

British Columbia

2024/2025

# *Oil & Gas Report*

*Highlighting the different facets of B.C.'s oil and gas industry*



***Global game changers in B.C.  
LNG Canada project nears completion and  
Ksi Lisims LNG signs 20-year deal with Shell***

## **MIND OVER METAL**

**Youth camp promotes careers in welding and metalwork**

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**Capital investment projected at \$40.6 billion in 2024**

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## On the cover:

Rendering of the Ksi Lisims floating LNG facility to be located on Nisga'a Nation-owned land on the northern tip of Pearse Island.

*Photo courtesy of Ksi Lisims LNG.*

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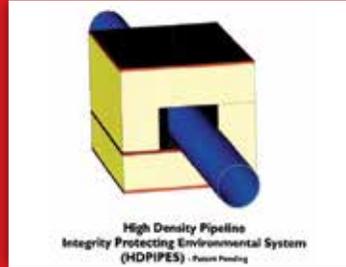
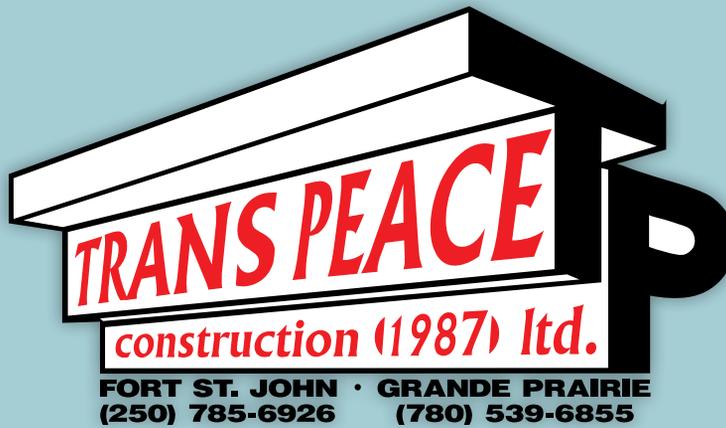
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# Message from the editor

**W**elcome to the 2024/2025 BC Oil & Gas Report, where we explore the dynamic energy landscape of British Columbia.

In this issue, we highlight Ksi Lisims LNG's ground-breaking agreement with Shell, combining economic growth with sustainability in LNG development. We also showcase the innovative solutions Woodbridge LNG has unveiled surrounding its construction workforce accommodation, emphasizing environmental responsibility.

BCER's sponsorship of the Mind Over Metal™ Youth Camp demonstrates a commitment to nurturing future talent, while we celebrate the Boilermakers' legacy in building B.C.'s energy infrastructure and congratulate Calfrac Well Services Ltd. on their 25th anniversary.

The Canadian Association of Petroleum Producers forecast of a \$40.6 billion capital investment in 2024 reflecting ongoing growth in the Canadian oil and gas sector.

As LNG Canada nears completion, we witness a global game-changer in energy production, highlighting British Columbia's role on the world stage. Enserva's THINK Energy campaign promotes diverse career paths in the energy services sector, inspiring the next generation of industry leaders.

Join us in shaping the future of energy in British Columbia and beyond through these compelling stories of innovation, sustainability, and growth.

*Tammy* ■



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**KSI LISIMS LNG**

## ECONOMIC GROWTH AND SUSTAINABILITY: **Ksi Lisims LNG's game-changing agreement with Shell**

In their first LNG offtake agreement, Ksi Lisims LNG Limited Partnership ("Ksi Lisims LNG"), announced that the company signed a 20-year LNG sale and purchase agreement with Shell Eastern Trading Pte Ltd. ("Shell"). Under the SPA, Shell will purchase two million tonnes of LNG per year from the Ksi Lisims LNG project on a free-on-board basis.

"The Nisga'a Nation has been striving to grow economic opportunities for our people right here at home," says Eva Clayton, President of Nisga'a Lisims Government. "Ksi Lisims LNG is the cornerstone of a brighter future for our people. As the project continues to pick up momentum, evidenced by this agreement with Shell, the Nisga'a people are now able to envision the opportunity and prosperity that Ksi Lisims LNG will bring to our Nation."

Ksi Lisims LNG is a co-development of the Nisga'a Nation, Rockies LNG, and Western LNG. Powered

by renewable hydroelectricity, it will be the lowest emission intensity LNG facility in the world, and net-zero ready by 2030. The facility will produce 12 million tonnes per annum of LNG from two floating LNG production and storage facilities located on Nisga'a Nation-owned land on the northern tip of Pearse Island.

