

MAGAZINE

WE ACHIEVE
AMAZING
THINGS
TOGETHER

Bitumen
Beyond
Combustion

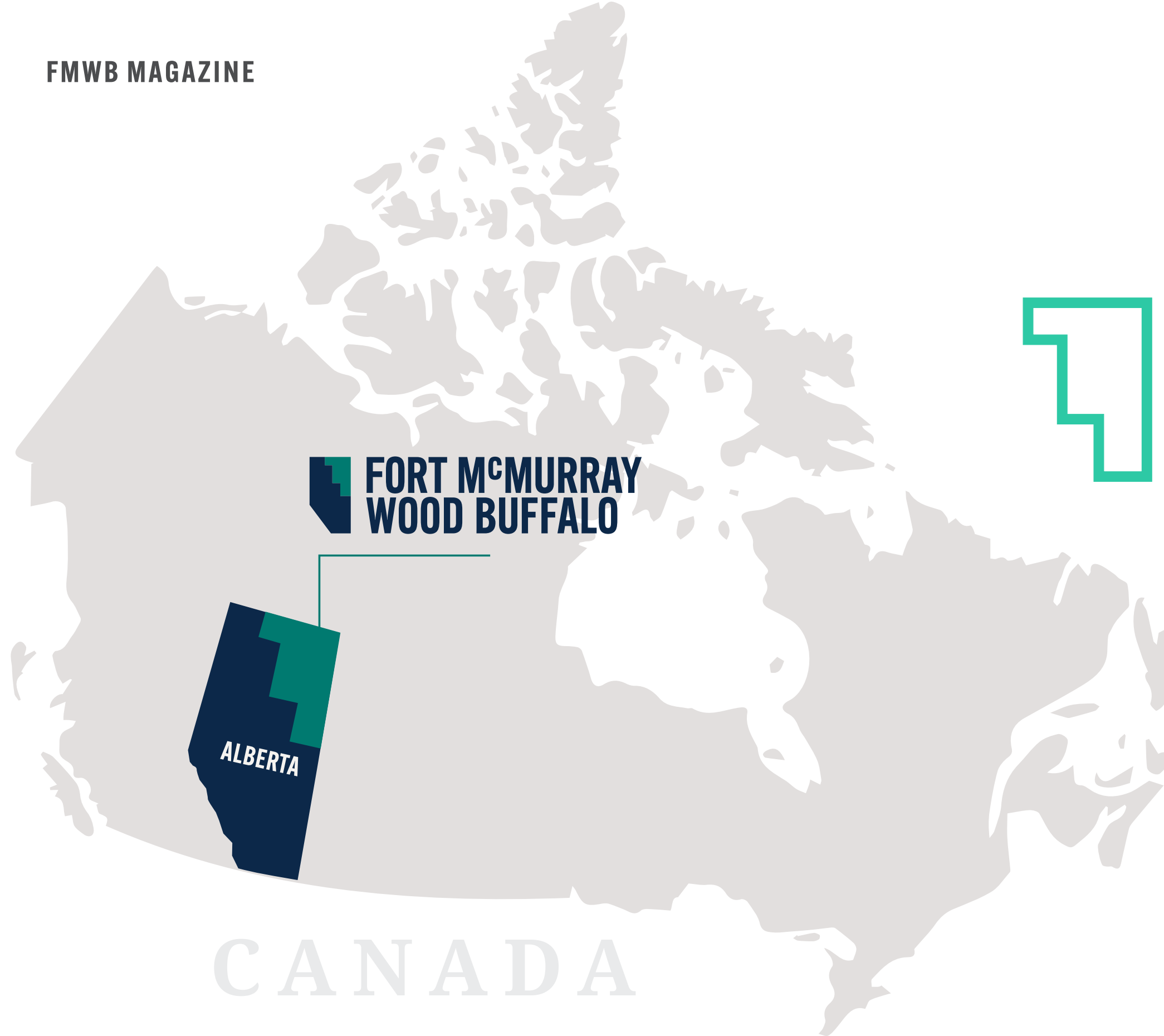
Oil Sands
Action Toward
Net Zero

Unlocking
New Value
In Canada's
Boreal Forest



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What Lies Ahead
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in Canada’s Boreal Forest

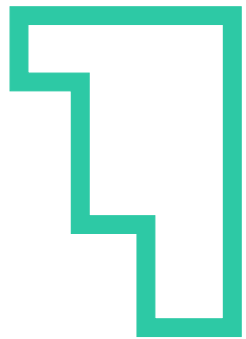


**FORT McMURRAY
WOOD BUFFALO**

ALBERTA

CANADA

A PLACE WHERE WE



**ACHIEVE
AMAZING
THINGS
TOGETHER**

Fort McMurray Wood Buffalo is located in the Northeast corner of Alberta. Home to the Athabasca Oil Sands, Canada's largest oil sands deposits, the region delivers prosperity and opportunity to the entire country. The region is a place of economic opportunity, primed to invest here, develop here, build here and thrive here. Fort McMurray Wood Buffalo is a prime example of what the Alberta advantage truly is.



WHAT LIES AHEAD

Bitumen Beyond combustion

Courtesy Alberta Innovates

The past three years have seen the greatest upheaval in energy markets in 50 years since the oil embargo of 1973. The COVID pandemic brought record low prices, with crude briefly trading at negative value. Then the Russian invasion of Ukraine brought on a global energy crisis with a rapid increase in energy prices and spiraling inflation rates in much of the world. These events have led to increased fossil fuel consumption and higher greenhouse gas (GHG) emissions. Some oil-producing companies have scaled back their plans to reduce the amount of oil and gas they produce. Others have argued that global oil demand will continue to increase through 2045 and 2050 (OPEC, 2023; ExxonMobil, 2023).

