Building a Sustainable Future
ESG in Canadian Oil and Gas

November 2021

This article is a summarized excerpt of a report published by BMO Capital Markets Research on November 21, 2021. For the full report, [click here](#).

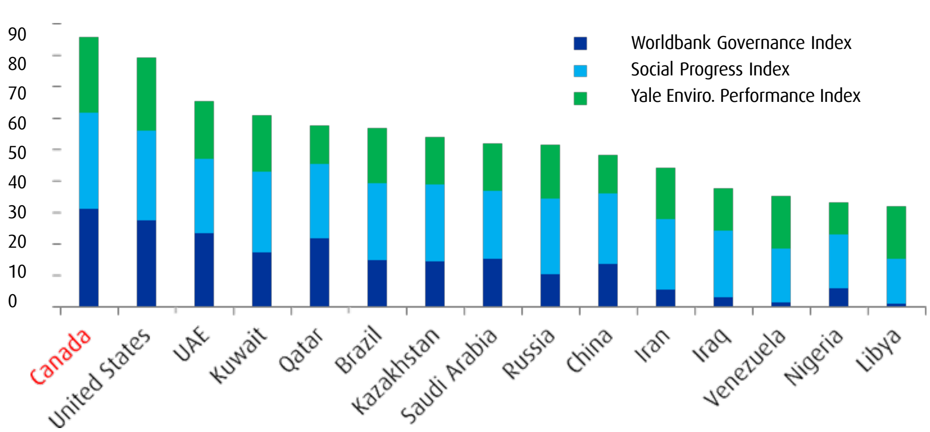
Environmental, Social, and Governance ("ESG") practices are an increasingly topical theme that we expect will only rise in importance in the investment decision process for energy companies. BMO's Equity Research team recently introduced its own approach to evaluate issuers on ESG factors, detailed in the BMO Capital Markets report, *A Paradigm Shift: BMO's Approach for Assessing ESG Factors*. Our approach includes carefully curated quantitative and qualitative insights that can be harnessed in an investor's investment process. While quantitative ESG scores have been widely used by investors for many years, they are facing unprecedented criticism due to a lack of standardization and consistency across providers. Instead of joining the chorus and assigning issuer-specific ESG scores, our approach shines a light on observable performance metrics, such as greenhouse gas ("GHG") intensity and fresh water intensity rates, and supplements these indicators with fundamental insights about firm-level performance on key ESG issues. Although lacking the immediate digestibility that comes with composite ESG scores, we believe our clear and in-depth approach is a much more valuable source of analysis for investors as they contemplate the ESG performance of Canadian energy companies and the myriad ways that this information can be integrated into their investment processes.

This article highlights Canada's recognition as a leader in ESG among the world's major oil and gas reserve holders, and it provides separate assessments of the Canadian Oil Sands, Exploration and Production, and Energy Services sectors.

Setting the oil and gas industry context: Canada's leading ESG position

We have highlighted numerous times in our past work that Canada, as a country, has continually been recognized as a leader in Environmental, Social, and Governance practices among the world's largest oil and gas reserve holders according to independent evaluations, including the Yale/Columbia Environmental Performance Index ("EPI"), Social Progress Imperative's Social Progress Index, and World Bank's Worldwide Governance Indicators (Exhibit 1). The country also ranks third overall among the world's current top oil-producing regions, next to Norway and the U.K.