"We're proud to be working to deliver the world's cleanest natural gas to markets that need it most," says Charlotte Raggett, President and CEO of Rockies LNG. "Canada is an ideal global energy supplier, producing the world's most responsible and lowest-emission natural gas at the shortest distance from Asia in the Americas. The Ksi Lisims LNG project will provide energy markets in Asia with low-carbon, reliable energy that helps transition from higher emitting fuels to meet growing energy needs and supports continued growth in intermittent renewables such as wind and solar."

The project, utilizing floating LNG production units



Renderings courtesy of Ksi Lisims LNG.

built by Samsung Heavy Industries and an all-electric process technology developed by Black & Veatch, would be one of Canada's first LNG export facilities and its second largest. It is still in the process of passing all regulatory requirements.

"The Ksi Lisims LNG project is an innovative development for North America," says Davis Thames, President and CEO of Western LNG. "The strong fundamentals of our project have earned the confidence of some of the most established companies in the LNG industry. We look forward to continuing to work with Shell and our other customers as we move toward reaching a final investment decision,"

Thames says that their work with the Nisga'a Nation and Rockies LNG has produced a unique value proposition for their customers and they intend to continue growing their sales portfolio. "Ksi Lisims LNG will play an important role in the long-term economic growth of the Nisga'a Nation and other nations with which we work, and we remain committed to being good partners with them." ■

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# A sustainable solution for LNG construction workforce accommodation

**T**he arrival of the MV Isabelle at the Woodfibre LNG project site in Howe Sound will mark a leap forward in sustainable workforce accommodation. The floating workforce accommodation — a converted luxury cruise ship also known as a floatel — is expected to arrive at the project site in spring of 2024 where it will remain moored until the completion of construction in 2027. The floatel will provide high-quality housing to approximately 650 non-local workers during construction

of the Woodfibre LNG project.

The vessel first arrived in the Burrard Inlet in January after a 40-day, 22,563-kilometre journey from Estonia and through the Panama Canal. The vessel then spent time at Seaspan's North Vancouver shipyard facility receiving some finishing touches.

With its 652 luxury cabins and advanced environmental systems, the vessel exemplifies comfort, safety, and eco-responsibility. Provided by Bridgemans Services

Group, the MV Isabelle supports Woodfibre LNG's commitment to sustainability while housing workers in a premium live-work environment.

"We are thrilled to showcase MV Isabelle to our neighbours in Vancouver and along the Sea-to-Sky corridor," says Brian Grange, president of Bridgemans. "We have been providing floatels to resource and cleantech workforces for 10 years in Canada and around the world. MV Isabelle represents a generational leap in environmental



The converted cruise ship offers its residents a premium live-work environment, including individual rooms with private ensuites, catered dining areas, indoor and outdoor sports lounges, an 8,000-square-foot fitness facility, and a billiards and games room.

innovation and a made-in-Canada approach that we hope to bring to more of our large workforce accommodation projects in future."

Floatels are increasingly being used for worker accommodation when land-based options pose significant challenges, as they can be quickly positioned and removed and can be operated sustainably, leaving no ecological footprint after departure.

Woodfibre LNG, designed to be the world's first net zero LNG export facility, chose Bridgemans for its commitment to sustainability and ability to deliver turnkey, safe, and secure live-work offshore accommodation for workers at the site.

The MV Isabelle offers an array of advanced environmental systems that meet or exceed Canadian and provincial regulations. Its state-of-the-art services include an ultraviolet water purification system, the ability to run on-shore hydro power, industrial-sized heat pumps, and sewage treatment that includes ultrafiltration and shipment to a waste management facility in B.C.

The converted cruise ship offers its residents a premium live-work environment, including individual rooms with private ensuites, catered dining areas, indoor and outdoor sports lounges, an 8,000-square-foot fitness facility, and a billiards and games room.

Woodfibre LNG plans to fund the

\$100 million floatel along with the cost of catering, housekeeping, and other services on board, as part of its commitment to ensure the project has as little impact on the Squamish community as possible.

The Woodfibre LNG export facility is being constructed on the former Woodfibre pulp mill site in Howe Sound, approximately seven kilometres south of Squamish. The project is located on the unceded territory of the Squamish Nation within the traditional village known as Swiyát.

Construction on the Woodfibre LNG project began in fall 2023. The facility will export approximately 2.1 million tonnes of LNG per annum, and substantial completion is expected by 2027. ■

# UNLEASHING POTENTIAL

## BCER sponsors second Mind Over Metal™ youth camp



Students, instructors, family, and friends gather at the closing ceremonies.