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EXECUTIVE SUMMARY

In spite of this energy crisis, policies, strategies and plans to achieve net-zero emissions (NZE) continue to be developed around the world, and energy transitions in electric power generation are taking place rapidly. The Government of Alberta released its Emissions Reduction and Energy Development (ERED) Plan, announcing its goal to reach net-zero carbon neutrality by 2050. The Government of Canada remains committed to its goal of NZE by 2050. The United States has greatly accelerated efforts to lower its economy-wide GHG emissions through the Inflation Reduction Act adopted in 2022 (EPA, 2023). The pathway to NZE by 2050 remains open, but it has narrowed since 2021 (International Energy Agency [IEA], 2023). Alberta Innovates has developed a vision for Bitumen Beyond Combustion (BBC). We believe that the Alberta oil sands could contribute to achieving NZE goals if this resource was used to create valued products and not just combustible fuels. The BBC strategy calls for a greater portion of

bitumen production to be diverted away from fuel production and dedicated to the manufacture of high-value materials. In doing so, the carbon from the bitumen would remain trapped within the products and not released into the atmosphere. Through BBC, the carbon in oil sands would become an asset. BBC products could make transportation more energy efficient, infrastructure less energy intensive and longer-lasting, and renewable electricity generation and energy storage more economical. Instead of contributing to the emissions problem, bitumen could contribute to energy efficiency solutions. This document updates the BBC strategy from 2021 in light of the complex changes in energy markets of the last three years. We examine the roles that BBC may play and impacts it can have in a changed world. We are convinced more than ever that BBC can help the world reach net-zero emissions and create economic opportunities for Alberta and Canada.



WE ARE CONVINCED MORE THAN EVER THAT IMPLEMENTING A BBC STRATEGY CAN HELP THE WORLD REACH NET-ZERO EMISSIONS AND CREATE ECONOMIC OPPORTUNITIES FOR ALBERTA AND CANADA.

combustion

BITUMEN FOR HIGH-VALUE PRODUCTS

Bitumen is a sticky, viscous form of petroleum trapped in sand found in northern Alberta. It is processed to produce transportation fuels and other petroleum products. Bitumen has a lower value than conventional crudes when used as a source for transportation fuels.

The central concept behind the BBC strategy is that the heavy fraction in bitumen would be diverted from fuels production and instead be used to generate products with growing demand around the world. Since conception of the BBC program in 2016, Alberta Innovates has been working to assess market opportunities and develop new products and technologies (see Section 2 for details). Some key BBC products (products that can be made from bitumen) include carbon fibre, asphalt binder and energy carbons (activated carbon and hard carbon) for electrical storage in supercapacitors and sodium-ion batteries. Market demand for these products has been growing and will continue to grow in a net-zero emissions future. For example, the Chinese carbon fibre market has been growing at a CAGR of more than 19 per cent.

As shown in Figure 1 below, if the heavy fraction is used to make carbon fibre, it could add an estimated \$179 to that barrel of bitumen. At the same time, the light fraction would become more valuable since it can be shipped and refined more easily. Using \$50 as the price for a barrel of bitumen (five-year average using bitumen valuation methodology), the total value of the bitumen barrel would increase from \$50 to \$233. Further value addition can be realized when carbon fibre made from bitumen is used to manufacture goods such as automobile parts.

Asphalt binder made from bitumen is superior to other sources. If the heavy fraction of the barrel was used to make asphalt binder, the added value would be \$73. For energy carbons, the added value could be more than \$100 per barrel.

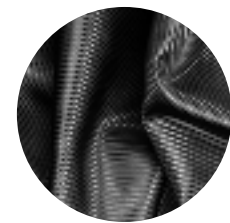


Figure 1

Benefits of using BBC for high-value products



HEAVY FRACTION



CARBON FIBRE (\$179**)



ASPHALT BINDER (\$73**)



ENERGY CARBONS (\$100+**)

*In this illustration, value of whole barrel is \$50 with current use as transportation fuels.

**Value of BBC products that can be extracted from one barrel bitumen.

Exporting one million barrels per day of bitumen will generate \$18 billion per year in gross revenue based on \$50 per barrel. As shown in Table 1 below, if the same volume of bitumen was used to generate BBC products in Alberta, the potential revenue would rise to \$42 billion per year: \$28 billion from BBC products and \$14 billion from sales of light fraction of the bitumen. The markets for BBC products are large and growing

and have the potential to use Alberta's future bitumen production. The actual amount of bitumen converted to BBC products in the future will depend on successfully developing new production technologies and demonstrating the value of BBC products. Significant additional economic benefit and thousands of new jobs could be realized as a result.

Table 1

Revenue projection with and without BBC products for one million barrels per day bitumen production (\$50/bbl based on five-year bitumen valuation)

	Bitumen (bbl/d)	Sales Price (CAD)	Total Revenue (Annual, CAD)
Bitumen sold as crude for fuels	1,000,000	\$50/bbl	\$18B
Bitumen used for BBC products	1,000,000		\$42B
Heavy fraction for BBC	480,000	\$163/bbl	\$28B
Light fraction for fuels	520,000	\$72/bbl	\$14B

BBC FOR GHG EMISSIONS REDUCTION

BBC products offer compelling options for GHG emissions reduction as well. Emissions reduction can be achieved in three ways: diverting bitumen away from combustion, replacing higher-intensity products and reducing downstream GHG emissions when BBC products are in use.

- BBC products can replace existing products with high-emission intensities. For example, life-cycle analysis indicates that the GHG intensity of bitumen-derived carbon fibre may be 52 per cent lower than that of existing commercial polyacrylonitrile (PAN) carbon fibre (Kumar et al., 2021). Similarly, improved technology could reduce GHG intensity for asphalt production by up to 30 per cent on a per barrel basis.

- Carbon fibre composites in lightweight vehicles increase fuel efficiency and reduce GHG emissions by 22 to 36 per cent on a life-cycle basis as compared to a conventional vehicle (Kumar et al., 2021). Similar benefits can be found when carbon fibre is used for rail cars, shipping containers and airplanes. Carbon fibre in composite wind turbine blades enables the generation of ultra-low GHG emissions electricity. The use of carbon fibre in concrete infrastructure adds durability, longevity and reduces cracking compared to existing construction methods. Activated carbon for rapid electrical storage in supercapacitors enables more efficient use of renewable energy by complementing battery technologies, while hard carbon is essential for the emerging sodium ion

battery market. Using premium asphalt binder derived from Alberta bitumen increases the longevity of road surfaces, requiring less reconstruction and the associated emissions.

