety requirements of the job at a price that is competitive, and market driven. Following these criteria, priority is given to local and Indigenous-affiliated service providers, when possible.


We support and participate in several employment training programs and work directly with Indigenous communities to identify opportunities where they can increase their involvement in our business. Throughout the year, we meet with Indigenous communities to review our development plans to identify potential contracting opportunities for upcoming work.

# Community Investment


At ARC, caring about others and giving back is core to our culture. Through our corporate giving efforts, employee donations and volunteerism, we are proud to support the communities where we live and operate.

Our corporate giving reflects the priorities of the community and those of our employees. Supporting initiatives that our employees are personally connected to is important to us. Many of our people also volunteer their time at the organizations we support, amplifying the impact.  
[Learn more about community investment at ARC](#)


In 2021, we donated approximately \$1.7 million to communities, in four core focus areas:




**MENTAL  
HEALTH &  
WELLNESS**



**CHILDREN**



**EDUCATION**



**CULTURE**

## Long-term Community Partnerships

Over our 26-year history, ARC has developed long-term partnerships with organizations addressing food insecurity, emergency response, and community well-being.



Over the last two decades, we have donated more than \$10.5 million through our annual campaigns. Through a combination of employee and corporate donations, approximately \$500,000 was raised for the 2021 United Way campaign. The 2021 campaign marked the 26th year ARC has supported the United Way and its mission to make Calgary a resilient, strong, and supportive place where everyone thrives.



ARC supports STARS Foundation in their work providing life-saving transport to critically ill and injured patients. In 2021, we donated \$175,000 to support the organization’s fleet campaign and mission operations. We have supported STARS for the last ten years, contributing \$1.5 million to-date.



Each year, we support the food banks across our areas of operation. Over the holiday season, we provided \$100,000 to local foodbanks in Dawson Creek, BC; Calgary and Grande Prairie, Alberta to help address critical food insecurity.

## Making an Impact



### BC Flood Relief

Following the devastating floods that occurred in BC in November 2021, we donated \$25,000 to Canadian Red Cross and \$10,000 to the Lower Mainland Christmas Bureau's Toy Drive to support families impacted by the floods.



### Brown Bagging for Calgary's Kids

In 2021, we continued to partner with Brown Bagging for Calgary's Kids (BB4CK). We donated \$10,000 and sent our teams to volunteer shifts, where they assisted in creating healthy lunches for children who would otherwise go without.

ARC has proudly supported BB4CK since 2008. To-date, we have volunteered approximately 3,650 hours and created approximately 185,000 healthy lunches for Calgary's kids.



### Highway Clean-up & Safety in Grande Prairie

For years, our team in Kakwa has participated in the Province of Alberta's Transportation Highway Clean-up Program – an initiative that brings community members together to collect litter along the highway and in the community, and raise funds for good causes. This year, employees and their families volunteered their time and cleaned up a 13 kilometre stretch of Highway 40 just outside of Grande Prairie.

#### Road Safety

Through the Coalition for Safer Alberta Roads, ARC supported education and mitigation efforts to uphold driver safety on high-traffic roadways near our Kakwa operations.



### Volunteers in Action: Ante Creek Playground Upgrade

In August 2021, a group of ARC employees in Valleyview, Alberta, rolled up their sleeves and volunteered their time and equipment to upgrade the playground at the local primary school.

### Supporting Seniors' Mental Health & Wellness in Northeast BC

Connection to the community and social engagement is critical in the overall wellbeing of seniors. For six years, our team in northeast BC has partnered with Better at Home to host seniors at the Dawson Creek Exhibition. Last summer, 73 seniors were hosted on a tour to the exhibition.

The Better at Home program, run by South Peace Community Resources Society, provides seniors with home support services such as snow removal, grocery shopping, housekeeping and friendly visits.



# Our People

Our people are our most valuable asset, and underpin the success of our company. With our core values as our foundation, we strive to create an environment where our people feel valued and supported to do their best work.

## Our Culture & Employee Engagement

ARC is a place where action, passion and accountability are rewarded. Since our inception, we have built a dynamic culture of caring and high performance, which we believe is a competitive advantage for ARC.

### Employee Engagement

Having a highly engaged and aligned workforce is critical in achieving business objectives and executing our strategy. Every year, we conduct a company-wide employee engagement survey which is further supplemented by regular pulse checks. These surveys provide employees with a confidential means to share their feedback, and provides the Company with valuable information we can use to adapt our programs and initiatives to the needs of our employees.

### Key Highlights

- **Integration** - Successfully onboarded approximately 450 employees and contractors remotely through the Business Combination
- **Succession** - 94% of leadership roles and 42% of all open roles were filled by internal candidates
- **Training** - Invested nearly \$1.3 million in employee training and development initiatives

## Employee Health & Well-being

An important part of our culture is supporting the well-being of our employees. Recognizing the uncertainty and stress of an ongoing global pandemic, we continued our proactive and thoughtful approach to supporting employee health and well-being.

Enhanced health and safety protocols were implemented in our office and field locations, in addition to hybrid work options for office-based employees. Through regular pulse checks and virtual townhalls, employees were also encouraged to share feedback on ARC's COVID-19 response and their effectiveness working from home. To promote connections, we also established virtual communities for employees, focused on wellness, connection, and family.



## Prioritizing Mental Health

Over the past seven years, we have made it a priority to support the [mental health](#) of our people. Every year, we participate in the Canadian Mental Health Association's 'Not Myself Today' campaign, which aims to break the stigma around mental health in the workplace. Through the campaign, we engage in discussions involving mental health, share important resources, and bring employees together to educate and support each other.

In addition, as part of our benefit program, mental health spending and resources are available to employees. During the pandemic, we further supplemented our regular programming with COVID-19-specific mental health campaigns and initiatives.

## Diversity, Equity and Inclusion

We believe a diverse workforce drives better decision-making and stronger performance. We are committed to building a workplace that creates a sense of belonging, promotes diversity of thought, and represents the experience and backgrounds of the communities where we live and work.

[Learn more about DEI at ARC](#)

In 2018, ARC became a member of the 30% Club, joining the campaign to increase gender diversity on boards and senior management teams. In 2020 and 2021, we were included on the Bloomberg Gender-Equality Index.

In 2021, we achieved our 30 per cent target for female representation on the Board and within our Management team – reaching 42 per cent on the Board and 30 per cent in Management. Moving forward, we will continue to evolve and advance our commitments, practices and policies related to areas of diversity, equity and inclusion.



### Women in the Workforce

● Women 29%  
● Men 71%





# Employee Attraction, **Retention & Development**

Attracting and retaining top talent is a core focus of our people strategy, and is critical to the long-term success of the Company. At ARC, our culture is one where teams work together to achieve results, while learning and growing from and with one another. This collaborative and people-centric approach is further supported with our focus on development, which includes training, mentorship opportunities and leadership support. By developing from within, we have established a strong pipeline of talent that has been effective in succession planning within the organization.

[Learn about the ARC experience](#)

## **Succession**

Our succession planning begins with ensuring we have a diverse pool of candidates for consideration. Through the process, we identify internal candidates, create development opportunities, and evaluate performance and progress. In addition, we engage independent executive evaluation services to provide an objective assessment of high-potential candidates and establish formal skills and capability development.

In 2021, 94 per cent of leadership roles and 42 per cent of all open roles were filled by internal candidates.

## **Mentorship**

Our mentorship program has been one of the most successful learning initiatives to-date. The program is available to all employees, and pairs individuals across the business to build cross-functional relationships, improve leadership skills, and gain knowledge about other areas of our business. Now into its 14th year, the mentorship program has resulted in more than 1,400 successful mentoring relationships.

## **Training**

ARC invests in tools and resources for our teams to continue to evolve their skills and competencies, including ongoing training, educational assistance programs, and internal learning sessions to share business knowledge. In 2021, ARC invested more than \$1,500 per employee on training for an overall spend of nearly \$1.3 million.

**~\$1.3 million** invested in employee training in 2021



# ESG Leadership: Development Planning with Halfway River First Nation

Relationships are core to our business. By engaging early and often, our goal is to strengthen our understanding of each community's unique needs and priorities. Through partnership, we have significant opportunities to create shared benefit and design projects with reduced impacts.

We are privileged to work closely with several Indigenous communities, including Halfway River First Nation (HRFN), on our development plans in northeast BC. In coordination with HRFN's land office, we consult on future and ongoing projects to identify areas of concern and opportunities to collaborate. Through knowledge sharing and site visits, we learn about traditional land use and community priorities, to ensure we incorporate considerations into our development planning.