Two projects welded at the camp.

From July 24 to 28, the BCER sponsored another Mind Over Metal™ camp at the Thompson Rivers University (TRU) campus in Williams Lake. At the BCER, we believe investing in young people means empowering the next generation. One of the ways we do this is through our sponsorship of the Mind Over Metal Camp. This transformative and unforgettable experience, for youth aged 12 to 17, is designed to introduce young minds to the fascinating world of welding and metalwork while nurturing their creativity, camaraderie,

and confidence. It's also about removing barriers for women: this time, four out of 16 students were young women.

The camp's foundation is built on accessibility. Participation is free, ensuring everyone, regardless of their background or financial situation, can take part in this enriching week (the only challenge was an overwhelming waitlist!). This commitment to inclusivity aligns perfectly with BCER's values of promoting growth and advancement for all.

Hosted at the TRU's impressive trades facility, the camp's setting is nothing short of inspiring. Their state-of-the-art facilities provide an immersive, hands-on learning environment, ideal for sparking the curiosity and passion of young minds.

Mind Over Metal is not merely about inspiring careers in welding; it's a transformative journey that instills a sense of purpose and self-belief. Tyler, a TRU welding instructor, expressed his enthusiasm for the camp, saying that witnessing the growth,

Mind Over Metal is not merely about inspiring careers in welding; it's a transformative journey that instills a sense of purpose and self-belief.

progress, and ingenuity of the students is a source of great satisfaction for him and the team, many of whom are volunteers. As the days pass, the campers form new friendships, learn from one another, and create a sense of camaraderie.

The closing ceremony itself is a joyous occasion, as students proudly showcase their impressive works to an audience of parents and friends. Each student is recognized during a certificate ceremony, acknowledging their dedication and achievements. It's heartwarming to see the beaming faces of students, proud of their accomplishments and newfound abilities. During the closing ceremony it's evident how this environment positively influences the young participants. The sheer number of projects created by the students is nothing short of spectacular!

The sense of respect and appreciation at the camp is a testament to its profoundly positive impact on young people.

The camp provides a glimpse of the infinite potential that lies within our youth, inspiring hope for a brighter future. BCER is proud to be a part of this journey, fostering the growth of young minds and contributing to a better tomorrow. Together, we can unlock the potential of the next generation and create a stronger, more innovative society.

## About Mind Over Metal

The camp is offered by the CWB Welding Foundation, a national registered charity established in 2013 by the Canadian Welding Bureau (CWB) Group. Through hands-on learning, these camps are designed to introduce youth

to welding and welding-related careers while building confidence and self-esteem through the development of new skills. To learn more about Mind Over Metal camps and the CWB Welding Foundation, visit [www.cwbweldingfoundation.org](http://www.cwbweldingfoundation.org). ■

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# POWERING THE FUTURE: Boilermakers' legacy in building B.C.'s energy infrastructure

**W**e are fortunate here on the West Coast; blessed with an abundance of natural resources that we have been able to harness and transform into the energy that we need to grow. Hydro power, natural gas, biomass, hydrogen, and biofuels are all available to us to power our province, provide jobs, and drive our economy forward. However, we are in the middle of an inflection point.



The amount of energy we are projected to require in the future is growing faster than our current output can reliably provide. Extreme weather requiring increases in both heating and cooling demands are demanding above-normal resources output. Our population is growing, too. BC Statistics released a report stating that population growth for British Columbia in 2023 was three per cent, the highest it has been since the 1970s.

# CONSTRUCTION, MAINTENANCE, OR SHUTDOWN: YOU NEED BOILERMAKERS.

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We Boilermakers take safety training seriously, and our co-operative approach in tandem with our employers shows it. Keeping safety as a core Boilermaker value saves time, money, and lives.

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## B.C. and Alberta have enough natural gas to meet Canada's demand for the next 300 years, at current usage levels. This is part of a solution that is available now for us to implement and ensure that we have energy security for the foreseeable future.

This will place additional increased demand on our energy supply.

In addition to our increasing demand for energy, our ability to supply that demand is not currently able to keep pace. Reduced snowfall has resulted in snowpack that is as bad as 40 per cent below normal, according to the B.C. River Forest Centre, meaning that water flow in streams and rivers, as well as replenishment of BC Hydro reservoirs will be diminished. In fact, according to the British Columbia Energy Regulator, there is an increased potential for drought conditions in 2024 and limited water supply for northern B.C.