For every million barrels of bitumen used for BBC, 480,000 barrels could be diverted for non-combustion products. Combustion of this oil as liquid fuels would generate 70 million tonnes per year of GHG emissions. When the final BBC products are used, combustion emissions would be avoided and emissions would be further reduced by making vehicles lighter, by enhancing electrical energy storage, and by enabling longer life of road surfaces BITUMEN BEYOND COMBUSTION / Alberta Innovates / November 2023 PAGE 8 and infrastructure. Since bitumen is exported for fuels to be used in other countries, both the combustion-related emissions of fuels, and the end-use emission reductions from BBC products would follow the consumer. As a result, not all the emission reductions would occur in Canada.

BBC IN VARIOUS EMISSIONS SCENARIOS

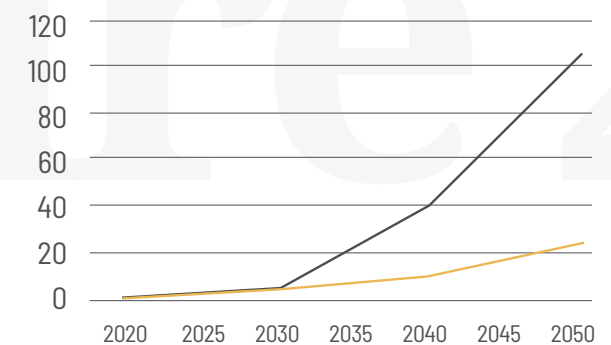
We have analyzed BBC's role and impact in representative scenarios including the following:

- IEA's Stated Policies Scenario (STEPS) based on current climate change policies around the world. ExxonMobil's global outlook is very similar to STEPS in terms of global oil demand.
- Net-zero emissions scenarios represented by the IEA Net-Zero Emissions (NZE) by 2050 Scenario (IEA 2021, 2023); and by the Canada Energy Regulator [CER], 2023).

In the ExxonMobil global outlook, global oil demand will continue to increase but the demand for oil in North America will drop by 32 per cent between 2021 to 2050 (ExxonMobil, 2023). In the IEA's NZE by 2050 Scenario, global oil demand will decrease by 75 per cent (IEA, 2021, 2023), and Canadian production will decrease significantly as well (CER, 2023). Without BBC, demand for Alberta bitumen for conventional uses will be negatively impacted in these scenarios. Our analysis shows that BBC creates more economic value and reduces GHG emissions in all scenarios, but provides the greatest value in various NZE scenarios by 2050 (see Figure 3 below). In STEPS,

BBC can divert a modest amount of bitumen from combustion and still create a multibillion-dollar new economic opportunity for Alberta and Canada. In NZE scenarios, the revenue from BBC after 2030 provides the incentive to significantly expand BBC capacity over time. Total annual revenue from BBC can exceed \$100 billion by 2050. The successful expansion of BBC production will support sustained demand for bitumen. As demand for fuels is increasingly challenged after 2030, the availability of cheap light fractions of bitumen as byproducts of BBC will encourage innovation and investment in their conversion to noncombustion products.

Figure 2
Comparative BBC revenue projections



Alberta oil sands producers committed to achieving net-zero emissions from their operations by 2050 in the Oil Sands Pathways to Net Zero. However, approximately 80 per cent of total emissions occur downstream of production at the point of combustion (Scope 3 emissions). In a net-zero world, the greatest challenge is Scope 3 GHG reduction. A recent study has shown that oil sands production would drop by as much as 90 per cent for Alberta to achieve net-zero emissions by 2050 in the absence of a BBC strategy. However, if BBC was implemented, bitumen production could be maintained or even increased in net-zero scenarios by 2050 (Navius Research, 2023).



A CALL FOR LEADERSHIP AND INVESTMENT IN THE FUTURE

Bitumen Beyond Combustion is a disruptive initiative. It won't happen on its own, and inaction could result in losing significant components of the value chain to jurisdictions with heavy oil (e.g., Venezuela) or manufacturing expertise (e.g., United States and China).

The development of steam-assisted gravity drainage (SAGD) in the 1980s and 1990s provides a great lesson (Hastings-Simon, 2019). The creation of the Alberta Oil Sands Technology Research Authority (AOSTRA) in the 1970s and subsequent development of SAGD were not supported by the conventional oil industry at the time. However, former premier Peter Lougheed had the foresight at the time to prioritize the development of an innovative in situ recovery method. Lougheed's tenacity and faith in the disruption/breakthrough approach led to successful testing of the SAGD technology and the eventual creation of thousands of jobs and today's multibillion-dollar in-situ oil sands industry. BBC is a unique opportunity to unite economic benefits with climate benefits for the common good. Our mission is to turn this vision into a reality. We call on the Government of Alberta to seize the transformational opportunity that Bitumen Beyond Combustion presents. Significant investment will be required to achieve these benefits, and the most critical phase is between now (2023) and 2030. With success of BBC product development and commercialization, private investment will drive much of technology and market development and commercialization post-2030.

It is estimated that \$300 million total government investment will be required over 10 years to realize the full potential of BBC. In light of the tens of billions of dollars of economic impact and climate benefits that BBC can generate out to 2050 and beyond, this could be the best investment the Government of Alberta makes.