**"ARC has been a great partner to work with. Any time more information was asked for, it was freely given,"** said Roslyn Notseta, HRFN Land Manager, **"This is an example of how consultation should go - we want to be engaged early in the process with a full view of development for our territory."**

## Proactive Engagement

Through proactive and transparent engagement with HRFN, we have gained valuable insight that has informed better project design and created meaningful employment opportunities for the community.

### Site Visits

When assessing potential project impacts, we conducted several site visits where HRFN validated site locations to ensure wildlife and native plant species were protected. The outcome resulted in options for erosion control, single point access in and out of the area, and the protection of water sources.

### Holistic Review

By sharing our full development plans for the area, HRFN is able to provide feedback in a holistic way. The community shared information on sensitive areas in the region which allowed ARC to adjust access plans to minimize land disturbance.

Engaging during the project assessment phase assisted in gathering input and addressing concerns earlier and more efficiently for the community. In an area with multiple proponents and increased industry activity, this is critical.





## Supporting Community Priorities

We recognize that every Indigenous community is unique, with goals and interests specific to their own priorities. For HRFN, critical priorities for the community include the protection of Indigenous rights to hunt, fish and gather, along with the conservation of wildlife.

### Wildlife Conservation

To support the community's priorities, ARC has supported the installation of wildlife trail cameras to monitor animal activity on the community's traditional lands. Following development, the flow of ungulates and predators can be tracked to ensure there are no negative impacts related to area construction. There is a focus on protecting wildlife territories, by balancing wetlands and other habitats for animals in the region.

### Reclamation and Restoration

For progressive reclamation and future site restoration, HRFN has created a plant book for their territory. The repository includes native plant species and their use. This tool has enabled greater mitigation around critical plants during industry development. Future generations will maintain and update the repository to protect necessary plants for the area's ecosystem.

#### Conservation Officer Program

In 2021, ARC contributed to a Conservation Officer Program for HRFN. This program enabled HRFN to have dedicated resources to prevent and respond to human-wildlife conflicts in the area.

**With a conservation officer stationed in the HRFN territory 80 per cent of the time,** the community can directly address challenges with poaching and unlawful hunting in the area. Two additional positions were created for community members to gather information and document wildlife encounters.



## Creating Employment Opportunities

When reviewing our development plans, we identify potential contracting opportunities with Indigenous communities. In partnership with HRFN, we work closely with community-owned businesses on environmental and reclamation work for our projects.

During project assessment, HRFN community members are contracted for archaeological impact assessments, enabling traditional knowledge and found artifact protocols to be applied. Through this work, the community has developed an updated found artifact protocol to tag the artifact location with GPS to ensure it is not disturbed during future area developments.

## Looking Ahead

We value the relationships we have built with communities like Halfway River First Nation, as we have gained a deeper understanding of the region and continue to learn through our engagements. Moving forward, we will continue to seek opportunities to engage proactively and advance our knowledge in partnership with Indigenous communities near our operations.

[Find out how ARC engages with Indigenous communities](#) ➔



# Business Ethics & Corporate Governance

Sound corporate governance builds trust with our stakeholders and is core to the success of our business. Our actions are guided by our values and supported by a clear governance framework that ensures proper oversight and accountability.

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**10 of 12**  
Directors Were Independent

**42%**  
Directors Were Women

**99%**  
Director Meeting Attendance

**96.68%**  
Shareholders Voted in Favour of Say-on-Pay



# Guiding Principles

## Ensure appropriate focus and oversight of corporate strategies and practices

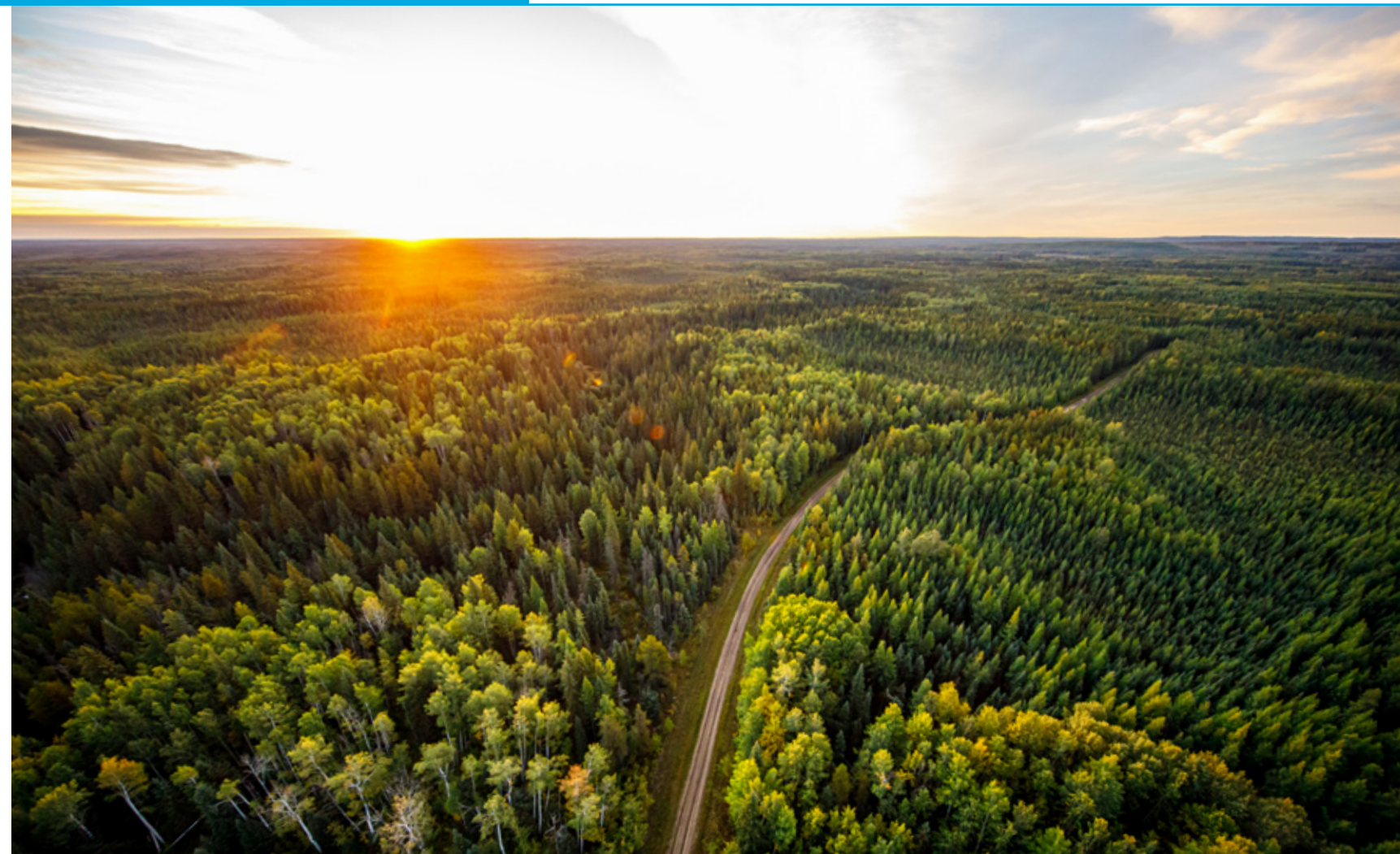
- [Ensure mandates of the Board](#) and its sub-committees provide the necessary oversight of the responsibilities of the Board, including oversight of the components of ESG.
- [Evaluate and assess progress](#) towards delivery on goals and targets established in ARC's corporate ESG framework.

## Continually improve governance structure and processes

- [Evaluate industry best practices](#) for Board activities, risk management, corporate governance and ESG matters, and ensure a strong leadership position is maintained in all areas.

## Ensure strong link between executive compensation and performance, including assessment of ESG metrics

- [Link executive compensation](#) to performance metrics in the Corporate Performance Scorecard, which includes ESG measures.



# Goals & Targets



- Ensure appropriate Board oversight on ESG matters through sub-committees
- Maintain Board structure of independent directors including the Board Chair
- Promote diversity and inclusion and continue with the established target of 30 per cent female representation on the Board and in Management
- Expand scope of third-party assurance of key ESG performance metrics
- Incorporate key performance metrics, including ESG-related metrics, into the Corporate Performance Scorecard to determine executive compensation



# Business Ethics & Corporate Governance

Sound governance practices are foundational in driving excellent operational and financial performance. Effective ESG leadership requires an understanding of how environmental and social factors may affect our performance and ability to create value over the long-term.