This increase in forecasted demand for energy is causing a decline in reserve margins and reduced surplus capacity for managing periods of above-normal demand. To manage this shortfall, our province has turned to other jurisdictions for power supply during peak periods. In 2023, we imported 10,000 gigawatts hours (approximately 1/5 of our total provincial power needs) at a cost of \$450 million, with BC Hydro becoming a net importer of electricity. If we cannot meet 1/5 of our power demands now, how can we hope to meet future energy needs without making changes to how we address the issue?

B.C. and Alberta have enough natural gas to meet Canada's demand for the next 300 years, at current usage levels. This is part of a solution that is available now for us to implement and ensure that we have energy security for the foreseeable future. Making use of this resource will provide us the power we need to develop the next evolution of sustainable energy technologies, while ensuring that the people of British Columbia are not put in the position of relying on other jurisdictions for power – jurisdictions that are facing many of the same demand, supply, and price concerns

that we are, and that may not be able to provide for us like they have in recent years.

We need to carefully examine our expected power needs and our ability to meet those needs. There is an opportunity to convert facilities into co-generation plants. We can convert retired pulp and paper mills into power plants using natural gas, and incorporating carbon capture, utilization and storage technologies in these plants can also decrease CO<sub>2</sub>.

Another potential avenue for reliable energy provision is the burning of garbage for heat and energy. B.C. has a positive example of how to do it right in Burnaby, but we can do better. Garbage is a resource that can and should be used to create energy and heat.

Boilermakers, along with our employers and contractors, have the experience and expertise to manage, build, maintain, repair, and retrofit industrial plants to help meet B.C.'s future energy needs. We have been a part of building major B.C. energy projects since the 1860s. More recently, we have worked on Site C, LNG Canada, and the Trans Mountain tank farm, along with other terminal projects. We built the energy plants that started the industrial revolution, we build the plants that power modern civilization, and we install the emissions controls on those plants to protect the environment.

Base load power is important, and B.C. natural gas can help ensure that our supply is stable. We need to make sure that, as demand and supply for power change, we maintain the ability to meet that need without having to rely on the generosity of our neighbours. We have the resources, we have the expertise, and we have the ability to provide enough power to meet provincial demand – if we choose, we have enough to meet Canada's demand, too. ■

# Calfrac Well Services Ltd.

*Celebrating its 25th anniversary this year, this Calgary-based company is showing no signs of slowing down*

BY LISA KOPOCHINSKI

**A**s a pressure pumping company with experience across the diverse geologies (or reservoirs) within Canada, the United States, and Argentina, Calfrac Well Services Ltd.'s innovations in hydraulic fracturing, coiled tubing, cementing, and other well stimulation services have helped their customers maximize their production.

Since its start-up in 1999 in Calgary, the company has grown organically and through various high-return strategic acquisitions. Its geographic expansion has been selective and includes entry into both

conventional and unconventional oil and gas markets. Over the years, Calfrac has expanded its operations to include the U.S. and Argentina.

"The company is now the largest Canadian headquartered pressure pumping company with 15 large fracturing fleets and six coiled tubing rigs operating in North America," says Pat Powell, CEO of Calfrac. "In addition to our North American operations, Calfrac has a very significant market presence in Argentina—especially in Neuquén—where it provides fracturing, coiled tubing, and cementing services to



## **CALFRAC WELL SERVICES**

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clients operating in the Vaca Muerta shale play and southern Argentina."

When asked what he attributes the company's success to, Powell says, "The company's longevity in a dynamic well services industry is the direct result of the efforts of our employees to execute safely and efficiently for our clients. Our operating teams throughout North America and Argentina are committed to Calfrac's brand promise to "Do it Safely, Do it Right, Do it Profitably," and it underpins how we work every day."

## Principal Business

Calfrac's principal business is the provision of hydraulic fracturing services. This includes the completion of unconventional reservoirs, including unconventional oil and gas shales, siltstones, mudstones, and other traditionally bypassed reservoirs. This process is technically and operationally challenging, and

characterized by increasing numbers of horizontal wells multi-stage fracturing treatments and elevated pumping pressure demands.

Calfrac is a leader in pressure pumping services with a combined fleet of 1.2 million horsepower. The company provides slickwater solutions for fresh and high Total Dissolved Solids (TDS) brine applications, support for high viscosity friction reducer fracture fluid systems, along with all traditional industry applications of gel-based, crosslink, and energized fracturing needs. Treatment types and additives (such as surfactants, biocides, and diverters) are customized to meet desired operational, treatment, and production objectives.