This article was first published as an executive summary in the report 'Bitumen Beyond Combustion' by Alberta Innovates. Read the full report at [AlbertaInnovates.ca](https://albertainnovates.ca)

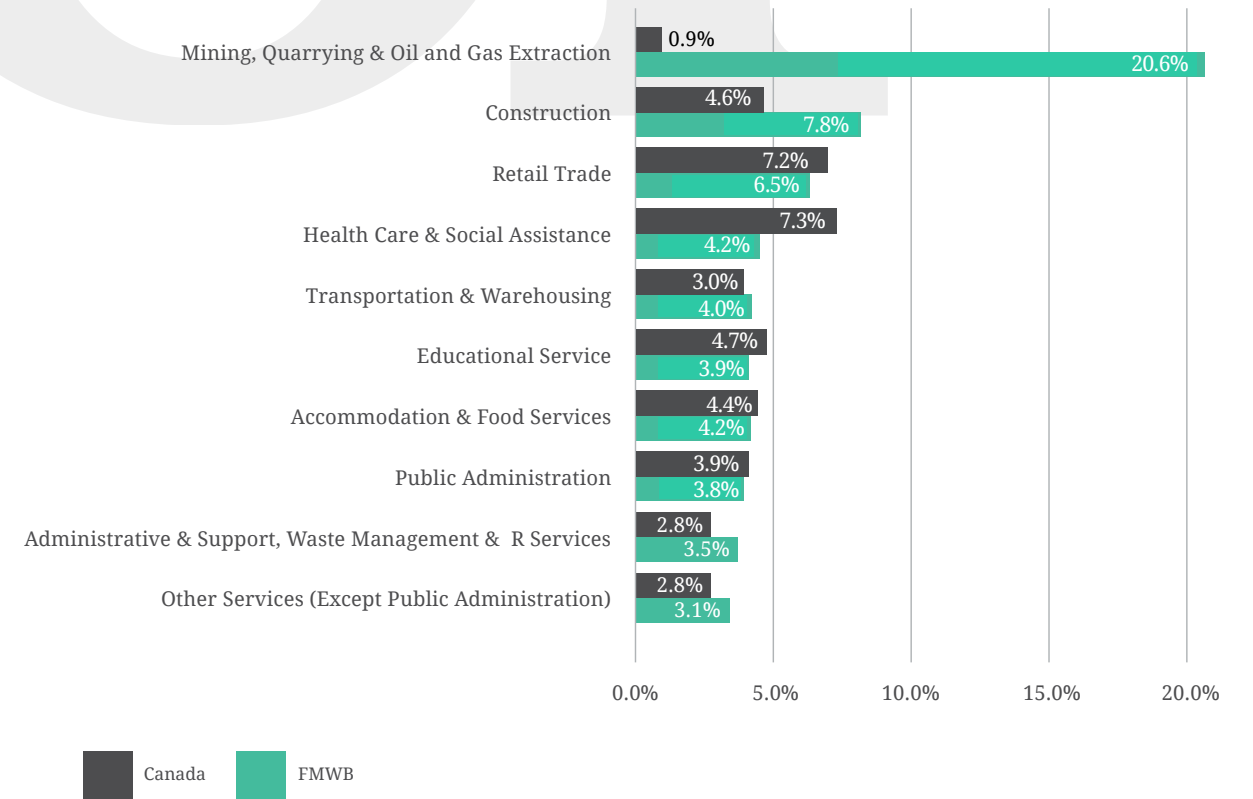
A LOOK AT THE

TOP 10 INDUSTRIES IN TRADE AREA

BY DISTRIBUTION OF LABOUR FORCE



TOP 10



WE HAVE THE

ENERGY FOR THE FUTURE

Fort McMurray Wood Buffalo is home to the third largest proven oil reserves in the world. Approximately 96% of Canada's oil comes from oil sands, and the majority of Canada's oil sands are located in Fort McMurray Wood Buffalo. The region is a global energy hub and key driver of the Canadian economy.

The majority of global oil deposits are either government owned or controlled. Of the 19% of total world deposits open for private sector investment, over half are located in Fort McMurray Wood Buffalo.



OIL SANDS ARE LOCATED IN THREE DEPOSITS - THE ATHABASCA, PEACE RIVER AND COLD LAKE DEPOSITS. THE LARGEST OF THESE DEPOSIT ARE FOUND IN FORT MCMURRAY WOOD BUFFALO.

WHAT ARE
OIL SANDS?

Oil sands are a natural mixture of sand, water and bitumen. As the oil trapped within is thick and does not flow on its own, it can not be recovered through conventional drilling and pumping. Unconventional oil requires unconventional methods, and extracting the oil is a challenge that scientists have been working on since the 1920s. In 1967, the first commercial production in the oil sands began. And every year since, research and development of new techniques and technologies are undertaken to achieve cleaner and more efficient methods of extraction.

Today, oil is extracted using advanced oil sands mining and in situ development. Bitumen deposits located 70 metres from the surface are mined and represent 20% of recoverable oil sands. The remaining 80% are recovered through drilling and enhanced oil recovery technologies such as steam assisted gravity drainage (SAGD).



MORE THAN
6,000
EVERYDAY
PRODUCTS
ARE MADE WITH OIL

CERAWEEK MARCH 2024



KEYANO COLLEGE
SUPPORTING
INDUSTRY & COMMUNITY



KEYANO.CA

WE HAVE THE

THE ENERGY TO SUCCEED



Canada is the fourth-largest oil producer in the world thanks to ongoing oil sands production growth. Record volumes of synthetic crude were produced in the second half of 2023, with planned maintenance at upgraders delivering further efficiency gains. Total oilsands production for the year was almost 1.2 billion barrels – over three million barrels per day. Alberta’s oil sands have proven reserves of about 158.9 billion barrels.

MILLION B/D	2018	2020	2025	2030	2035	CHANGE
Mining	1.35	1.51	1.51	1.63	1.71	0.47
In Situ	1.56	1.68	1.95	2.16	2.44	0.88
Total Oil Sands*	2.91	3.20	3.57	3.88	4.25	1.34

Source: Statistics Canada (Record high crude oil production largely driven by oil sands: Crude oil year in review 2023 - Statistics Canada (statcan.gc.ca))

\$16.5B

PER YEAR PROJECTED AVERAGE CAPITAL EXPENDITURES

\$17B

OVER THE NEXT 10 YEARS PROJECTED CONTRIBUTION IN OIL SANDS ROYALTIES & TAXES

217,000

DIRECT AND INDIRECT JOBS ACROSS CANADA IN 2018

PUMPING UP THE ECONOMY

According to the Canadian Energy Research Institute (CERI), the oil sands industry is projected to contribute \$1.01 trillion to the Canadian GDP over the next 11 years. That’s an average annual GDP growth of approximately \$92 billion over the next 10 years. Of that, Alberta will account for 88% of the total impact, averaging \$80 billion per year.