Exhibit 1: Canada #1 in All Categories vs. Top Reserve Holders

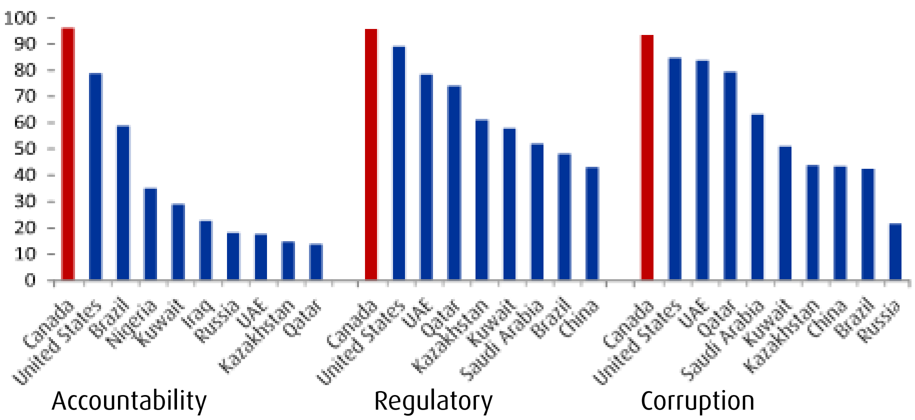


Source: Yale Environmental Performance Index (EPI); Social Progress Imperative; World Bank Governance Indicators

Canada ranks #1 for its Environmental, Social, and Governance practices among the world's top oil reserve holders, and #3 overall among the largest 20 oil producing countries.

We like to highlight the sizeable gap in *Governance* quality between Canada and the rest of the oil-producing world as a critical distinction, as astute oversight is logically a root enabler of environment and social stewardship. Canada's standards for accountability, regulatory discipline and corporate oversight stand head and shoulders above most major energy producing countries. We believe that regulatory prudence is of particular importance for the energy industry, whereby Canada's regulatory system and climate policies are already regarded among of the most advanced vs. other producing nations. This is a competitive advantage that strongly supports its role in a sustainable energy future. Governance structures continue to evolve in alignment with emerging sustainability goals.

Exhibit 2: Leadership in Key, Industry-Relevant Governance Factors



Source: World Bank Worldwide Governance Indicators, BMO Capital Markets

There is a particularly wide gap in Governance quality between Canada and most other global oil suppliers – we view as a root enabler of overall ESG performance.

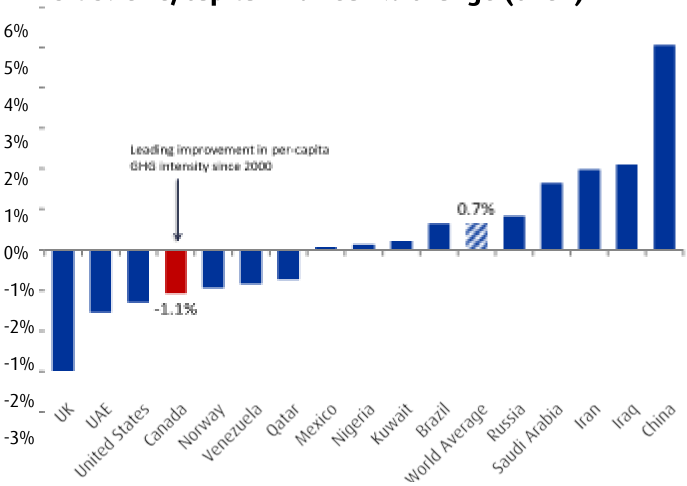
Canada's industrial sector emissions per US$GDP are just half the global average, while per-capita emissions have fallen 1.8%/year since 2000 vs. an average increase of ~2% worldwide.

Already a leader in climate policy and action

Against many misconceptions, Canada is already viewed as a world leader in climate policy in the context of energy producing nations. Alberta has held industrial emitters accountable with a price on excess carbon since 2007 that have steadily increased from $15/T to $40/T and are set to rise to $170/T by 2030 under Federal pricing legislation.

