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2020 Project Updates



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Strathcona County is Canada's largest hydrocarbon processing region and Alberta's leading industrial municipality – as measured by the value of manufactured goods. Over 11,000 businesses and organizations are located in the county, including over 220 manufacturing companies.

Welcoming and well equipped to handle current and future industrial growth, Strathcona County has recently completed the Heartland industrial area structure plan and transportation master plan to maintain excellent infrastructure and support road, rail and pipeline access to regional and global markets.

Inter pipeline

Inter Pipeline's construction of the Heartland Petrochemical Complex is well underway. The facility is designed to convert locally sourced, low-cost propane into 525,000 tonnes per year of polymer grade polypropylene, a high value and easy to transport plastic used in the manufacturing of a wide range of finished products.

The Heartland Petrochemical Complex ...will cost approximately \$4.6 billion (consisting of a \$4.0 billion main project and \$600 million CUB) to construct and will consist of a propane dehydrogenation (PDH) and a polypropylene (PP) facility with a central utility building (CUB). Inter Pipeline was awarded \$200 million in royalty credits from the Government of Alberta's Petrochemical Diversification Program, in support of the complex. Construction is underway, with more than 2,000 on-site workers, and completion is scheduled for late 2021.



MEG Energy owns a 1,200-acre parcel of land in Strathcona County, and has disclosed plans to develop commercial processing facilities, including a Diluent Recovery Unit and partial upgrading facilities. MEG also owns a smaller parcel of land in the Industrial development area of Lamont County, adjacent to the Bruderheim Energy Rail Terminal, where they are developing the HI-Q® demonstration facilities to advance their proprietary HI-Q® technology.



The Gibson Edmonton Terminal recently expanded to 1.7 million barrels of existing storage, with long-term potential to increase capacity by an additional 2 million barrels – subject to future market conditions.



In February 2018, Wolf Midstream Inc. purchased the Stonefell Terminal, which is in the Heartland Industrial development area of Strathcona County, from MEG Energy. The Stonefell Terminal connects to the Access Pipeline System, of which MEG Energy also sold their 50 per cent stake in to Wolf Midstream, giving Wolf Midstream a 100 per cent ownership interest in the Access Pipeline.

MEG Energy will continue to operate Stonefell Terminal. The Access Pipeline (to be rebranded Wolf Midstream Pipeline) transports oil from MEG Energy's Christina Lake production project and to the Bruderheim Pipelines system which connects to the Bruderheim Energy Terminal rail facility. Wolf has also partnered with Enhance Energy Inc. to build the Alberta Carbon Trunk Line (ACTL), a 240km pipeline that transports CO₂ from Alberta's Industrial Heartland to an enhanced oil recovery project near Lacombe, Alberta. The \$500 million ACTL, to be owned and operated by Wolf, will allow for the removal of 14.6 million tons of CO₂ annually.

TC Energy

The Grand Rapids Pipeline Project began operations in the fall of 2017, connecting crude oil resources from the west Athabasca oil sands area to Strathcona County. The 460 km dual pipeline system consists of 36-inch pipeline to transport blended bitumen from Northern Alberta to the Edmonton Area and a 20-inch pipeline to transport diluent from the Edmonton Area back to the Fort McMurray area. Total product moved will be up to 590,000 barrels per day of crude and 330,000 barrels per day of diluent.

The Heartland Pipeline Project is a proposed 36-inch pipeline that will aid in the transport of up to 900,000 barrels of crude oil from Strathcona County to the Hardisty Alberta hub. As they have progressed through the regulatory process and advanced Project planning, the project has adjusted their construction schedule to respond to current market conditions and continues to work with its long-term committed shippers.

TC Terminals is a proposed project that will provide up to 1.4 million barrels of crude oil and will facilitate the efficient movement of crude oil from Northern Alberta by providing a connection to access markets elsewhere in North America. The TC Terminals Project will be constructed in alignment with the in-service date of the Heartland Pipeline.

TC Energy has announced that it will proceed with construction of the Keystone XL Pipeline Project, an invest of approximately US\$8 billion. The project will be capable of safely delivering 830,000 barrels per day of crude oil from Alberta to Nebraska, where it will connect with existing TC Energy facilities to reach U.S. Gulf Coast refiners. The pipeline is expected to enter service in 2023. As part of the funding plan, the Government of Alberta will invest US\$1.1 billion as equity, in addition to a \$4.2 billion loan guarantee.