At ARC, sustainability considerations are embedded in all aspects of our business. Key ESG risks and opportunities are reviewed and discussed throughout our strategic planning and risk management processes, with clear accountabilities and oversight residing with the Board, Board committees and the Management team.

## Business Ethics

Our reputation and integrity depend on each employee, officer, director and representative working on behalf of our Company. Our Code of Business Conduct and Ethics (the Code) outlines our commitment to conduct business in an ethical and safe manner that's consistent with our core values. The Code outlines the basic principles and policies all directors and employees are expected to follow to ensure compliance with relevant laws and regulations.

Annually, the Code is reviewed, updated, and approved by the Board of Directors. Directors, employees, contractors and consultants are required to review and sign-off on their understanding and commitment to follow the Code every year.

In addition, we have a Code of Ethics for Senior Financial Officers, and a quarterly certification process to ensure their compliance with ethical business conduct, financial reporting requirements and filings, and accurate reporting of operational results. This Code of Ethics for Senior Financial Officers is signed by the Chief Executive Officer and Chief Financial Officer, and reviewed by the Policy & Board Governance Committee each quarter.

## ESG Policies

Establishing a strong policy framework to define ARC's corporate standards of practice and implementing management systems to guide our actions is critical to our long-term success. ARC has the following ESG-related policies, which are reviewed and approved by our Board of Directors:

- [Code of Business Conduct & Ethics](#)
- [Code of Conduct for Senior Financial Officers](#)
- [Disclosure and Insider Trading Policy](#)
- [Diversity, Equity and Inclusion Policy](#)
- [Whistleblower Policy](#)



# Corporate Governance

## Board Oversight

ARC’s Board of Directors is responsible for the stewardship of our Company to ensure its long-term success through the execution of our strategy and guiding principles. In terms of ESG governance, the Board and its sub-committees are responsible for oversight of ESG matters, and ensuring we have the appropriate policies and processes to address these matters. This includes the identification of principal ESG risks and ensuring that all reasonable steps are taken to implement appropriate mitigation plans, systems, and procedures. [See Risk Management](#)

The Board also approves our strategic plan which includes an in-depth analysis of more significant ESG opportunities and risks. In addition, the Board approves annual performance targets through the Corporate Performance Scorecard to create accountability for the execution of our strategy, including ESG-related matters. [See Linking Compensation to ESG Performance](#)

## Governance Framework



[Board Mandates](#)



## Management Accountability

Our Management team is responsible for developing and executing ARC’s strategy – which includes a focus on delivering ESG excellence aligned with our values and the interests of our stakeholders. While our CEO has ultimate accountability for our ESG performance, all members of our leadership team are accountable for identifying and integrating sustainability opportunities and decision-making into each aspect of the business.

Our Management team is also responsible for identifying the principal risks to the business, and for ensuring that all reasonable steps are taken to implement systems and procedures to adequately address these risks. Management reports quarterly to the Board on ESG-related factors and identifies areas for continuous improvement in our performance.



# Board Diversity & Experience

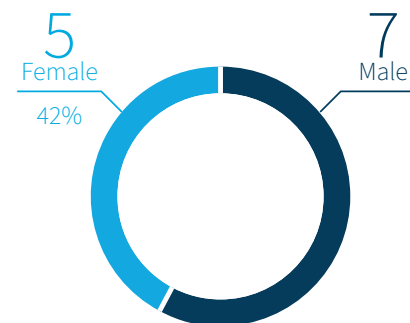
ARC believes that an informed and engaged Board of Directors with a diverse mix of skills, experience and backgrounds, is critical for decision-making and the Company's success. Diversity, equity and inclusion begins at the Board and cascades throughout the organization.

In 2018, we formalized our focus on diversity with a goal to increase female representation on the Board. In 2021, we exceeded our target of 30 per cent female representation on the Board with 5 of 12 directors or 42 per cent being women. Moving forward, we have expanded our policy to include diversity, equity and inclusion in broader terms, and will be conducting an ethnicity self-identification survey to inform our strategy for the coming years.

## Board Composition

Our Board of Directors brings a wealth of experience, diverse perspectives and insight to the organization. Sustainability experience is considered in the director's skills matrix used for director succession, evaluation, and recruitment. The Board, led by the Policy & Governance Committee, reviews potential candidates' experience, qualifications and skills in alignment with our skills matrix, to ensure the Board can meet the challenges of our business today and in the future.

### Board Gender Diversity



# Linking Compensation to ESG Performance

ARC’s executive compensation programs are designed to attract, retain, motivate and reward leaders to deliver strong performance that is aligned with our business objectives and long-term strategy.

## Pay-for-Performance

Our executive compensation program is grounded in a pay-for-performance philosophy. The program includes a combination of base salary, annual cash bonuses and long-term share-based incentives comprised of Restricted Share Units and Performance Share Units awards – a significant portion which is variable and performance-based.

Performance objectives are tied to the execution of our strategy and are measured through our Corporate Performance Scorecard, which includes several specific ESG metrics related to safety, environmental, people and social performance. Linking executive pay directly with defined corporate and individual objectives, motivates strong performance and reinforces our business strategy, organizational culture, and overarching priorities of the Company.

This disciplined approach underscores our commitment to good governance and alignment with shareholder interests. The Corporate Performance Scorecard creates frequent and in-depth conversations amongst the Board, Management, and employees throughout the year. Our Corporate Performance Scorecard is developed on an annual basis by Management and approved by the Board, and is used to determine compensation decisions for the annual bonus and 50 per cent of the PSU performance multiplier.

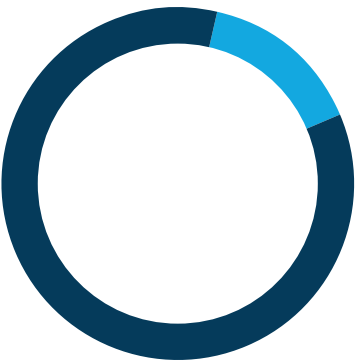
ARC’s shareholders have the opportunity to vote for or against our approach to executive compensation with a non-binding advisory vote (Say on Pay) at the annual general meeting (AGM). At the 2021 AGM, our approach to executive compensation was approved with 96.68 per cent of votes in favour.

For a full overview of ARC’s 2021 Corporate Performance Scorecard:  
[Read our 2021 Information Circular](#)



NEO Compensation Mix

- Salary & Benefits **25%**
- At-risk Compensation **75%**



CEO Compensation Mix

- Salary & Benefits **15%**
- At-risk Compensation **85%**



# Risk Management

Risk management across all aspects of our business has been a hallmark for ARC. We have a robust risk management process, which plays a central role in the development of our strategic plan. Our Board of Directors and Management team are primarily responsible for the identification of the principal risks of the business – including ESG factors – and for ensuring all reasonable steps are taken to implement appropriate mitigation plans, systems, and procedures.

The Risk Committee assists the Board in meeting its responsibilities with respect to risk identification, oversight and mitigation, and maintains a Business Risk Matrix that identifies and ranks risks to the organization by severity and probability. The Board regularly reviews the Business Risk Matrix, and each Board committee has defined responsibilities for risk oversight and mitigation as outlined in the committee mandates.

ARC monitors five categories of organizational risk:



Strategic



Operations



Culture,  
Organization  
& Systems



ESG



Business  
Environment

In addition, given the strategic importance to our business, climate-related risks are regularly reviewed and assessed by the Management team and our Board. For a detailed review of our discussion on climate-related risks and opportunities see [Climate-Related Risks & Opportunities](#).





# ESG Leadership: Leading Emissions Performance in Northeast BC

As global energy needs have evolved and countries around the world define their climate ambitions, ARC has kept pace – leaning on some of the same guiding principles upon which our Company has been built: capital discipline, risk management and a long-term focus on profitability. We believe taking a balanced approach to responsible development led by these principles, will be key in harmonizing the environment and the economy.

Over the course of our 26-year history, ARC consistently achieved, and has been recognized for, our top-tier ESG performance. Today, we have one of the lowest GHG emissions intensities among our Canadian upstream peer group, which is a direct reflection of our commitment to sustainable development practices.

Through continued collaboration with our stakeholders, Indigenous communities, investors, governments and industry, we will continue to improve our ESG

performance. Our approach to reducing emissions is multi-pronged and focused on electrification of our facilities, carbon credit generation, and the identification and evaluation of current and emerging technologies.