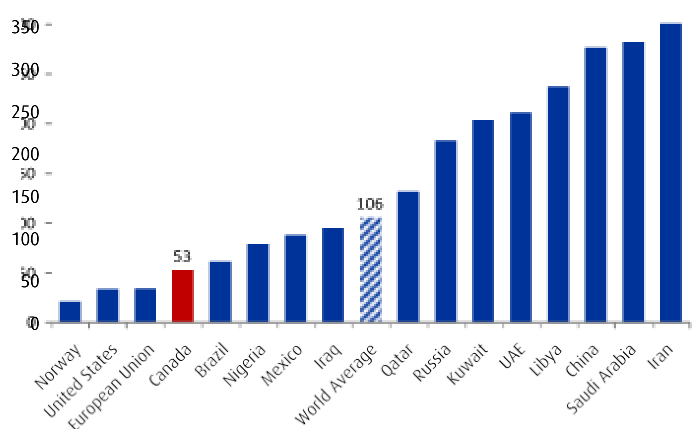
Leading Emissions Reductions. Despite the many misconceptions about Canada's emissions profile, the fact is that Canada is a leader in global efforts to lower GHG intensity. Of note, Canada has posted the fourth-best improvement in per-capita emissions intensity among major oil and gas regions since 2000 at 1.1%/year CAGR, which is notably ahead of Norway and compares to a world average increase in per-capita intensity of 0.7% (Exhibit 3). If we hone in on the industrial sector, Canada's emissions per unit of GDP are just half the global average (Exhibit 4), while on a per capita basis, it has managed to reduce industrial emissions intensity by an annual average rate of 1.8%.

Exhibit 3: GHG/Capita - 20-Year % Change (CAGR)



Source: United Nations, CAIT, BMO Capital Markets

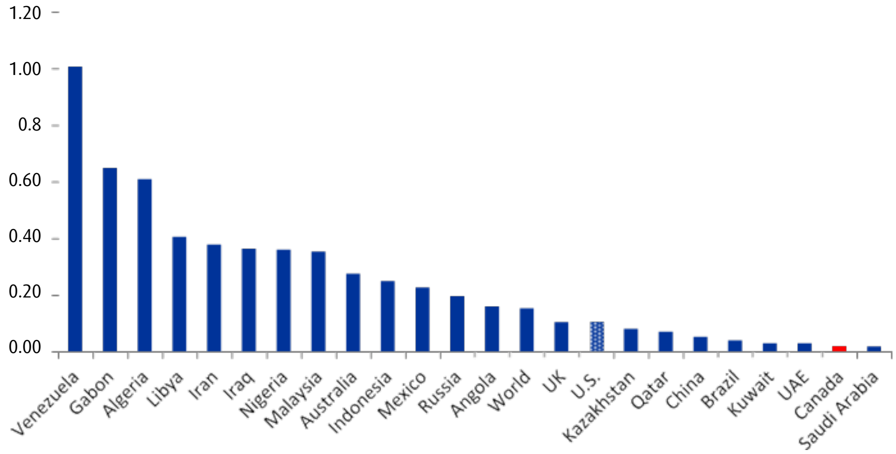
Exhibit 4: Industrial Sector GHG per US$GDP (MT)



Source: United Nations, World Resources Institute (2020), BMO Capital Markets

Natural gas flaring and venting practice is an important testament to Canada's regulatory standards. The Alberta Energy Regulator ("AER") Directive 060 places strict limits on flaring and is firmly enforced by the Environmental Protection and Enhancement Act. As a result, non-routine flaring has been virtually eliminated, making Canada one of the lowest flaring intensity producers globally (Exhibit 5).

Exhibit 5: Flaring Intensity by Major Oil Producer (mcf/bbl)



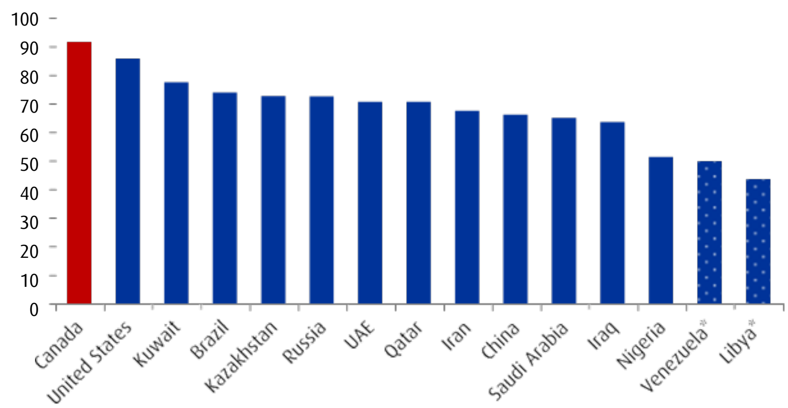
Source: World Bank, BMO Capital Markets Estimates

Canada's gas flaring regulations rank it one of the lowest intensity producers globally.