Quest Carbon Capture and Storage (CCS) Project is a joint venture of Shell, Chevron, Marathon, Government of Alberta and the Government of Canada. Now operational, this \$1.35 billion project captures, transports and stores (permanently underground) over one million tonnes of CO₂ a year, from Shell's Scotford Upgrader in Strathcona County – the equivalent to taking 175,000 North American cars off the road each year. Once the CO₂ is captured from the three hydrogen units, it is transported by pipeline up to 80 km north to the chosen injection wells.

Heartland Sulphur

The Heartland Sulphur Terminal has completed construction, and is in operation. This terminal provides the forming and liquid loading facilities required for Alberta producers to move their increasing sulphur supply to various world markets. The forming facility processes 700,000 tonnes of liquid sulphur sourced from Alberta oil sands and gas plants each year, with room to expand.



The ATCO Heartland Energy Storage and Logistics Centre encompasses more than 600 acres of continuous land in Strathcona County. The project currently includes four salt caverns for hydrocarbon storage, with butane, ethylene, and natural gas condensate. Through on-site access to utility service options including natural gas and industrial water, the ATCO Heartland Energy Centre has the potential to develop upwards of 40 caverns, and provides a compelling alternative for siting of customer facilities.

A partnership between ATCO and Petrogas EnergyCorp. has secured long-term contracts for the construction and operation of a fifth salt cavern storage facility and a regional pipeline that will connect the new salt cavern facility to existing pipelines in the area for delivery of hydrocarbon products.



KEYERA

Rezoning was approved in fall of 2017 to allow for an extension to Keyera's existing salt cavern storage facilities. Keyera has also purchased all Sasol land holdings and any information regarding its use will be shared in future updates.

Keyera continues to advance construction of the approximately US\$1 billion Key Access Pipeline System (KAPS), which will transport NGLs and condensate from northwestern Alberta to facilities in Alberta's Industrial Heartland. KAPS is expected to be operational in 2023.



A new Canadian plant has been built in Strathcona County under a long-term agreement for Air Products to supply Shell Scotford with hydrogen and steam, and to supply hydrogen to North West Redwater Partnership Sturgeon Refinery.

The total investment of the project was \$300 million, and it produces 150 million standard cubic feet per day of hydrogen. The facility ties into Air Products' 50km Heartland hydrogen pipeline, connecting it to customers and Air Products' other hydrogen plants in the region. The pipeline also has the added benefit of additional storage space for hydrogen.



The federally approved \$12.6B expansion to the existing Trans Mountain Pipeline will add approximately 1,000km of new pipeline between Strathcona County and the B.C. coast. Construction of the pipeline in the Edmonton region is now over 50% complete, and will see the addition of four new storage tanks in Strathcona County, bringing total storage capacity onsite to 9.25 million barrels.



Canadian Natural

Canadian Natural (CNRL) purchased assets from Shell, valued in the range of \$12.7 billion. This includes ownership of the Athabasca Oilsands Project, 70 per cent of the Scotford upgrader, and the Quest CSS project. Shell will maintain ownership and operation of their refinery and chemical plants in Strathcona County, in addition to their existing land holdings, and will continue to operate the Scotford upgrader and Quest CSS.



In 2017, Pembina Pipeline Corporation launched the \$250 million Canadian Diluent Hub (CDH), a large-scale condensate and diluent terminal at its Heartland Terminal site in Strathcona County.

The CDH development includes 600,000 barrels of above ground storage, multiple inbound and outbound pipeline connections, plus associated pumping and metering facilities. CDH is designed to augment Pembina's existing diluent handling facilities in the area and offer diluent services for oil sands customers.

In 2019, Pembina purchased Kinder Morgan Canada and the cross-border Cochin Pipeline for \$4.35 billion. This acquisition included 10 million barrels of additional storage capacity and further connectivity within their system, via the addition of Kinder Morgan's Edmonton Terminals and Vancouver Wharves. The Cochin pipeline presents a future opportunity to connect Pembina's assets to markets in Sarnia. The Edmonton Terminal, located in Strathcona County, represents a 10x increase in Pembina's above-ground storage capacity and a world-class rail loading terminal. It includes the recently constructed Base Line Terminal, a joint venture crude oil storage terminal located on at Keyera's Alberta Enviro Fuels facility in Strathcona County that has potential to expand operations by another 1.8 million barrels in the future.



The 447 km Norlite Pipeline was completed and in-service in June 2017. The 24-inch pipeline is capable of shipping 270,000 barrels per day of diluent from the Enbridge Stonefell site to the Suncor East Tank farm near Fort McMurray, and has the potential to be expanded up to 400,000 barrels per day, with the addition of pump stations.

Enbridge has completed construction and replacement of Canadian portion of Line 3, which runs from Edmonton to Wisconsin, and has also received regulatory approval to complete construction and replacement of the American portion of the line.