In northeast BC, we have been successful in achieving strong operational, financial and environmental performance.



## Electrification

Electrification has played a central role in our leading emissions performance. Working closely with the Government of BC and BC Hydro, we have electrified elements of our operations to significantly lower our emissions. Currently, three of six of our major facilities in northeast BC are electrified, with the two remaining facilities currently being evaluated. Electrification of these facilities resulted in approximately 275,000 tCO<sub>2</sub>e/year of GHG emissions avoided, which is the equivalent of taking 60,000 cars off the road.

## Sunrise

[Sunrise](#) is an important asset in our portfolio. The facilities process approximately 280 MMcf per day of low-cost, low-emissions natural gas production in northeast BC. Given its proximity, Sunrise will be directly connected to LNG Canada, helping enable our natural gas supply agreement with an LNG Canada proponent.

Electrification and facility design are the key drivers behind the facilities' leading performance, resulting in a 98 per cent reduction in emissions. Today, at approximately 3,000 tCO<sub>2</sub>e of scope 1 emissions per year, Sunrise is nearly a zero emissions facility, with the remaining routine venting and combustion emissions anticipated to be eliminated by the end of 2023. Through continuous emissions monitoring, we anticipate reducing fugitive emissions – detecting and alerting operations of leaks to reduce the total methane released to the atmosphere.

Sunrise demonstrates that it is possible to create high value without compromising on top-tier environmental performance. With less than 1 kg/boe of scope 1 and 2 emissions combined, Sunrise produces some of the cleanest natural gas in the world.



## Certified Natural Gas

As a responsible energy producer, we are committed to continuous improvement and transparent disclosure of our ESG performance. Through organizations like Equitable Origin, our performance is independently evaluated and validated against a robust set of global ESG standards.

In April 2022, we received [certification under Equitable Origin's EO100™](#) Standard for Responsible Development for our northeast BC assets, including Greater Dawson and Sunrise. Including our existing certification at Kakwa, ARC now holds the largest certified production base under this standard by a Canadian energy producer, with approximately 95 per cent of our current production certified.

## Market Diversification & LNG

Market access and diversification are core to our strategy. Through our marketing efforts, we strive to deliver our low-emissions energy to key consuming regions at the lowest cost. As a result, we have assembled a transportation portfolio that provides access to the Canadian west coast and the U.S. Gulf Coast, enabling our participation in the North American LNG export market.

Our first long-term natural gas supply agreement to an LNG project came in November 2021, when we entered into an agreement with an LNG Canada participant. Under the agreement, ARC will deliver approximately 150 MMcf per day of natural gas, following the start-up of LNG Canada in BC. The second came in May 2022, when we announced we had entered into a long-term natural gas supply arrangement with Cheniere Energy, Inc. Upon completion of Train 7 of the Corpus Christi Stage III expansion on the U.S. Gulf Coast, we will supply 140,000 MMBtu per day of natural gas for a term of 15 years.

**ARC's scale, investment-grade credit rating and leading ESG performance, combined with our focus on market diversification, have positioned our Company to access these important opportunities. We are proud to play a role in helping bring responsibly produced Canadian energy to global markets, and in doing so, help address global energy security.**



# 2021 ESG Performance Data

ACTIVITY	UNITS	PRO FORMA 2021	INDICATOR
Production of: (1) oil, (2) natural gas, (3) synthetic oil, and (4) synthetic gas <sup>1</sup>	boe/day	342,322	EM-EP-000.A
Number of offshore sites	number	0	EM-EP-000.B
Number of terrestrial sites	number	2021 Annual Information Form p.7-9 outlines all onshore operations	EM-EP-000.C
<b>ENVIRONMENT</b>			
Direct energy consumption	GJ	26,695,626	GRI 302-1
Production energy intensity	GJ/m <sup>3</sup> oe	1.32	GRI 302-3
<b>GREENHOUSE GAS EMISSIONS</b>			
Total direct GHG emissions (scope 1) <sup>2</sup>	metric tonnes CO <sub>2</sub> e	1,819,007	EM-EP-110a.1
Indirect GHG emissions from energy purchased and consumed (scope 2) <sup>2</sup>	metric tonnes CO <sub>2</sub> e	41,531	
Intensity (scope 1 and scope 2)	metric tonnes CO <sub>2</sub> e/boe	0.0149	
Methane (as % of scope 1 emissions)	percentage	14.7	EM-EP-110a.1
Covered under emissions-limiting regulations	percentage	90	EM-EP-110a.1
Combustion emissions	metric tonnes CO <sub>2</sub> e	1,415,190	EM-EP-110a.2
Flaring emissions	metric tonnes CO <sub>2</sub> e	162,774	EM-EP-110a.2
Vented emissions	metric tonnes CO <sub>2</sub> e	47,645	EM-EP-110a.2
Fugitive emissions	metric tonnes CO <sub>2</sub> e	50,010	EM-EP-110a.2
Drilling & completions emissions	metric tonnes CO <sub>2</sub> e	143,388	EM-EP-110a.2
Flared gas	thousand m <sup>3</sup>	65,698	
Vented gas	thousand m <sup>3</sup>	4,866	
Solution gas conservation rate	percentage	99.0	
<b>AIR EMISSIONS</b>			
NO <sub>x</sub> (excluding N <sub>2</sub> O)	metric tonnes	6,250	EM-EP-120a.1
SO <sub>x</sub>	metric tonnes	60	EM-EP-120a.1
Volatile organic compounds	metric tonnes	1,242	EM-EP-120a.1
Particulate matter	metric tonnes	193	EM-EP-120a.1

# 2021 ESG

## Performance Data

ACTIVITY	UNITS	PRO FORMA 2021	INDICATOR
<b>WATER</b>			
Total fresh water withdrawn	m <sup>3</sup>	2,739,327	EM-EP-140a.1 GRI 303-3
Total fresh water consumed	m <sup>3</sup>	2,739,327	EM-EP-140a.1 GRI 303-5
Volume of produced water and flowback generated	m <sup>3</sup>	2,876,614	EM-EP-140a.2 GRI 303-4
Water discharged	percentage	0	EM-EP-140a.2
Water injected	percentage	88	EM-EP-140a.2
Water recycled	percentage	12	EM-EP-140a.2
Hydrocarbon content in discharged water	metric tonnes	N/A	
Hydraulically fractured wells for which there is public disclosure of all fracturing fluid chemicals used	percentage	100	EM-EP-140a.3
Hydraulic fracturing sites where ground or surface water quality deteriorated compared to a baseline	percentage	0	EM-EP-140a.4
<b>BIODIVERSITY IMPACTS</b>			
Number of hydrocarbon spills	number	7	EM-EP-160a.2
Volume of hydrocarbon spills	bbl	854.79	EM-EP-160a.2
Volume of hydrocarbon spills in Arctic	bbl	0	EM-EP-160a.2
Volume of hydrocarbon spills impacting shorelines with ESI rankings 8-10	bbl	0	EM-EP-160a.2
Volume of hydrocarbon spills recovered <sup>3</sup>	bbl	835.92	EM-EP-160a.2
Proved reserves in or near sites with protected conservation status or endangered species habitat	percentage	55	EM-EP-160a.3
Probable reserves in or near sites with protected conservation status or endangered species habitat	percentage	45	EM-EP-160a.3



# 2021 ESG

## Performance Data

ACTIVITY	UNITS	PRO FORMA 2021	INDICATOR
RECLAMATION			
Active wells (net operated)	number	1,718	
Inactive wells (net operated)	number	341	
Shut-in wells (net operated)	percentage	25	
Suspended wells (net operated)	percentage	75	
Abandoned wells (net operated)	number	272	
Active wells (net non-operated)	number	21	
Inactive wells (net non-operated)	number	36	
Shut-in wells (net non-operated)	percentage	37	
Suspended wells (net non-operated)	percentage	63	
Abandoned wells (net non-operated)	number	34	
Active reclamation ongoing (gross)	number	315	
Certificates received (gross)	number	15	
PIPELINE INCIDENTS			
Number of reportable spills	number	11	
Reportable non-pipeline spills	number	8	
Reportable pipeline spills	number	3	
Total volume of reportable spills	m <sup>3</sup>	577	
Volume of non-pipeline reportable spills	m <sup>3</sup>	12	
Volume of pipeline reportable spills	m <sup>3</sup>	565	
Pipeline incident rate	incidents per 1,000 km	0.37	
Number of fines and penalties	number	0	