Social standards: ethical development

Social standards also have important implications for business risk, continuity and profitability. As we remind investors in Exhibit 6, regard for human rights and social progress are unfortunately not a high priority in many producing regions, and Canada is a standout in the evolving social dynamic. We believe that variances in ESG quality are exacerbated in times of market turmoil and that persistently challenging industry conditions could induce "cheating," by those with lax governance and social policies. Conversely, Canada's stringent oversight and standards should circumvent corner cutting, in our view.

Exhibit 6: Social Progress Index (SPI) – Top 15 by Reserves

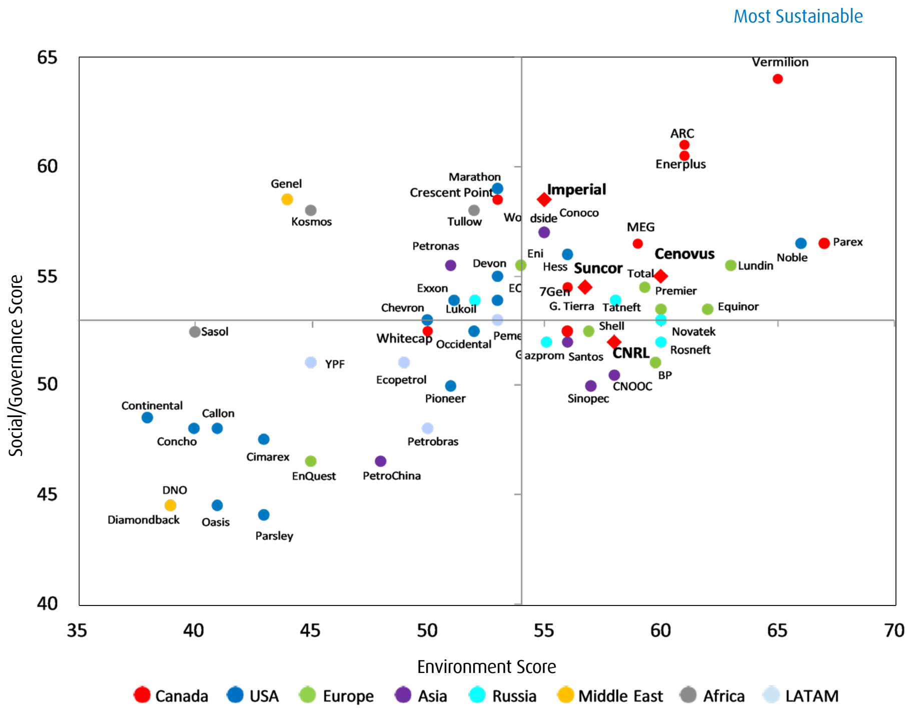


Source: Social Progress Imperative, BMO Capital Markets estimates

Canada's strong ESG ratings reflect its oil and gas sector

Although contrary to the common narrative, the country-level ESG ratings that we outlined are reflective of Canada's largest economic sectors, including oil and gas. While we do not recommend investors rely solely on third-party ESG scores to draw investment conclusions, we note that Canada's leading oil and gas companies do achieve top consensus ESG scores relative to global competitors. Importantly, these lead ratings are directionally consistent with our internal assessment of corporate ESG trends.

Exhibit 7: Canadian Oil & Gas Companies Top Consensus ESG Ratings



Source: CSRHub (January 2021), BMO Capital Markets Estimates

Canada's oil sands: last barrel standing?

We like to say that Canada's oil companies have been "practicing ESG since before it was a thing," stemming from a long history of outsized scrutiny. While early production involved novel and crude processes that logically raised concerns about negative environmental consequences, business and operating practices have evolved considerably, including the introduction of far less invasive in-situ extraction. Yet, this history of scrutiny has shaped the world-class regulatory system and corporate oversight that Alberta has in place today, and motivated companies to be more proactive than the rest of industry in operations and disclosures. The implications are evident in underlying ESG performance to date. Our work shows that oil sands producers have led the pace of improvement in numerous ESG trends over the past decade including emissions intensity, fresh water and tailings, as well as social/governance progress in Indigenous engagement, health and safety and executive alignment.