The effect of the oil sands industry is felt across the nation. Oil sands companies spend \$4 billion on supplies and services from 2,711 companies in 9 provinces, and 3 territories outside of Alberta. Every direct job created in the oil sands industry, creates 2.5 indirect jobs in the rest of Canada.



OIL SANDS ACTION

Toward Net Zero

By Kevin Weidlich, President & CEO,
Fort McMurray Wood Buffalo
Economic Development and Tourism

CARBON CAPTURE AND STORAGE WILL BE A MAJOR CONTRIBUTOR TO REACHING CANADA'S NET-ZERO EMISSIONS TARGETS. THE PATHWAYS ALLIANCE CCS PROJECT LEVERAGES ALBERTA'S OIL SANDS ADVANTAGES TO HELP MEET CLIMATE GOALS.

Canada's largest energy producers are serious about reducing emissions. Carbon Capture and Storage (CCS) facilities in Alberta are already securing millions of tons of carbon dioxide before it is emitted each year. Fort McMurray Wood Buffalo is uniquely suited to scale up Canada's CCS capacity.

CCS is a proven and reliable process. From the United States to Norway, and from Brazil to Australia, governments and industry are pursuing major CCS projects. "It's a key component of our net-zero strategy because it's one of the most advanced technologies for emissions reduction and our

members have the expertise to implement it right now," says Kendall Dilling, President of Pathways Alliance.

Pathways Alliance is a collaborative industry organization that brings together Canada's six largest oil sands companies toward their shared goals. Their biggest project to date is a proposed 250-mile pipeline, network, and underground storage hub that will collect CO2 from up to 20 oil sands facilities for safe, long-term storage. It's a massive undertaking that could reduce net carbon emissions by 10 megatonnes per year by 2030.

The oil sands is a strategic site for this project, and well suited to CCS investments. Alberta's oil sands are geographically concentrated and low-decline assets. This means that capital investments continue to deliver for many decades without the need for a continuous drilling program. In fact, our oil sands have the fourth-largest proven recoverable reserves in the world. With production centered around a relatively small area, CCS investments can capture a greater share of CO2 during production.

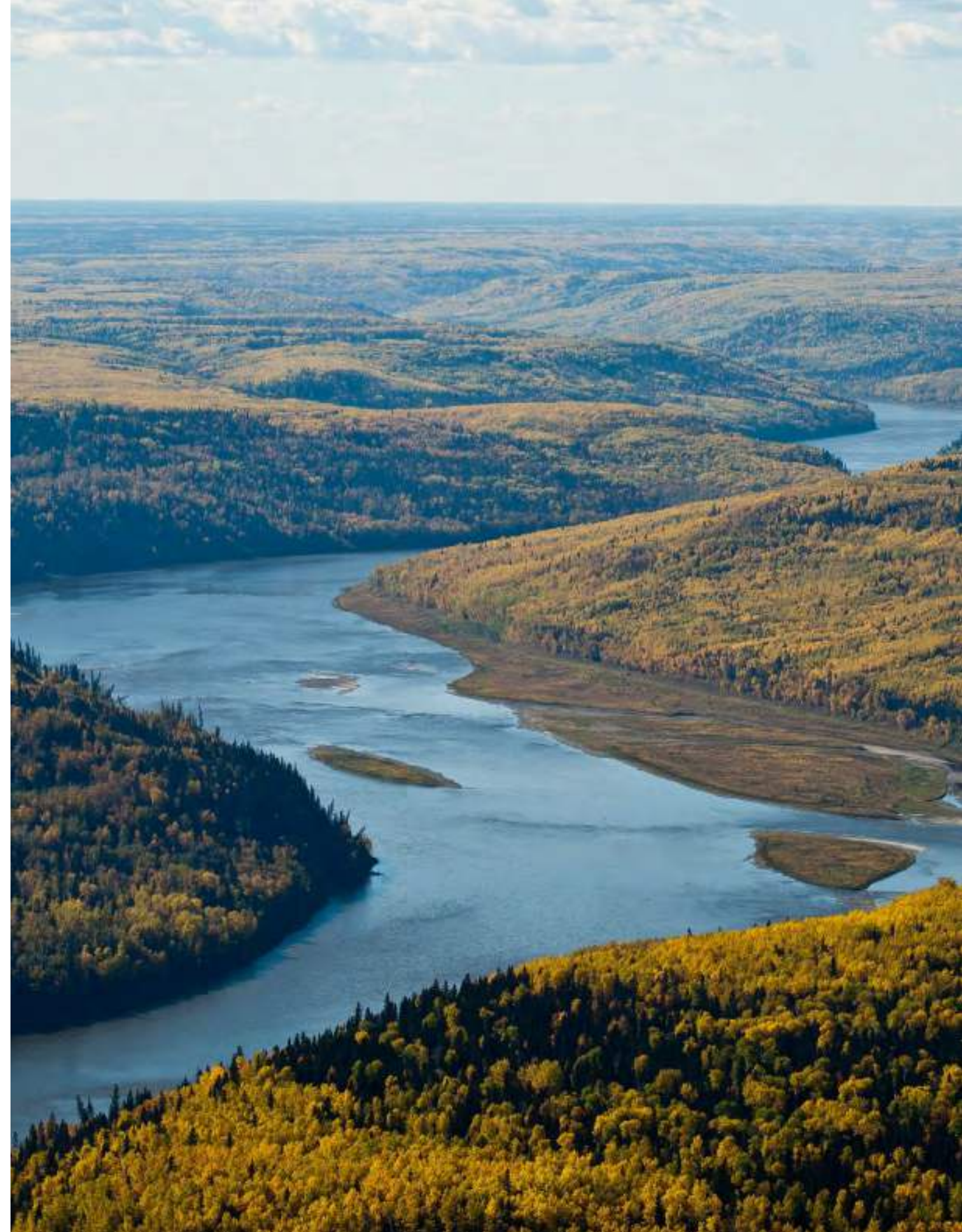
Our province has an enviable track record on CCS technology and facilities. "Alberta is a world leader in the development of carbon capture and storage (CCS) tech," said Brian Jean, Minister of Energy and Minerals for the Government of Alberta. "For more than a decade, our province has supported the development of CCS by establishing the framework and infrastructure to employ carbon tech to help reduce their emissions."

