

Government initiatives accelerate new investments in energy transition across Western Canada

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The push towards energy transition and a net-zero future accelerated over the last year, promising significant new investment in Western Canada in 2023 and beyond. The combination of new government strategy and incentives, increased regulatory certainty and supplemental revenue opportunities associated with creating and selling carbon credits has improved the feasibility of many energy transition initiatives, including carbon capture, utilization and storage (CCUS), hydrogen, net-zero power generation and others. We expect these industries to grow significantly in the years ahead as Canada strives to achieve its 2030 and 2050 emissions reduction goals.

The Federal Emissions Reduction Plan 2030

In March 2022, the Canadian government released its [Emissions Reduction Plan 2030](#). The Plan sets out the federal government's blueprint for carbon pricing, low carbon fuels and energy transition by sector. In connection with the release of this Plan, the government also announced a \$2.2 billion funding commitment to its Low Carbon Economy Fund, which supports climate initiatives by provincial and municipal governments, schools, institutions and not-for-profit organizations.

The Emissions Reduction Plan 2030 includes specific measures designed to increase adoption of zero-emission vehicles (mandating, for example, that all new light-duty vehicles sold by 2035 be zero-emission vehicles), to decarbonize power generation (including a target for a net-zero carbon grid across Canada by 2035) and to provide support for emissions reduction initiatives across all segments of the economy. The Plan also creates an \$8-billion Net Zero Accelerator fund that will support large-scale investments in key industrial sectors across the country to ensure that Canada remains competitive in a net-zero economy while reducing greenhouse gas (GHG) emissions.

CCUS and blue hydrogen developments

CCUS and blue hydrogen – which involves producing hydrogen from natural gas and utilizing CCUS – remain key strategies for emissions reductions in Western Canada, with Alberta at the forefront in promoting and supporting these industries.

To date in 2022, Alberta has selected 25 projects for development in the province. As we described in our [Osler Update from April 1, 2022](#), in March 2022, the Alberta government announced its initial selection of six proposals to create carbon sequestration hubs in the Edmonton heartland region. The accepted proposals had been selected from a request for full project proposals (RFPP) released by the province in December 2021. A second RFPP was

released on March 3, 2022 for projects outside the industrial heartland. The second RFPP resulted in the selection of 19 additional project proposals across the province.

While none of these projects are yet in development, the selected companies are beginning to explore how to safely develop their CCUS hubs with the goal of obtaining regulatory approval from the Alberta Energy Regulator (AER) in the near future under the AER's Carbon Sequestration Tenure Management system. Additionally, several companies in Alberta have announced significant capital projects that are tied to the CCUS hubs. These include Air Products' \$1.3-billion blue hydrogen facility in Edmonton and the \$16.5-billion Oil Sands Pathways Alliance initiative.

In May 2022, Saskatchewan announced that it had commenced a foundational study to develop a plan for a potential hydrogen hub in the Regina-Moose Jaw region. The report is projected to be completed by mid-2023. British Columbia has announced similar planning efforts for a hydrogen hub in Metro Vancouver.

Regulatory developments in Alberta and British Columbia

Many existing regulatory frameworks across Western Canada do not currently address energy transition or contemplate the new technologies and resources that are involved. Regulatory reforms and clarifications are needed in certain areas to ensure new developments are appropriately managed and investors are able to understand what is required to develop new energy transition projects.

Alberta

The Alberta government's 2022 budget included a \$41-million investment over the next three years to finalize the regulatory regimes for both geothermal and critical mineral resources, as we discussed in our Osler Update from June 30, 2022. While the mineral resources framework has yet to be finalized, the rules and regulations for geothermal development were completed in 2022, including the Geothermal Resource Development Rules. These rules describe the regulatory requirements for developers seeking to take advantage of the province's geothermal resources under the *Geothermal Resource Development Act*. The AER has also released its directive on geothermal resource development, which contains the regulatory information necessary for geothermal developers to begin production, as summarized in our Osler Update from August 25, 2022. Also of note in Alberta, in 2022 the Alberta Utilities Commission (AUC) conducted an inquiry into the technical and regulatory feasibility of blending hydrogen into the natural gas stream for gas utilities in the province. On June 30, 2022, the AUC released its final report for the inquiry including specific regulatory reforms that will provide further clarity on the use of hydrogen for this purpose in Alberta.

British Columbia

British Columbia streamlined its geothermal regulations in July 2020 to improve the permitting process for new geothermal projects in the province.

In July 2021, British Columbia amended its Greenhouse Gas Reduction (Clean Energy) Regulation (GGRR) to allow for the increased production and use of renewable gas and hydrogen resources. The amended GGRR now allows utility companies to make time- and volume-limited investments in, and supply greater percentages of, renewable gases to stimulate the domestic market for renewable fuels.