# 2021 ESG Performance Data

ACTIVITY	UNITS	PRO FORMA 2021	INDICATOR
HEALTH & SAFETY			
LOST-TIME FREQUENCY			
Full-time employees <sup>4</sup>	cases per 200,000 work hours	0.00	EM-EP-320a.1 GRI 403-9
Contractors	cases per 200,000 work hours	0.06	EM-EP-320a.1 GRI 403-9
RECORDABLE FREQUENCY			
Full-time employees <sup>4</sup>	cases per 200,000 work hours	0.18	EM-EP-320a.1 GRI 403-9
Contractors	cases per 200,000 work hours	0.40	EM-EP-320a.1 GRI 403-9
FATALITIES			
Full-time employees and contractors	cases per 200,000 work hours	0.00	EM-EP-320a.1 GRI 403-9
NEAR MISS FREQUENCY RATE			
Full-time employees <sup>4</sup>	near misses reported per 200,000 work hours	0.55	EM-EP-320a.1 GRI 403-9
Contractors	near misses reported per 200,000 work hours	0.27	EM-EP-320a.1 GRI 403-9
SOCIAL			
WORKFORCE PROFILE			
Full-time	number	516	
Part-time	number	6	
Contractors and temporary employees	number	327	



# 2021 ESG Performance Data

ACTIVITY	UNITS	PRO FORMA 2021	INDICATOR
EMPLOYEES BY LOCATION			
Field (permanent)	number	205	
Office (permanent)	number	317	
Field (contractors and temporary)	number	304	
Office (contractors and temporary)	number	23	
GENDER DIVERSITY (PERMANENT ONLY)			
Women in workforce	percentage	29	GRI 405-1
Supervisory/professional positions	percentage	38	GRI 405-1
Management & executive team	percentage	30	GRI 405-1
Board of Directors	percentage	42	GRI 405-1
EMPLOYEE AGE CATEGORY			
30 years and under	number	58	GRI 405-1
30 years to 50 years	number	388	GRI 405-1
50 years and over	number	76	GRI 405-1
EMPLOYEE TURNOVER			
Total turnover <sup>5</sup>	percentage	27	GRI 401-1
Voluntary turnover	percentage	4	GRI 401-1
Employee new hires	number	55	GRI 401-1
EMPLOYEE TRAINING			
Total Spending on Training	\$	1,279,163	
Spending per Employee	\$	1,507	
SECURITY, HUMAN RIGHTS & RIGHTS OF INDIGENOUS PEOPLES			
Proved reserves in or near areas of conflict	percentage	0	EM-EP-210a.1
Probable reserves in or near areas of conflict	percentage	0	EM-EP-210a.1
Proved reserves in or near Indigenous land <sup>6</sup>	percentage	0	EM-EP-210a.2
Probable reserves in or near Indigenous land <sup>6</sup>	percentage	0	EM-EP-210a.2

# 2021 ESG Performance Data

ACTIVITY	UNITS	PRO FORMA 2021	INDICATOR
BUSINESS ETHICS & TRANSPARENCY			
Proved reserves in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index <sup>7</sup>	percentage	0	EM-EP-510a.1
Probable reserves in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index <sup>7</sup>	percentage	0	EM-EP-510a.1
CRITICAL INCIDENT RISK MANAGEMENT			
Process Safety Event (PSE) rates for Loss of Primary Containment (LOPC) of greater consequence (Tier 1)	rate	0.55	EM-EP-540a.1
ECONOMIC			
Value generated <sup>8</sup>	\$ millions	4,140.8	GRI 201-1
VALUE DISTRIBUTED TO			
Suppliers <sup>9</sup>	\$ millions	2,246.2	
Providers of capital <sup>10</sup>	\$ millions	314.8	
Governments <sup>11</sup>	\$ millions	568.6	
Employees <sup>12</sup>	\$ millions	259.7	
Landowners <sup>13</sup>	\$ millions	3.2	
Communities <sup>14</sup>	\$ millions	1.7	
Value retained <sup>15</sup>	\$ millions	746.6	
RESERVES VALIDATION & CAPITAL EXPENDITURES <sup>16</sup>			
Sensitivity of hydrocarbon reserve levels to future price projection scenarios that account for a price on carbon emissions	million barrels (MMbbls), million standard cubic feet (MMscf)	See Price Case Table	EM-EP-420a.1
Estimated carbon dioxide emissions embedded in proved hydrocarbon reserves	metric tonnes CO <sub>2</sub> e	300,681,500	EM-EP-420a.2
Amount invested in renewable energy, revenue generated by renewable energy sales	reporting currency	0	EM-EP-420a.3

# 2021 ESG and Performance Data

PRICE CASE	TOTAL PROVED				TOTAL PROBABLE				TOTAL PROVED + PROBABLE			
SCENARIO	Oil (MMbbl)	Gas (MMscf)	TOTAL (MMboe)	Tonnes CO <sub>2</sub> e	Oil (MMbbl)	Gas (MMscf)	TOTAL (MMboe)	Tonnes CO <sub>2</sub> e	Oil (MMbbl)	Gas (MMscf)	TOTAL (MMboe)	Tonnes CO <sub>2</sub> e
IEA Current Pricing	19	4,653,613	1187	300,681,500	13	2,273,945	577	148,383,100	32	6,927,558	1,763	449,064,600
IEA Stated	19	4,640,338	1183		12	2,276,419	577		31	6,916,757	1,761	
IEA Sustainable	18	4,603,211	1175		12	2,238,010	568		30	6,841,221	1,743	

This data table communicates Pro Forma 2021 data inclusive of the Business Combination as at December 31, 2021. Future ESG reporting will reflect ARC’s historical performance representative of the combined organization. See “Disclaimers - Oil and Gas Information”.

<sup>1</sup> 2021 production is calculated as the combined annual production for both ARC and Seven Generations. The Business Combination between ARC and Seven Generations closed on April 6, 2021, and therefore, production from Seven Generations for the three months ended March 31, 2021, is excluded from ARC’s annual consolidated financial statements for the year ended December 31, 2021.

<sup>2</sup> Methodology used to collect activity data and calculate scope 1 and scope 2 emissions includes Canadian Association of Petroleum Producers, Calculating Greenhouse Gas Emissions, 2003; American Petroleum Institute Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry, 2009; and Western Climate Initiative - Final Essential Requirements of Mandatory Reporting – 2011 Amendments for Harmonization of Reporting in Canadian Jurisdictions, December 21st, 2011.

<sup>3</sup> Does not include spills 0.159 m³ (1 bbl) or less.

<sup>4</sup> Employee hours from Seven Generations prior to the Business Combination is not included in this metric.

<sup>5</sup> At the closing of the Business Combination, all permanent employees were assumed by ARC.

<sup>6</sup> ARC defines Indigenous lands as crown-held reserve land. While ARC does not have operational assets or mineral rights within Indigenous lands, a portion lies within the traditional territory occupied by both Treaty 6 and Treaty 8 First Nations and by the Métis people.

<sup>7</sup> All of ARC’s reserves are within Canada and therefore not in countries in the 20 lowest rankings.

<sup>8</sup> Economic value generated comprises sales of crude oil, natural gas, condensate liquids and other income, before the reduction of any royalty obligations, gains and losses on risk management contracts and gains and losses on asset dispositions and business combinations. All figures are presented on an accrual basis.

<sup>9</sup> Economic value distributed to suppliers comprises all operating, transportation and general and administrative costs as well as capital expenditures that are paid to suppliers other than employees, landowners, governments and for purposes of charitable donations. All figures are presented on an accrual basis.

<sup>10</sup> Economic value distributed to providers of capital includes interest expense paid in cash, cash dividends paid and common shares distributed through ARC’s Dividend Reinvestment Program and Stock Dividend Program.

<sup>11</sup> Economic value distributed to governments includes Crown royalty obligations, corporate income taxes, property and business taxes, carbon taxes, provincial sales taxes as well as consideration paid to governments for surface rights of Crown-owned land and government licenses, fees and permits. Excludes contributions to government pension plans and government employment insurance premiums made on behalf of employees. All figures are presented on an accrual basis. Due to the use of different reporting frameworks, figures presented will not necessarily conform to those presented in ARC’s annual reporting under the Extractive Sector Transparency Measures Act (ESTMA). For more information or to view ARC’s annual ESTMA report, please refer to ARC’s website at [www.arcresources.com](http://www.arcresources.com).