The \$9 billion project will increase capacity of Line 3 to 390,000 barrels per day. Being the largest project in Enbridge history, it will comprise the newest and most advanced pipeline technology and provide incremental capacity to support Canadian crude oil production growth.



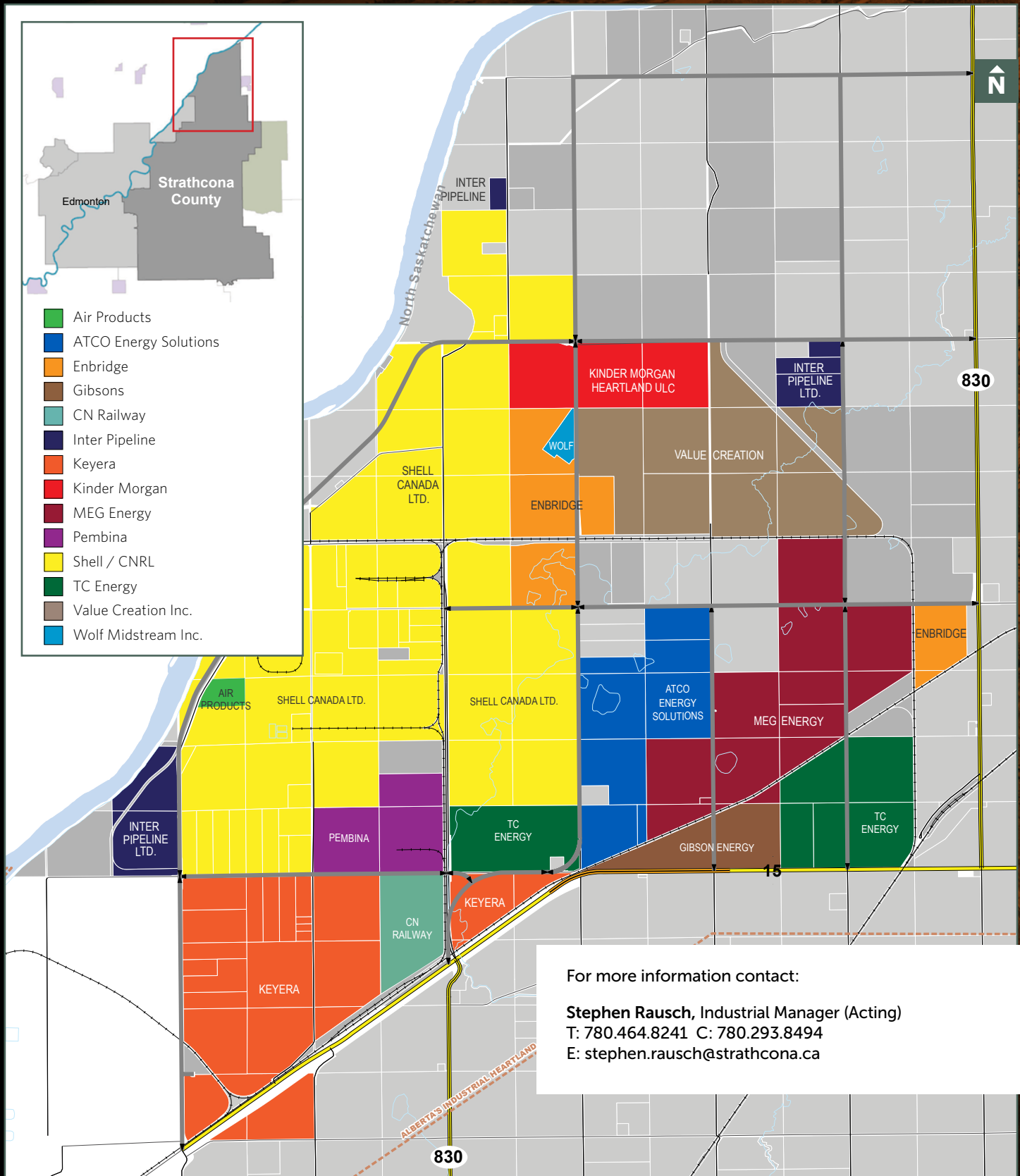
Value Chain Solutions (VCS) is a subsidiary of the Value Creation Group (VCG) and intends to move forward with a facility (\$2 billion at full build out) that would upgrade diluted oil sands bitumen into a higher-value crude blend that can easily flow through pipelines.

Construction of the Strathcona County-based project is already underway, with some foundational infrastructure in place and design work nearly completed. VCG has established bitumen supply and product off-take interests well beyond its initial target, and is pursuing a participative strategic partnership to ensure excellence in execution, operation and trading.

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Strathcona County Land Holdings and Major Projects



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