Advancements in CCS technology have been paired with improvements in emissions intensity. Steam-assisted gravity drainage (SAGD) projects are relatively less intensive. SAGD has seen extensive investments for new projects over the past 15 years. Production efficiencies in existing operations, as well as the development of SAGD projects has meant that oil sands emissions intensity dropped by almost 25% since 2011.

These production efficiencies have delivered economic benefits too. A September 2023 BMO Capital Markets assessment estimated a USD\$46 per barrel cost to cover capital budgets and base dividends for the average oil sands producer, compared to USD\$53.50 per barrel for the average large U.S. producer.

Federal and provincial governments are rolling out incentives to prioritize CCS projects. The Government of Canada announced its Investment Tax Credit for Carbon Capture and Underground Storage in 2023. It provides a 50% tax credit for upfront CCS costs until 2030 and 25% from 2031 – 2040. An Alberta incentive program is expected in 2024. Minister of Energy and Mines Brian Jean said the incentives will be similar to the existing Alberta Petrochemical Incentives Program, and that he is engaged with stakeholders to develop the program. "We're going to make sure we do a robust consultation to get it right," said Minister Jean.

Carbon Capture and Storage is a key pillar to the responsible expansion of Canada's oil sands production. Improvements in extraction and production are lowering oil sands emissions intensity, and carbon capture and storage prevents emissions from entering our atmosphere. The successful combination of these initiatives can deliver on industrial emissions targets – and help Canada to achieve its net-zero goals.



THIS IS THE PLACE

WHERE INVESTMENT HAPPENS

Fort McMurray Wood Buffalo is a place to invest. The estimated cost of capital projects under construction and proposed over the next seven years total nearly \$33 billion.

\$2.4B
UNDER
CONSTRUCTION

\$30.1B
PROPOSED

ALBERTA MAJOR PROJECTS

ESTIMATED COSTS

PROJECTS UNDER CONSTRUCTION

Suncor Power Cogeneration	\$1,400,000,000
McMurray Metis Cultural Centre	\$74,700,000
Fort McMurray Lower Townsite Flood Mitigation	\$143,000,000
Kearl Oil Sand In-Pit Tailings Project	\$750,000,000
Saunderson Pressure Reducing Station	\$44,000,000
	\$2,411,700,000

PROPOSED PROJECTS

Aspen Oil Sands Project	\$2,600,000,000
Suncor Base Mine Extension	\$4,400,000,000
Meadow Creek East SAGD Project	\$1,500,000,000
Titanium and Zircon Extraction Project	\$400,000,000
Cevovus First Nation Housing	\$50,000,000
Christina Lake Phase H Expansion	\$1,300,000,000
Highway 881 Improvements	\$52,000,000
Athabasca Delta School Replacement	\$25,500,000
Mildred Lake Mine Extension (MLX)	\$3,300,000,000
Suncor PURE Demonstration Facility	\$52,500,000
Pathways Alliance Carbon Capture Storage Hub	\$16,500,000,000
	\$30,100,000,000

UNLOCKING NEW VALUE IN

Canada's Boreal Forest

By Lisa Sweet and Jessica Pilgrim,
Fort McMurray Wood Buffalo Economic
Development & Tourism

Our community sits amidst one of the largest forests in the world – in fact Alberta has more acres that are SFM-certified than almost every other country in the world. That's impressive. Total income from the forestry sector grew by over 100% between 2006 and 2021 in Fort McMurray Wood Buffalo. It's a sector that's innovating to provide valuable new products, decrease waste, and contribute to the economy of the future.



NATION - LEADING PRODUCTIVITY

The forest industry continues to invest in Alberta, with over \$300 million in capital projects in 2022 and an estimated \$7 billion over the past ten years. New investment ensures that mills are globally competitive. Thanks to ongoing investment, Alberta's forest industry has the highest labour productivity in the country. Wood product manufacturing productivity alone is more than 50% higher in Alberta than the national average.

Alberta's forest industry has plenty of room for investment. The sector offers secure access to wood fibre, world-class mills, and competitive conditions that deliver enviable returns. It is a respected contributor to dozens of communities across the province – including Indigenous communities.

Indigenous communities participate in the forest sector economy through joint ventures, contracting, cooperative agreements, and collaborative initiatives. Approximately 12,000 Indigenous workers are employed in Canada's forest sector, including 1,400 Indigenous-owned businesses. Their skills and knowledge are contributing to the ongoing growth in Alberta's forest sector.

Northern Alberta winters provide a productivity boost as well. Tree harvesting takes place during colder months as it is easier for trucks and equipment to operate on frozen ground. Muskeg, lakes, and rivers are a major part of the geography around Fort McMurray Wood Buffalo. Ice roads increase access to remote locations, freezing helps to minimize ground disturbances, and winter conditions help to minimize risks of forest fires.