"Our experience includes wells in excess of 10,000 feet (3,000 m) true vertical depth, and horizontal wells sometimes reaching 20,000 ft. (6,000 m) total measured depth," explains Powell. With a strong

# Coiled Tubing and Cementing Solutions

Calgary-based Calfrac has extensive coiled tubing experience and expertise in cementing solutions. Its fleet includes:

- Conventional coiled tubing units paired with high-capacity reel-trailers capable of deploying up to 24,000 ft (7,200 m) of 2-3/8 inches (60.3 mm) coiled tubing;
- Mast coiled tubing units, ideally suited for fast and efficient operations in shallower wells;
- Custom-designed coiled tubing strings optimized for extended reach, high-pressure operations, and fatigue performance;
- HPHT equipment for 15,000 psi operations;
- E-Coil, for live downhole telemetry during milling and annular fracturing; and E-Coil, for logging, camera runs, and perforating.

The company's areas of expertise include annular fracturing; frac through coil; bridge plug milling and

other milling operations; confirmation runs; fishing; logging; acid stimulations; and drilling.

Calfrac provides expert cementing services in Argentina, using modern and reliable equipment, experienced personnel, and continually evolving cement blends. Primary and remedial cementing services in a variety of wells include:

- Shallow and deep;
- Thermal/high temperature;
- Vertical and horizontal;
- Low and high pressure.

Calfrac uses different classes of conventional and special cements, as well as specially developed cementing systems. Its in-house cementing experts have developed proprietary lightweight and ultralightweight cementing systems that use unconventional cement without the use of extenders.

“The company is the largest Canadian headquartered pressure pumping company with 15 fracturing fleets operating in North America,”

—CEO Pat Powell

focus on its customer base, he says the company's experienced field operations teams are supported by highly qualified technical, supervisory, and support personnel. “In collaboration with our customers, we develop an understanding of the specific project requirements and then tailor innovative and practical solutions to meet those needs.”

Over the years, Calfrac has developed strong relationships with a diverse mix of multinational public companies, national oil and gas companies, as well as private companies.

“We count among our customer base many of the most active exploration and production companies in the countries where we operate,” says Powell.

The company is especially committed to its multi-year fleet modernization program, which will convert existing Tier II fracturing equipment to next-generation, lower emission Caterpillar Tier IV dynamic gas blending (DGB) technology. This investment program is designed to modernize the company's fleet in North America and capitalize on higher demand by top tier clients for this type of equipment.

Following the completion of the 2024 capital program,

Calfrac expects to have approximately seven of its 15 fracturing fleets converted to Tier IV DGB pumping units, as the market dictates will continue this equipment refurbishment over the next few years.

As with all companies, there are challenges to overcome. Calfrac has had to withstand two significant market downturns over the past decade.

“In 2020, Calfrac completed a significant recapitalization transaction which is now well behind us and has shown significantly improved operating and financial performance since that time which has left it very well-positioned for the future,” says Powell.

As for Calfrac's goals for 2024 and the next few years, Powell says the company's strategic priorities are to maximize net income and free cash flow, which will be used to reduce long-term debt and improve overall asset quality.

“We believe that strong execution in the field will allow Calfrac to continue to make progress on these strategic objectives and, in turn, deliver significant long-term returns for its shareholders.” ■



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# BCER actively managing industry water use in 2024

**T**he British Columbia Energy Regulator (BCER) regulates the access, storage, handling, use and disposal of water used for oil and gas activities in accordance with the province's legal and regulatory framework. The BCER prioritizes environmental and community water needs through its regulatory authority for Water Sustainability Act (WSA) short-term use (Section 10) and long-term water licences (Section 9).

Persistent drought conditions through fall 2023 and winter 2024 in northeast British Columbia continue to impact stream flows and groundwater levels. Combined with below average snowpack, this has created an increased potential for drought conditions in 2024 and another summer of possibly limited water supply in the north.

As of April 1, 2024, the Peace Basin is currently at 65

per cent of normal snowpack; the Liard Basin is at 55 per cent while the provincial average is 63 per cent. It is the lowest provincial snowpack on record since 1970. Last year, the provincial average was 88 per cent. Low snowpack and seasonal runoff forecasts combined with warm seasonal weather forecasts and lingering impacts from on-going drought are creating significantly elevated drought hazards for this upcoming spring and summer.

As a result, industry should be prepared for both the potential for further water use restrictions and that current water suspensions may extend for a longer period than in previous years.