<sup>12</sup> Economic value distributed to employees comprise salaries, employee benefits and compensation associated with ARC’s share-based compensation plans. All figures are presented on an accrual basis.

<sup>13</sup> Economic value distributed to landowners comprise land access payments and royalty obligations to individuals and corporations associated with non-Crown owned lands. Reduction in value distributed to landowners over a five-year time span is attributed to reduction in total well count.

<sup>14</sup> Economic value distributed to communities comprise contributions to charitable and not-for-profit organizations.

<sup>15</sup> Economic value retained represents value generated minus total value distributed as presented herein. Economic value retained does not have any standard meaning prescribed by International Financial Reporting Standards (IFRS) and should not be confused with retained earnings, net income, comprehensive income or any other measure prescribed by IFRS. May not be comparable to similar measures presented by other entities.

SASB

Content Index

TOPIC & ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE	SELECT DISCLOSURE
GREENHOUSE GAS EMISSIONS				
Gross global Scope 1 emissions, percentage methane, percentage covered under emissions-limiting regulations	Quantitative	metric tonnes CO <sub>2</sub> e, percentage	EM-EP-110a.1	56
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	Quantitative	metric tonnes CO <sub>2</sub> e	EM-EP-110a.2	56
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	Qualitative	n/a	EM-EP-110a.3	17 – 22
AIR QUALITY				
Air emissions of the following pollutants: (1) NO <sub>x</sub> (excluding N <sub>2</sub> O), (2) SO <sub>x</sub> , (3) volatile organic compounds (VOCs), and (4) particulate matter (PM <sub>10</sub> )	Quantitative	metric tonnes	EM-EP-120a.1	56
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	Quantitative	m <sup>3</sup> , percentage	EM-EP-140a.1	57
Volume of produced water and flowback generated; percentage (1) discharged, (2) injected, (3) recycled; hydrocarbon content in discharged water	Quantitative	m <sup>3</sup> , percentage, metric tonnes	EM-EP-140a.2	57
Percentage of hydraulically fractured wells for which there is public disclosure of all fracturing fluid chemicals used	Quantitative	percentage	EM-EP-140a.3	57
Percentage of hydraulic fracturing sites where ground or surface water quality deteriorated compared to a baseline	Quantitative	percentage	EM-EP-140a.4	57
BIODIVERSITY IMPACTS				
Description of environmental management policies and practices for active sites	Qualitative	n/a	EM-EP-160a.1	26
Number and aggregate volume of hydrocarbon spills, volume in Arctic, volume impacting shorelines with ESI rankings 8-10, and volume recovered	Quantitative	number, bbl	EM-EP-160a.2	57
Percentage of (1) proved and (2) probable reserves in or near sites with protected conservation status or endangered species habitat	Quantitative	percentage	EM-EP-160a.3	57
SECURITY, HUMAN RIGHTS & RIGHTS OF INDIGENOUS PEOPLES				
Percentage of (1) proved and (2) probable reserves in or near areas of conflict	Quantitative	percentage	EM-EP-160a.3	57
Percentage of (1) proved and (2) probable reserves in or near Indigenous land	Quantitative	percentage	EM-EP-210a.2	57
Discussion of engagement processes and due diligence practices with respect to human rights, Indigenous rights, and operation in areas of conflict	Qualitative	n/a	EM-EP-210a.3	38
COMMUNITY RELATIONS				
Discussion of process to manage risks and opportunities associated with community rights and interests	Quantitative	n/a	EM-EP-210b.1	36 – 37



# SASB

## Content Index

ACCOUNTING METRIC	CATEGORY	UNIT OF MEASURE	CODE	SELECT DISCLOSURE
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	Quantitative	rate, hours	EM-EP-320a.1	59
Discussion of management systems used to integrate a culture of safety throughout the exploration and production lifecycle	Qualitative	n/a	EM-EP-320a.2	33 – 35
RESERVES VALUATION & CAPITAL EXPENDITURES				
Sensitivity of hydrocarbon reserve levels to future price projection scenarios that account for a price on carbon emissions	Quantitative	million barrels (MMbbls), million standard cubic feet (MMscf)	EM-EP-420a.1	61 – 62
Estimated carbon dioxide emissions embedded in proved hydrocarbon reserves	Quantitative	metric tonnes CO <sub>2</sub> e	EM-EP-420a.2	61
Amount invested in renewable energy, revenue generated by renewable energy sales	Quantitative	reporting currency	EM-EP-420a.3	61
Discussion of how price and demand for hydrocarbons and/or climate regulation influence the capital expenditure strategy for exploration, acquisition, and development of assets	Qualitative	n/a	EM-EP-420a.4	13 – 16
BUSINESS ETHICS & TRANSPARENCY				
Percentage of (1) proved and (2) probable reserves in countries that have the 20 lowest rankings in Transparency International’s Corruption Perception Index	Quantitative	percentage	EM-EP-510a.1	61
Description of the management system for prevention of corruption and bribery throughout the value chain	Qualitative	n/a	EM-EP-510a.2	49
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	Qualitative	percentage	EM-EP-530a.1	2021 Annual Information Form
CRITICAL INCIDENT RISK MANAGEMENT				
Process Safety Event rates for Loss of Primary Containment of greater consequence (Tier 1)	Quantitative	rate	EM-EP-540a.1	61
Description of management systems used to identify and mitigate catastrophic and tail-end risks	Qualitative	n/a	EM-EP-540a.2	34 – 35
ACTIVITY METRICS				
Production of: (1) oil, (2) natural gas, (3) synthetic oil, and (4) synthetic gas	Quantitative	boe/day	EM-EP-000.A	56
Number of offshore sites	Quantitative	number	EM-EP-000.B	56
Number of terrestrial sites	Quantitative	number	EM-EP-000.C	2021 Annual Information Form p.7-9 outlines all onshore operations




# TCFD

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CATEGORY	RECOMMENDED CONTENT	SELECT DISCLOSURE
Governance (a)	Board oversight of climate-related risks and opportunities	50
Governance (b)	Management’s role in assessing and managing climate-related risks and opportunities	50
Strategy (a)	Identification of climate-related risks and opportunities over the short, medium, and long term	15 – 16
Strategy (b)	Impact of climate-related risks and opportunities on the business, strategy, and financial planning	15 – 16
Strategy (c)	Scenario analysis and strategy resilience	13 – 14
Risk Management (a)	Processes for identifying and assessing climate-related risks	53
Risk Management (b)	Processes for managing climate-related risks	53
Risk Management (c)	Integration of processes for identifying, assessing, and managing climate-related risks into the organization’s overall risk management	53
Metrics and Targets (a)	Metrics used to assess climate-related risks and opportunities	56 – 62
Metrics and Targets (b)	Disclosure of GHG emissions	56
Metrics and Targets (c)	Targets used to manage climate-related risks and opportunities	12

# GRI

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TOPIC AND DESCRIPTION	CODE	SELECT DISCLOSURE
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# Disclaimers

This 2022 ESG Report (the "Report") is for information purposes only and is being made available by ARC to provide information on ARC, its business and its approach to ESG matters.

This Report does not constitute an offer to sell to any person, or an offer to the public of, or the solicitation of an offer to subscribe or purchase, any securities of ARC, nor shall this Report or any part of it, or the fact of its delivery or availability, form the basis of, or be relied upon in connection with, or act as an inducement to enter into, any contract or commitment whatsoever with respect to any securities.