S U S T A I N A B L Y
H A R V E S T I N G T H E
B E S T - M A N A G E D F O R E S T S

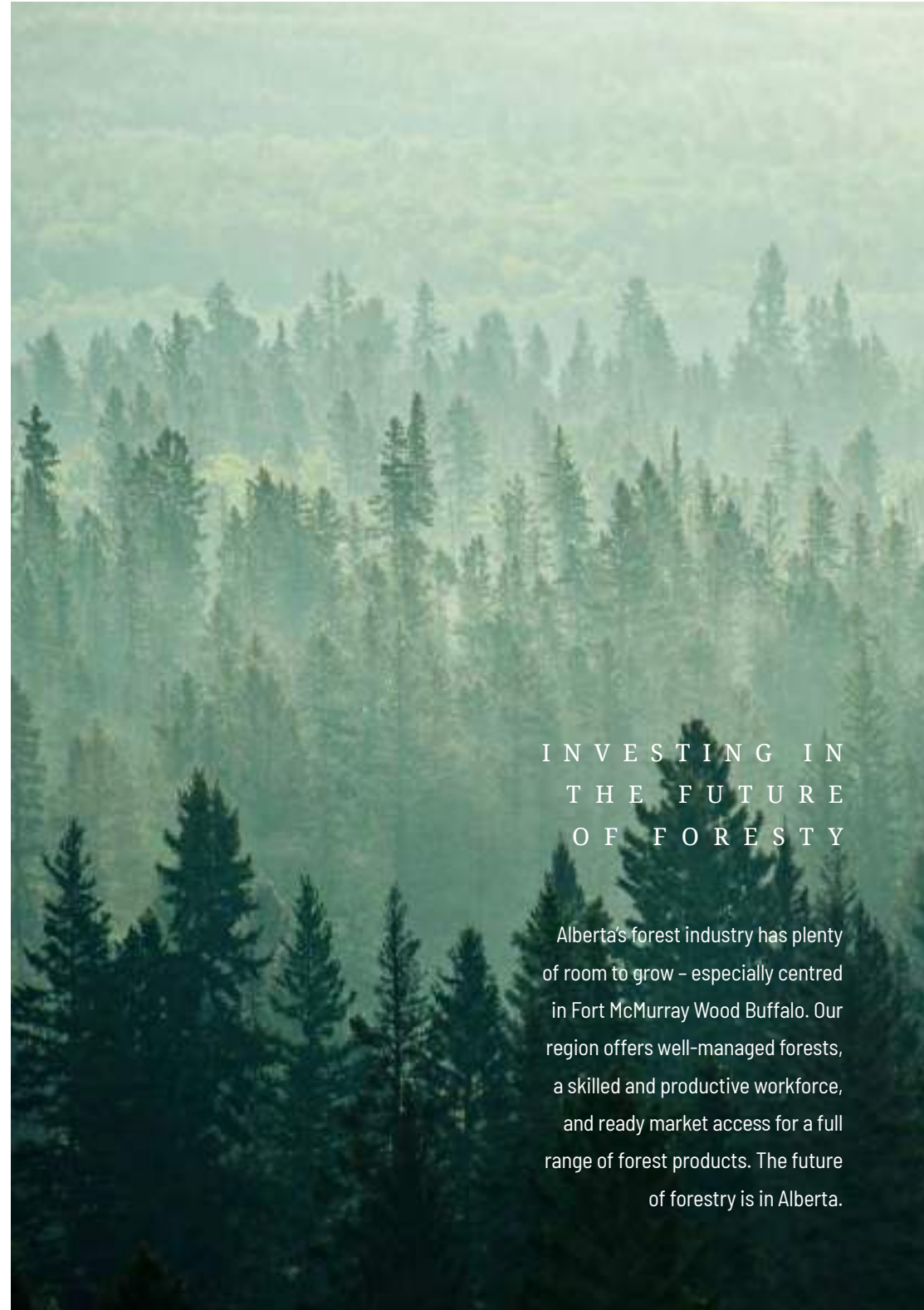
The Canadian approach to sustainable forest management is based on a long history of science, Indigenous knowledge, industry experience, and community involvement. Our approach maintains natural processes and actively manages our forests, helping to support a move to a net-zero carbon economy.

Fort McMurray Wood Buffalo is blanketed by boreal forest. Undisturbed, trees of the boreal forest live to about 100 years. The oldest trees in a boreal forest are more susceptible to fire, pests, droughts, and other disturbances. All of these events are natural but also release giant amounts of carbon dioxide back into the atmosphere. By taking a proactive approach in managing our forests we minimize the scope and risk of fire and disease.

Planned, sustainable harvesting of the boreal forest ensures that the forests are renewed every 100 years. Harvesting

also locks carbon into the building materials and other products created by the forest industry. Sustainable forest management practices help us maintain a more youthful, healthy, vibrant and sustainable forest for our communities and future Albertans.

Alberta has over 20 million hectares of Sustainable Forest Management certified forest area. This means that the province has more certified forest area than all other countries but the United States and Sweden. Certification supports the province's reputation as a source of forest products from sustainably-managed forests. The recognized standards of SFM certification promote responsible forest management through the conservation of biological diversity, maintenance of wildlife habitat and species diversity, protection of special sites, soil and water, and sustainable harvest levels.



I N V E S T I N G I N
T H E F U T U R E
O F F O R E S T Y

Alberta's forest industry has plenty of room to grow – especially centred in Fort McMurray Wood Buffalo. Our region offers well-managed forests, a skilled and productive workforce, and ready market access for a full range of forest products. The future of forestry is in Alberta.

D E L I V E R I N G O N
A M E R I C A N D E M A N D

Mass timber design and construction is also driving significant growth. Mass timber buildings can be completed 25% faster than similar projects using common building materials. Using wood in construction can reduce carbon pollution by 25 – 45%. Mass timber is safe, too. It is earthquake resistant and is designed to be as safe or safer during a fire. Its natural insulator capabilities deliver efficiencies in hot and cold environments, too.

Another major growth area for the forestry sector has been as a reliable supplier of baseload power and bioenergy products. Companies have made significant investments in electricity generation and wood pellet production capacity. All of the province's pulp and paper mills have generating capabilities that utilize either woody biomass or natural gas – alongside a standalone power plant that utilizes woody biomass exclusively.

All these innovations have increased the market for Alberta's forest products. The United States remains the province's largest market – buying almost 80% of Alberta forest products (by value). We reach the entire US market – Alberta companies reached every US state in 2022. In Texas alone, sales of Alberta forest products have grown five-fold in the past decade.

THIS SPECIAL

PLACE WE CALL HOME

We have a strong industry that attracts people to our unique part of the world. What keeps us here is a place built on people discovering, developing and seizing the opportunity.

- 42% of the population are between the ages of 20 and 44
- Largest population cohort is 35-39
- 47.4% Female population
- 52.6% Male population
- 60.4% Post secondary education

Fort McMurray Wood Buffalo is a vibrant and diverse community with an educated and engaged workforce. Our population is comprised of permanent residents and a shadow population of temporary residents (approximately 26% who live elsewhere) who are employed by an industrial or commercial establishment in the region a minimum of 30 days a year.