The BCER actively manages water use and last year, between May and July 2023, issued five directives, suspending short-term approvals of surface water use for the oil and gas industry from various sources across



B.C. In total this impacted 37 permits, 11 companies and 84 different points of water diversion. Some suspensions remain in effect, covering various basins within the Fraser, Peace and Liard River watersheds.

In preparation for potential water suspensions this year, the BCER posted an Information Update in January, notifying industry of potential water shortages in 2024. That was followed by a BCER-hosted webinar in February, featuring presentations by experts from Environment and Climate Change Canada and the B.C. River Forecast Centre providing a summary of current and expected conditions for the 2024 drought season.

Trained experts – including BCER's hydrologist, hydrogeologist, environmental management specialists, and regional water managers – monitor B.C.'s water resources, track oil and gas water use withdrawals and water availability, and require quarterly and annual water use reporting from industry, which is reported publicly on the BCER website. Water use reporting ensures companies are not using more water than allowed.

All water use applications are thoroughly reviewed by

trained BCER staff and professionals to make informed water allocation decisions and ensure the protection of environmental flows for fish and future water supplies for communities. Conditions may be attached to the licence or approval as the BCER can and has suspended industry water use in times of drought. The BCER participates in the Provincial Drought Working Group, along with many other government ministries and organizations.

Water is an important cultural resource for First Nations in British Columbia. The BCER is collaborating with several Treaty 8 Nations in water research and monitoring programs focused in northeast B.C., including a long-standing hydrometric monitoring program that has resulted in several new streamflow monitoring stations in northeast B.C.

During 2024, industry water users are encouraged to consider water conservation measures, develop or update water use contingency plans and stay informed on developing conditions.

For more information, please visit the BCER's Water Management web page. ■

# CAPP forecasts capital investment for Canadian oil and natural gas sector to reach \$40.6 billion in 2024



## CANADA'S OIL & NATURAL GAS PRODUCERS

**T**he Canadian Association of Petroleum Producers (CAPP) is forecasting capital expenditures for the upstream oil and natural gas sector will reach \$40.6 billion in 2024, rising slightly from an estimated actual investment of \$39 billion for 2023.

"Upstream oil and natural gas producers are staying disciplined, with capital expenditures expected to remain stable in 2024," says Lisa Baiton, CAPP President & CEO. "There is room for cautious optimism with current Canadian oil production at record levels in anticipation of the Trans Mountain expansion completion in the second quarter. We are also moving closer to seeing the completion of Canada's first globally significant liquefied natural gas export facility in British Columbia, expected in 2025."

In B.C., upstream spending is projected to reach \$5 billion in 2024, a slight increase over

estimated actual 2023 spending. Spending on upstream in 2024 is expected to be driven by drilling to supply LNG Canada as the project moves towards its commissioning and start-up phase.

"Despite these positive trends, there remains a sense of caution largely due to the ongoing uncertainty surrounding proposed emissions policy in Canada, which continues to be a significant factor in investment decisions," says Baiton.

The disciplined business approach and modest production growth in recent years has yielded significant returns to the Canadian economy, representing \$111 billion in gross domestic product (GDP) and \$45 billion in revenues to municipal, provincial, and federal governments, supporting communities, infrastructure, and energy affordability across the country.

"Energy production and export is the backbone of the Canadian

economy," says Baiton. "Hundreds of thousands of Canadians directly and indirectly rely on the industry for work, enabling thousands of families and businesses, including hundreds that are Indigenous owned, to improve their lives and prosperity."

The oil and natural gas industry is among the largest investors in emissions reduction technologies in Canada and investments are expected to accelerate this year to advance emissions reductions projects.

Emissions from oil and natural gas production peaked in 2015. From 2012 to 2021, the conventional upstream sector lowered CO<sub>2</sub> equivalent emissions by 24 per cent while growing production by 21 per cent. The conventional upstream sector has also reduced methane emissions and is on track to exceed the current federal government target of a 40 to 45 per cent reduction by 2025. In addition, with anticipated co-funding from

## The conventional upstream sector has also reduced methane emissions and is on track to exceed the current federal government target of a 40 to 45 per cent reduction by 2025.

governments the country's six largest oil sands companies expect to invest \$24 billion in emissions reduction projects by 2030 and are targeting net zero emissions from operations by 2050.

Canada's oil and gas sector spends more than any other industry in Canada on environmental protection — \$9.4 billion cumulatively from 2018 to 2020 — accounting for 33 per cent of total environmental protection expenditures made by business across Canada.

Conventional oil and natural gas capital investment for 2024 is forecast at \$27.3 billion, while oil sands investment is expected to reach \$13.3 billion.