British Columbia also introduced new emissions-reduction legislation in June 2022. The *Low Carbon Fuels Act* expanded the scope of the province's Low Carbon Fuel Standard to include aviation and marine fuels as regulated fuels. Following this change, all fossil-derived transportation fuels supplied in the province are now regulated under the Standard. The *Low Carbon Fuels Act* also amended the Standard to allow emissions-reduction projects which capture carbon directly from the air to generate compliance credits, which the provincial government hopes will encourage greater investment in technology to address carbon dioxide at the atmospheric level.

New federal Clean Fuel Standard

In June 2022, the federal government released its *Clean Fuel Regulations*, which impose annual volumetric and carbon intensity reduction requirements on "primary suppliers" of gasoline and diesel. The regulations establish a market for compliance credits. Credits are generated by conducting carbon dioxide emissions-reduction projects (including CCUS), importing or producing low-carbon-intensity fuels or displacing the use of high-carbon-intensity fuels for vehicles with a lower-carbon-intensity alternative. Biofuel producers, electric vehicle charging site hosts, fuel station owner/operators, and upstream and downstream operators may be able to qualify their projects to create and sell compliance credits under the regulations.

This regime takes effect on January 1, 2023 and is expected to drive strong demand and financial incentives for new carbon dioxide emissions-reduction projects across the country.

Federal Budget 2022: Tax credits for developers and investors

The April 7 federal budget introduced two key investment tax credits related to energy transition.

The first is a refundable credit for businesses that incur eligible costs purchasing equipment for CCUS or blue hydrogen production. "Eligible" expenses include only those that are related to the purchase and installation of equipment that is used solely to capture, transport, store or use carbon dioxide as part of a new CCUS project.

The second is a clean technology credit of up to 30% for net-zero technologies, battery storage solutions and clean hydrogen. In the fall economic update published November 3, 2022, the government confirmed that the net-zero technology tax credit applies to investments in clean energy generation and storage (including small modular reactors and wind, water and solar energy stored in batteries), low-carbon heating and zero-emission industrial vehicles used in the mining or construction industries.

During the fall economic update, the federal government also announced a further tax credit incentive of up to 40% for investments in hydrogen production. The design of this tax credit has yet to be announced, but is likely to include a tiered system of investments in different carbon-intensity levels and may follow the design of similar incentives introduced this year in the United States. Both the net-zero technology credit and the hydrogen production credit will be available next year when the new federal budget is released. While the net-zero technology credit is expected to continue until 2035, the hydrogen production credit will be phased out after 2030.

In combination with the government funding available through the 2022 federal budget (and other sources, including provincial governments), these tax credits are expected to drive new investments in CCUS, hydrogen and other net-zero technologies.

Federal GHG pricing and offset credits

In February 2022, Environment and Climate Change Canada announced its Output-Based Pricing System Proceeds Fund. As summarized in our [Osler Update from March 2, 2022](#), the Fund is aimed at reinvesting proceeds from the federal carbon pricing system in clean technology and green energy in the provinces where proceeds were collected. The federal output-based carbon pricing system only applies in provinces that do not have their own carbon pricing system. Although Alberta and British Columbia are therefore not affected by the announcement, Saskatchewan can look forward to reinvestments into local initiatives of some of the funds collected from the province's large industrial emitters.

The federal output-based pricing system was also updated in June 2022 when the federal government launched its [Greenhouse Gas Offset Credit System](#) for GHG-reduction projects. The system has been implemented under the [federal *Canadian Greenhouse Gas Offset Credit System Regulations*](#), which came into force at this time. The system establishes the specific requirements that must be fulfilled to create offset credits across different types of activities. Under the regulations, proponents are required to register their GHG-reduction projects under a specific protocol to qualify their project to generate offset credits that can be used in the offset credit system. Offset credits can be purchased and used for compliance by facilities regulated under the federal Output-Based Pricing System. This offset credit regime may provide additional revenue opportunities for certain types of emissions-reduction activities in the country.

Key developments to look for in the coming year

The goals set out in Canada's Emissions Reduction Plan 2030 are ambitious and will require significant new investments in a variety of areas. These include zero-emission vehicles and associated fueling and charging infrastructure, hydrogen generation and CCUS, and development of critical minerals. The development of net-zero power generation (through wind, solar or geothermal projects or small modular nuclear reactors) and storage (including pumped storage projects and commercial-scale batteries) will also be key.

New government funding opportunities, tax credits and carbon credit revenue streams are expected to encourage investments in these areas, as companies look to take advantage of these incentives and the greater certainty provided by amended regulatory regimes.