6
MÉTIS
COMMUNITIES

6
FIRST
NATIONS

35.3
MEDIAN AGE

77.9%
LABOUR FORCE
PARTICIPATION

31.3%
VISIBLE
MINORITY

WE HAVE A POPULATION OF
106,059
PEOPLE
FROM OVER
60 COUNTRIES

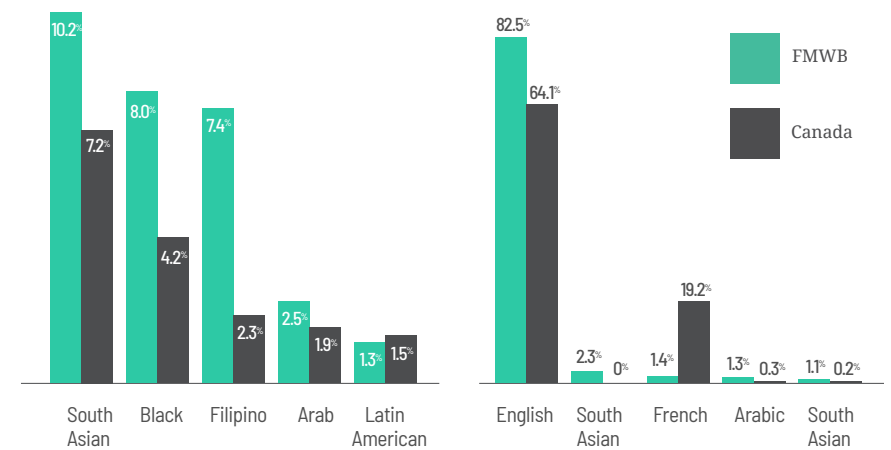
32.5%

BELONG TO A
VISIBLE MINORITY

A PLACE WHERE

EVERYONE HAS A STORY

Wherever you are, whoever you are, you are invited to build your success and make a name for yourself here. Fort McMurray Wood Buffalo is a place of diversity, of possibility, of community. We are home to some of the world's biggest creators and thinkers, and a magnet for the best and brightest from here, there, and everywhere looking to be a part of our ever-growing hub of creativity. Come see for yourself.



VISIBLE
MINORITY
STATUS:
TOP 5

LANGUAGES
SPOKEN
AT HOME:
TOP 5

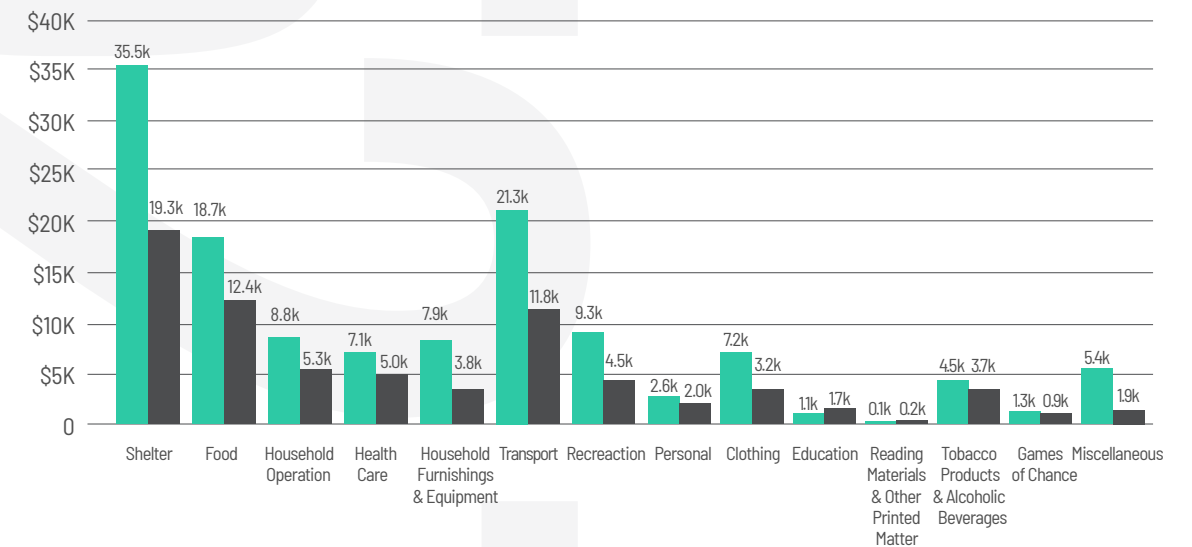
THIS SPECIAL

MAKE YOUR HOME HERE

With the news filled with stories of soaring housing costs across Canada, many see owning their own home as an unattainable dream. Not so in Fort McMurray Wood Buffalo. With an average house price of \$352,780, owning your own home here is a very achievable reality. You'll find a wide array of home options, ideal for individuals and families alike.

\$352,780
AVERAGE HOUSE

ANNUAL HOUSEHOLD EXPENDITURES BY CATEGORY



DWELLING TYPE	AVERAGE PRICE
Single Family Detached	\$530,634
Semi-Detached	\$405,286
Row	\$199,721
Apartment	\$89,993

Source: Alberta Real Estate Association, February 2022



THE VOICE OF THE CONSTRUCTION INDUSTRY IN WOOD BUFFALO

FMCA exists to advance the **construction industry** through effective representation and service to our member firms. We are a member-driven organization – founded on the principles of **integrity, leadership, quality, and value** – and dedicated to excellence and innovation.

JOIN TODAY
FMCA.NET

780-791-9288
fmcaadmin@fmca.net



Connecting the world to Fort McMurray Wood Buffalo, Fort McMurray International Airport (YMM) enhances residents' quality of life, and provides imperative workforce movements to support the oil sands industry, driving the Canadian economy forward.

Annual Direct Impacts of YMM

510 jobs

\$40 million
in wages

\$60 million
in GDP

\$160 million
in economic
output





PURSUIING OPPORTUNITY, TOGETHER.

Fort McMurray Wood Buffalo is naturally enriched with resources and blessed with a population that is equally resourceful. We welcome the opportunity to discuss investment in the region and subsequently, host you in Fort McMurray, introducing you to the community.



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