### Regional overview of capital expenditures in other provinces

In Saskatchewan, spending is forecast to rise from \$3 billion to \$3.3 billion in 2024, with approximately \$500 million allocated to thermal in-situ projects.

Alberta is expected to maintain

a steady investment level at \$29 billion, with oil sands' contribution at around \$13.3 billion.

Investments in Newfoundland and Labrador reached \$1.6 billion in 2023 and are expected to increase to \$2 billion in 2024. Although these investment numbers are lower than in the rest of Canada, capital investment is increasing in Newfoundland and Labrador after several years of little growth. There remains significant potential to grow and increase exports in the future. ■



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# Global game changer LNG Canada project nears completion

BY MELANIE FRANNER

**T**he largest private investment project in Canada's history is nearing completion – setting the stage for the country to become a major player in the low-carbon LNG energy market at a time when geopolitical conditions demonstrate the need for secure energy supplies.

“Construction of the LNG Canada facility in Kitimat is now more than 85 per cent complete overall (November 2023),” says Teresa Waddington, Vice President, Corporate Relations, LNG Canada. “With construction nearing completion, we’re preparing for commissioning and safe start-

up activities which will begin in 2024. We remain on track to ship first cargoes by the middle of the decade.”

## A look back

The LNG Canada project began as a greenfield development built on 400 hectares of land in Kitimat, B.C. The company is a joint venture comprised of five global energy companies with substantial experience in LNG: Shell, PETRONAS, PetroChina, KOGAS, and Mitsubishi Corporation.

When completed, the plant will consist of a natural gas receiving

and LNG production facility, as well as a marine terminal with the capacity to accommodate two LNG carriers, one tugboat dock, and LNG loading lines. The facility will also include LNG processing units, storage tanks, a rail yard, a water treatment facility, and flare stacks.

The LNG Canada facility will initially export LNG from two processing units or “trains” totalling 14 million tonnes per annum (mtpa). More notably, however, is that the LNG Canada facility is being built as the benchmark for responsible LNG development in the world.

“GHG emissions from LNG



Canada's Kitimat operation will be lower than any facility of a similar size operating in the world today; 35 per cent lower than the world's best performing facilities and 60 per cent lower than the global weighted average," says Waddington. "This is important in the context of the commitments Canada has made to reduce GHGs and important in the context of helping our international trading partners to meet their own climate change commitments."

The facility will use energy-efficient gas turbines and the latest methane-emission mitigation technologies to help reach low-emissions standards. It will also use electricity from the BC Hydro grid, and it is ideally located to take advantage of northwestern B.C.'s cool climate and shorter shipping distances to Asia to further reduce overall emissions.

## The present

Already, the LNG Canada project has had a huge impact on the province's economy. A Canadian and B.C. workforce of more than 8,000 is currently employed at the LNG Canada project site in Kitimat.

Plus, there are thousands of additional people working on the Coastal GasLink pipeline (which will deliver natural gas to the facility for liquification and export). Total pipeline installation was completed in October, while mechanical installation finished ahead of schedule in November.

LNG Canada has invested over \$5 million in workforce development programs and has contributed more than \$10 million to programs and equipment benefitting Kitimat, Terrace, and First Nations communities. The project has also

paid millions in property taxes each year.

"The cumulative value of our project's contracts and subcontracts to local, Indigenous, and other businesses in B.C. continues to grow, and had exceeded \$4.2 billion as of August 2023," says Waddington. "That includes more than \$3.3 billion to Indigenous-owned and local area businesses."

With construction nearing completion, LNG Canada is currently preparing for the commissioning and safe start-up activities, which will begin in 2024. Along the way, however, the company has not lost sight of the goal to further reduce GHG emissions wherever possible.

"We understand that all levels of governments want to see industries of all kinds reduce their emissions



While LNG Canada is on track to ship the first cargoes by the middle of this decade, the joint venture company is already thinking ahead to the next phase.

profiles in order to meet certain objectives," says Waddington. "That is one reason why we have proactively taken steps to identify potential opportunities to further advance electrification at our export facility in Kitimat and potentially along the Coastal GasLink pipeline route, to align with an availability of sufficient reliable power."

### A look forward

While LNG Canada is on track to ship the first cargoes by the middle of this decade, the joint venture company is already thinking ahead to the next phase.

"With our five joint venture participants, we continue to evaluate the timeline and scope for a second phase expansion," says Waddington. "A Phase 2 final investment decision will take into

account several factors which include over-all competitiveness, affordability, pace, future GHG emissions, and stakeholder needs."