## Forward-Looking Statements

This Sustainability Report contains certain forward-looking information and statements within the meaning of applicable securities laws. The use of any of the words "expect", "anticipate", "continue", "estimate", "objective", "ongoing", "may", "will", "project", "should", "believe", "plans", "intends", "strategy" and similar expressions are intended to identify forward-looking information or statements. In particular, but without limiting the foregoing, this Report contains forward-looking information and statements pertaining to the following: the continuing discussion around the energy transition and continued progress on lowering emission; that ARC will continue to advance its strategy to be the best-in-class responsible energy producer and deliver on its corporate purpose; ARC's commitment to the continuous improvement of its performance; the expectation that ARC will maintain its position as an ESG leader through enhanced reporting and disclosure; ARC's intended sustainability reporting and performance metrics; the expected priorities of ARC's future sustainability report; ARC's climate-related goals and targets and related expectations including but not limited to reducing ARC's GHG and methane emissions intensity by 20 per cent by the end of 2025 relative to ARC's 2019 baseline and implementing a minimum of 70,000 metric tonnes of carbon dioxide equivalent emission reduction projects by 2025; expectations that considerable investment in both natural gas and crude oil will be necessary to meet absolute demand in the future; anticipated results of different climate scenarios and the anticipated effect of such scenarios on ARC's business and corporate strategy; ARC's intention to continue to assess energy efficiency measure to reduce the emissions intensity of its assets; expectations that a growing emphasis on energy security will provide added support for natural gas demand from stable regions such as Western Canada; that ARC will continue to seek opportunities resulting from increased global demand for LNG; expectations that ARC will continue to dedicated resources to drive operational efficiencies in design, including air, waste heat recovery and electrification; expectations that electrification will result in annual carbon tax savings and reduce GHG emissions; that ARC will continue to work closely with technology providers, governments, industry associations, service providers and peers, to evaluate the feasibility and potential impact of new technology applications across its operations; expectations with respect to technology pilot projects; the intention to continue to increase electrification; the intended use of ARC's carbon offset revenue from 2020 and 2021; ARC's intention to evaluate new technologies to further reduce emissions and to build pipeline infrastructure to new well pads prior to drilling and completions activities to displace diesel with fuel gas; expectations that future electrification will further reduce methane and support ARC's and the federal government's methane targets; the intended uses of data from the Continuous Emissions Monitoring networks; plans to electrify ARC's Dawson III and IV facilities and additional well sites across its asset base; the current exploration of indirect emissions associated with ARC's value chain; ARC's continued success and improvement in water recycling and decreasing water use in its completion activities; that air quality around select ARC sites will be constantly measured to assist ARC in meeting or exceeding methane targets; expectations that health and safety focus areas will inform ARC's future efforts, improve ARC's health and safety performance and effectively manage risks; ARC's goals and targets with respect to social responsibility and corporate governance and the timing thereof; expectations that ARC will continue to demonstrate leadership through active engagement with stakeholders; expectations that ARC will continue to seek opportunities to engage proactively and advance its knowledge in partnership with Indigenous communities near its operations; the expectation that ARC will conduct an ethnicity self-identification survey to inform its future diversity strategy; expectations that ARC's ESG performance will continue to improve; expectations that the remaining routine venting and combustion emissions at the Sunrise facility will be eliminated by the end of 2023; anticipated reduction of fugitive emissions and expectations that Sunrise will be directly connected to LNG Canada helping to enable ARC's natural gas supply agreement.

The forward-looking information and statements contained in this Sustainability Report reflect several material factors, expectations and assumptions of ARC, including, without limitation: the general continuance of current industry conditions; that innovation and the application of clean technologies will continue to be the major drivers behind ARC's leading emissions performance; anticipated results of various technologies; that electrification will play a significant role; that over the long term, natural gas will be a pivotal component of the global energy mix; that there will continue to be a growing emphasis on energy security; the continuance of existing (and in certain circumstances, the implementation of proposed) tax, royalty and regulatory regimes; expectations that a growing emphasis on energy security will provide added support for natural gas demand from stable regions such as Western Canada; that there will be increased global demand for LNG; the Company's capital budget and operational plans for 2022; expectations that continuous monitoring can lead to reducing emissions; the ability to complete the infrastructure projects on the proposed timelines and within the proposed budget; the ability to implement new technologies; the ability to obtain all necessary regulatory approvals on the anticipated timelines; certain commodity price and other cost assumptions for 2022; the continuity of community priorities; that taking a balanced approach to responsible development led by certain guiding principles will be key in harmonizing the environment and the economy; the retention of ARC's key properties; access to equipment and qualified personnel; and the continued availability of adequate debt and equity financing and funds from operations to fund its planned expenditures. ARC believes the material factors, expectations and assumptions reflected in the forward-looking information and statements are reasonable, but no assurance can be given that these factors, expectations and assumptions will prove to be correct.

The forward-looking information and statements included in this Report are not guarantees of future performance and should not be unduly relied upon. Such information and statements involve known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking information or statements including, without limitation: changes in ARC's plans regarding the implementation of new technologies, facilities replacement and construction, and operations based on key learnings and experience gained through the design and implementation of such plans; changes to government regulations including royalty rates, taxes, and environmental and climate change regulation; delays and cost overruns in respect of the proposed projects; the inability to obtain the necessary regulatory approvals within the anticipated timelines; changes in commodity prices; changes in the demand for or supply of ARC's products; the impact of the economic development of emerging economies on demand for fuel products; changes in development plans of ARC or by third-party operators of ARC's properties; changes to the government; increased debt levels or debt service requirements; loss of key personnel; limited, unfavorable or a lack of access to capital markets; deterioration of relations with Indigenous groups; a lack of adequate insurance coverage; the impact of competitors; and certain other risks detailed from time-to-time in ARC's public disclosure documents (including, without limitation, those risks identified in this Report and in ARC's Annual Information Form for the year ended December 31, 2021 (the "AIF") which is available on ARC's profile on SEDAR at [sedar.com](#)).

The internal projections, expectations or beliefs are based on the 2022 capital budget which is subject to change in light of ongoing results, prevailing economic circumstances, commodity prices and industry conditions and regulations. Accordingly, readers are cautioned that events or circumstances could cause results to differ materially from those predicted. The forward-looking information and statements contained in this Report speak only as of the date of this Report, and none of ARC or its subsidiaries assumes any obligation to publicly update or revise them to reflect new events or circumstances, except as may be required pursuant to applicable laws.

## Third-Party Information

This Report includes market, industry and economic data which was obtained from various publicly available sources and other sources believed by ARC to be true. Although ARC believes it to be reliable, it has not independently verified any of the data from third party sources referred to in this Report or analyzed or verified the underlying reports relied upon or referred to by such sources or ascertained the underlying economic and other assumptions relied upon by such sources. ARC believes that its market, industry and economic data is accurate and that its estimates and assumptions are reasonable, but there can be no assurance as to the accuracy or completeness thereof. The accuracy and completeness of the market, industry and economic data used throughout this Report are not guaranteed and ARC makes no representation as to the accuracy of such information.

## Oil and Gas Information

Oil related terms and measurements	
MMbbl	Millions of barrels (1 barrel = 159 litres)
MMscf	Million standard cubic feet
MMboe	Millions of barrels of oil equivalents

### Barrels of Oil Equivalent

The term "boe" or barrels of oil equivalent may be misleading, particularly if used in isolation. A boe conversion ratio of six thousand cubic feet of natural gas to one barrel of oil equivalent (6 Mcf: 1 bbl) is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead. Additionally, given that the value ratio based on the current price of crude oil, as compared to natural gas, is significantly different from the energy equivalency of 6:1; utilizing a conversion ratio of 6:1 may be misleading as an indication of value.

### Reserves

The estimates of ARC's reserves set forth in this presentation have been derived from a report of GLJ Ltd. ("GLJ") with an effective date of December 31, 2021 and a preparation date of January 24, 2022 (the "GLJ SASB Report"), which was prepared in accordance with National Instrument 51-101 – Standards of Disclosure for Oil and Gas Activities ("NI 51-101") and the Canadian Oil and Gas Evaluations Handbook (the "COGEH") and using GLJ's forecast prices and costs as at January 1, 2022. The reserves in the GLJ SASB Report were analysed within the context of an evaluation of a distinct group of properties in the aggregate and do not represent all of ARC's reserves. The reserves reported in the GLJ SASB Report are subject to the limitations and assumptions therein. A complete statement of reserves data and oil and gas information in accordance with NI 51-101 for the year ended December 31, 2021 can be found in the AIF which is available on ARC's profile on SEDAR at [sedar.com](#).

"Proved" reserves are those reserves that can be estimated with a high degree of certainty to be recoverable. It is likely that the actual remaining quantities recovered will exceed the estimated proved reserves.

"Probable" reserves are those additional reserves that are less certain to be recovered than proved reserves. It is equally likely that the actual remaining quantities recovered will be greater or less than the sum of the estimated "proved plus probable" reserves.

All of ARC's reserves disclosed herein are located in Canada. The estimates of reserves provided in this document are estimates only, and there is no guarantee that the estimated reserves will be recovered. Actual reserves may eventually prove to be greater than, or less than, the estimates provided herein.



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September 09, 2022

**To the Board of Directors and Management of ARC Resources Ltd**

Millennium EMS Solutions Ltd. (MEMS) has conducted both a limited level and a reasonable level of assurance verification on ARC Resources Ltd. (ARC)'s corporate greenhouse gas "GHG" emissions inventory to assess whether the GHG emissions information asserted by ARC is reliable and of sufficient quality to accurately determine ARC's emissions inventory for the reporting period from January 01, 2021 to December 31, 2021.