- **Leading pace in GHGi.** Oil sands emissions intensity has decreased 44% since 1995, including 25% since 2013 vs. 13% for global majors and 15% for legacy U.S. oil producers. Viewed another way, the average oil sands barrel has shaved off >22 kg/bbl vs. just 5 kg for competing oils. The typical oil sands barrel now emits just 5% more than the global average crude over its life cycle from production to end-use, while several projects have below-average footprints.
- **Top in fresh water and recycling.** Oil sands producers have reduced fresh water intensity ~7%/year since 2014 vs. just 3% for global majors. Recycling is the main differentiator, averaging 82% vs. 29% for U.S. seniors. In situ projects use 60% less fresh water than conventional oil operations.

- **Accelerated tailings reclamation.** Mining projects, which represent a negative image in media, have greatly evolved in tailings treatment and reclamation. Some projects have cut annual tailings in half, and work is well advanced on waterless extraction that may eliminate tailings.
- **Leading health and safety record.** Injury frequency has fallen ~60% since 2013 to a new record low in 2019 and is quickly approaching the leading metrics of the Majors (down 17%). Importantly, while the sector has not been immune to the pandemic, its relative containment of risk stands in stark contrast to many regions where a lack of protocol has greatly impacted employees and operations.
- **Community and indigenous investment a top priority.** Community investment increased to a record $93 million in 2019 and has averaged >$80 million since 2010. Producers have also allocated $15 billion to Indigenous business since 2012 with record spending of $2.6 billion in 2019.
- **Ahead in ESG-linked compensation.** ESG metrics accounted for 15.1% of Canadian oil sands producers' executive incentive pay consideration in 2020 vs. 11% for U.S. E&P executives.

Transition survivor: Despite mounting pressures, we believe the sector is well positioned for an energy transition given a strong ESG track record, clear technology pathways to net zero, the inherently low decline, low sustaining cost nature of the extraction process, and unique opportunities to divert bitumen from fuel to non-combusted products. If we are correct, the oil sands could stand as one of few oil schemes outside of OPEC to sustain production and gain market share in the global "friendly oil" supply opportunity that we inevitably still see ahead.

ESG improving competitiveness and free cash flow: ESG improvements have contributed to a >45% decrease in core OPEX since 2013. Low sustaining capital of <$10/bbl is a key differentiator in the long- term sustainability of oil sands supply. With cash costs <$40/bbl, we estimate the sector could generate $260 billion in free cash flow by 2030, extending support for faster pace of ESG improvement vs. peers.

Canadian exploration and production companies

While the spotlight has historically been focused on the oil sands producers, Canadian exploration and production ("E&P") companies have also been leaders on the ESG front. Factors driving the conscientious approach to environmental sustainability are the long storied regulatory frameworks in the Western Canadian prairie provinces, including flaring/emissions reduction targets as well as strong carbon capture support. Industry has also strived to be leaders in abandonment and reclamation of oil and gas properties and recent incentives by all levels of government have accelerated the "clean-up" of inactive wells/facilities. In summary, we believe the Canadian E&P industry has among the best-in-class "ESG" practices in the world.

Canadian energy services

The Canadian energy service space has made strides toward improving their Environmental, Social and Governance initiatives over the past few years, although disclosure through formal ESG reports remains somewhat lacking from a large portion of our coverage universe. Positive initiatives include a shift toward lower emission intensities on equipment, maintaining strict employee safety records, strong engagement through various charitable, community and Indigenous partnerships, as well as improving management/board diversity. That said, the industry still has plenty of ground to make up with formal ESG reporting. We also believe that producers and other customers are looking to use service providers that are more ESG friendly, including a shift to lower emissions equipment, technology and techniques to drill, complete and service wells.

For more information, please speak with your BMO financial professional.

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