One possibility to further reduce GHG emissions is a phased-in replacement of Phase 2 gas turbines with electric motors, powered by electricity from the BC Hydro grid.

"Our five joint venture participants agree that a phased electrification for Phase 2 is a feasible path," she says. "We see a number of important benefits: reducing our emission performance even further from what is already a world-leading design; advancing our competitive profile; and alignment with government objectives."

### Toward a cleaner tomorrow

Waddington points out that a

reliable supply of responsibly produced energy should never be taken for granted. A look at the current geopolitical climate provides solid proof of this. For this reason – not to mention the highly skilled jobs, long-term employment, and stable revenue stream – LNG Canada represents a unique opportunity for Canadians across the country.

"LNG Canada in particular is an appealing story," concludes Waddington. "We're on course for exceptional performance while setting the benchmark for economically, environmentally, and socially responsible LNG development." ■

*Originally published in the Resource Connector magazine in January 2024.*



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# Enserva launches THINK Energy campaign: Highlighting diverse career paths within the energy services sector



Enserva, formerly Petroleum Services Association of Canada, officially launched its THINK Energy campaign, a national awareness strategy to showcase lucrative careers available within the energy services sector. This campaign will help educate Canadians about unique job offerings and career opportunities within this industry and seeks to encourage job seekers to rethink what they know about the energy services, supply, and manufacturing sector, and to engage in dialogue about the vast job prospects available as the sector evolves.

As part of this campaign, Enserva is introducing its [workingenergy.ca](#) portal, a unique job site used to connect employers to those looking for roles in the energy services sector. The Working Energy Portal not only serves as a portal for employers and job seekers but it acts as a training hub for Canadians to find and further develop their skillset to succeed within the industry.

"The THINK Energy campaign is designed to inform Canadians

about the abundance of job opportunities available within the sector regardless of experience level or background, as well as the variety of innovation, technology, and advancements that have been made," says Gurpreet Lail, CEO, Enserva. "As a part of this campaign, the Working Energy Portal will showcase the broad range of career possibilities within the energy services sector, aiming to challenge preconceived notions about opportunities in this field, as well as providing workers with excellent training and upskilling opportunities, so those entering the sector with no experience can find the perfect place to start their career."

The Working Energy portal addresses talent shortages by reaching new job seekers and simplifying the candidate search process for the industry. In its initial stages, the portal is focused primarily on connecting entry level talent with job opportunities. In the future, the intention is to include more mid and senior level roles. Beginning at the entry level stages, employees can get the support

they need to start what can be a long and successful career in the energy services, supply, and manufacturing sector.

"There is currently a 3,000-4,000-person labour shortage in the energy services sector that is made up of labourers, drivers, tradespeople, and more, and Enserva is hoping to connect those looking for jobs with companies who need positions filled and create a long-term solution to this shortage," adds Lail. "We are taking a proactive response to the labour shortage by working with our members to highlight all types of jobs in the industry, educating Canadians to help expand their understanding of the industry and the career opportunities available."

As the energy industry continues to transform to include a mix of oil and gas and renewable sources, the sector needs to fill current, and emerging positions in A.I., robotics, geothermal, environmental sustainability, trades, skilled labour and more. Enserva aims to attract a more diverse range of talent to the industry by providing aspiring

As the energy industry continues to transform to include a mix of oil and gas and renewable sources, the sector needs to fill current, and emerging positions in A.I., robotics, geothermal, environmental sustainability, trades, skilled labour and more.

professionals, including new Canadians, recent graduates from trade school and post-secondary institutions, Indigenous Peoples, and more with a user-friendly and accessible platform. This diversification of the talent pool will bring fresh perspectives, skills, and experiences, ultimately enhancing the sector's overall competitiveness and success.

The job portal is simple to use as applicants can upload their profile and enter specific criteria that

employers can easily match to job postings. The portal allows job seekers to set up alerts when jobs are posted that match the skill set on their profiles and provides easy-to-access training and courses in its training centre.

Enserva is pleased to have partnered with various companies in the energy services sector such as AMGAS, Iron Horse Energy Services, NOV, Sanjel Energy Services, STEP Energy Services, Strike Group, Tier 1 Energy

Solutions, Weatherford along with the provincial and federal government to bring this portal to life.

Enserva relies on its members to support these types of initiatives to be able to better serve the over 400,000 workers this industry relies on.

For more information about the Working Energy Portal, visit [www.workingenergy.ca](http://www.workingenergy.ca). For more information about Enserva, visit [www.enserva.ca](http://www.enserva.ca). ■



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