All ARC's operational facilities are currently regulated under compliance reporting schemes including the Alberta Technology Innovation and Emissions Reduction Regulation and the British Columbia Greenhouse Gas Industrial Reporting and Control Act

Although both the AB and BC regulatory reporting scheme requires that the GHG verification be performed at a reasonable level of assurance, there are differences in which types of emissions are reported, and verified, under each regulatory reporting scheme. Besides the required reporting scope, ARC has included additional emissions scopes that are not required under the respective regulatory reporting schemes in AB and/or BC and these emissions scopes are verified at a limited level of assurance by MEMS.

The table below provides a summary of ARC's emissions inventory and is broken down by emission source category and the level of assurance to which these source categories were verified.



ARC Resources Ltd.  
Assurance Letter – ARC Resources Ltd. Corporate GHG Inventory  
September 08, 2022

Source Category	Quantity Verified at Reasonable Level of Assurance (CO <sub>2</sub> e)	Quantity Verified at Limited Level of Assurance (CO <sub>2</sub> e)
Scope 1 BC	352,381.6100	0
Scope 2 BC	0	4,647.5979
Scope 1 AB <sup>[1]</sup>	1,063,592.5020	405,154.6770
Scope 2 AB <sup>[2]</sup>	9,485.5403	183,463.1253

[1] Including contracted camp fuel use.

[2] Including indirect emissions from electricity usage of contracted camp.

#### **ARC Resources management responsibilities:**

ARC is responsible for the quantification of the emissions according to the requirements of the regulatory reporting schemes and applicable standards (the criteria of verification) for the various source categories, and for implementing sufficient internal data management controls to ensure the GHG assertion is free from material misstatement. ARC is also responsible for supplying the facility operation data as well as background information to the verification team at MEMS.

#### **Millennium EMS Solutions Ltd. Responsibilities:**

Our responsibility was to conduct the verification in accordance with requirements of ISO14064:3 (2019), and to express both a limited and a reasonable assurance conclusion on the accuracy of ARC's corporate emissions inventory. The verification approaches, tests, and procedures undertaken for this review were selected in a manner consistent with professional standards, if not already mandated by the appropriate regulatory reporting schemes.

#### **Verification Statement:**

Based on the verification conducted by Millennium EMS Solutions Ltd (MEMS), the GHG assertion prepared by the ARC Resources Ltd. for corporate inventory reporting was determined to be:

Free of material misstatements, fairly presented, and substantiated by sufficient and appropriate prepared in accordance with the requirements of their respective provincial regulatory reporting scheme and relevant criteria for the emissions verified at a reasonable level of assurance. For the emissions verified at a limited level of assurance, no evidence was identified to exclude the conclusion that the GHG assertion, in all material effects, meet the requirements of the verification criteria, is accurate, and fairly stated.

#### **Limitation of liability:**

The verification practice was conducted in accordance with requirements of ISO14064:3 (2019), at both a limited and reasonable level of assurance. Standard test and control approaches have been adopted



ARC Resources Ltd.  
Assurance Letter – ARC Resources Ltd. Corporate GHG Inventory  
September 08, 2022

to review the quantification method and supplied supporting documents. This verification was prepared exclusively for ARC Resources Ltd. for the corporate inventory reporting and due to the complex nature of the operations and the inherent limitations of the verification procedures employed, it is possible that fraud, error, or non-compliance with laws, regulations, and relevant criteria may occur and not be detected. The reports may not be suitable for another purpose.

Yours truly,

**Millennium EMS Solutions Ltd.**


**Stantec Consulting Ltd.**

325 25 St SE Suite 200, Calgary Alberta T2A 7H8

September 6, 2022  
File: 160925168

**Attention: Stephanie Neilson**  
ARC Resources Ltd.  
1200, 308 - 4th Avenue S.W.  
Calgary, AB T2P 0H7

Dear Stephanie Neilson

**RE: Independent practitioner's reasonable assurance report on ARC Resources Ltd. GHG emissions for the 2021 Reporting Year**

## TO THE BOARD OF DIRECTORS AND MANAGEMENT OF ARC RESOURCES LTD.

Stantec has undertaken a reasonable level of assurance verification of the greenhouse gas (GHG) emissions for the British Columbia (BC) assets of ARC Resources Ltd. (ARC) for the 2021 reporting year from January 1, 2021 to December 31, 2021.

## GHG ASSERTIONS

The total GHG assertions for ARC's BC assets for the 2021 reporting year are presented below.

Category	CO <sub>2</sub> (tonnes)	CH <sub>4</sub> (tonnes)	N <sub>2</sub> O (tonnes)	CO <sub>2</sub> e (tonnes)
Stationary Fuel Combustion	277,587.01	823.50	11.87	301,710.45
Venting	510.79	286.58	-	7,675.28
Flaring	17,441.64	74.43	0.03	19,311.31
Other/Fugitive	15.20	946.77	-	23,684.57
<b>Total</b>	<b>295,554.64</b>	<b>2,131.29</b>	<b>11.90</b>	<b>352,381.61</b>

## VERIFICATION CRITERIA

The purpose of the verification was to assess whether the GHG data and supporting documentation, in all material respects, were fairly presented and substantiated by sufficient and appropriate evidence and was in accordance with:

- *Greenhouse Gas Industrial Reporting and Control Act* (GGIRCA) (November 2014, amended to BC Reg 235/2018).
- *Greenhouse Gas Emission Reporting Regulation* 249/2015 (GGERR) (last amended in February 2021 by B.C. Reg. 11/2021).
- Order in Council No. 702 (December 13, 2021) and applicable GGIRCA Bulletins.


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- Western Climate Initiative “Final Essential Requirements for Mandatory Reporting – Amended for Canada Harmonization”, December 17, 2010.
- Western Climate Initiative “Final Essential Requirements for Mandatory Reporting – 2011 Amendments for Harmonization of Reporting in Canadian Jurisdictions”, December 21, 2011 (for WCI.20, WCI.40, WCI.90, WCI.160, WCI.210, WCI.240, WCI.350, and WCI.360).
- Western Climate Initiative “Final Essential Requirements for Mandatory Reporting – 2013 Addendum to Canadian Harmonization Version”, December 20, 2013 (WCI.350 and WCI.360).

## VERIFICATION STANDARDS

The third-party verification was conducted in accordance with the requirements of:

- ISO 14064 Part 3 – Greenhouse Gases: Specification with guidance for the validation and verification of greenhouse gas assertions
- ISO 14065 - Greenhouse Gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation and other forms of recognition

## RESPONSIBILITIES

ARC was responsible for the preparation of the reports including the data management and the collection of data used in the calculations. In addition, ARC retained a third party GHG quantifier to complete the calculations, develop supporting technical documents, and present the information within the reports. Stantec was responsible for planning and executing the verification, in accordance with the ISO 14064-3 standard, in order to deliver an opinion as to whether the GHG assertions are presented fairly and in accordance with the verification criteria.

**Conflict of Interest Assessment**

Prior to conducting the verification, Stantec reviewed potential conflict-of-interests and threats to impartiality, which may arise. During the verification, Stantec continued to monitor our impartiality to ensure our services comply with the requirements of both the ISO 14065 and ISO 14064-3 standards.

## QUALITY CONTROL

In accordance with procedures, as well as Stantec’s internal Quality Assurance / Quality Control (QA/QC) policies, the assessments are quality reviewed and independently peer reviewed.

## CONCLUSION

Based on the procedures undertaken, it is Stantec’s opinion that the GHG assertions submitted by ARC are in all material respects fairly presented and substantiated by sufficient and appropriate evidence, and in accordance with the relevant standards and regulations.



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**LIMITATIONS**

The assessment represents the conditions in the subject area at the time of the assessments. Stantec did not conduct direct GHG emissions monitoring or other environmental sampling and analysis in conjunction with the verification. Stantec disclaims liability for use by any other party and for any other purpose.

**CLOSURE**

Should you have any questions or require additional information, please contact the lead verifier directly.

Regards,

**STANTEC CONSULTING LTD.**

Daniel Hegg

Digitally signed by Daniel Hegg  
Date: 2022.09.07 08:29:19 -06'00'

Daniel Hegg, M.Sc., CEM, ENV-SP  
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V Corning

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Issued September 6, 2022 in Calgary, Alberta, Canada