Alberta's Industrial Heartland

Advantages & Opportunities

Alberta's Industrial Heartland is your opportunity to be part of a world-class energy centre.

Key attributes include:

Canada's Largest Hydrocarbon Processing Region

- Petrochemical production (Ethylene, Styrene, Fertilizers, Propylene, Iso-Octane, MEG, Butadiene and more)
- Fractionation capacity (360 Mbdp)
- Petroleum refining (400 Mbdp capacity)
- Bitumen upgrading (250 Mbdp expanding to 400 Mbpd)
- Ready access to price advantaged hydrocarbon and petrochemical feedstock

Major Manufacturing Centre

- Established centre for supply, service and manufacturing for Canada's oil and gas sector
- Oil and gas logistics and processing
- Approximately \$1.5 billion in annual expenditures (excluding feedstocks)

Logistics & Market Connections

- Centre for pipeline terminals for natural gas, oil, bitumen, diluent and refined products
- Salt formations underlie the region allowing for natural gas storage and NGL storage
- Home to both Canadian National and Canadian Pacific railroads
- Direct access to major North American ports provides connections to world markets

Local Expertise

- Region is home to more than 1.3 million people
- Educated and skilled labour, technical and professional expertise

Government Supported

- Stable, democratic and business friendly political system
- Carbon capture and storage projects backed by \$2B Government of Alberta program
- Past government incentive programs aimed at growth in downstream sector
- Favourable tax structure (low corporate tax)

CONTACT US

ALBERTA'S INDUSTRIAL HEARTLAND ASSOCIATION

www.industrialheartland.com

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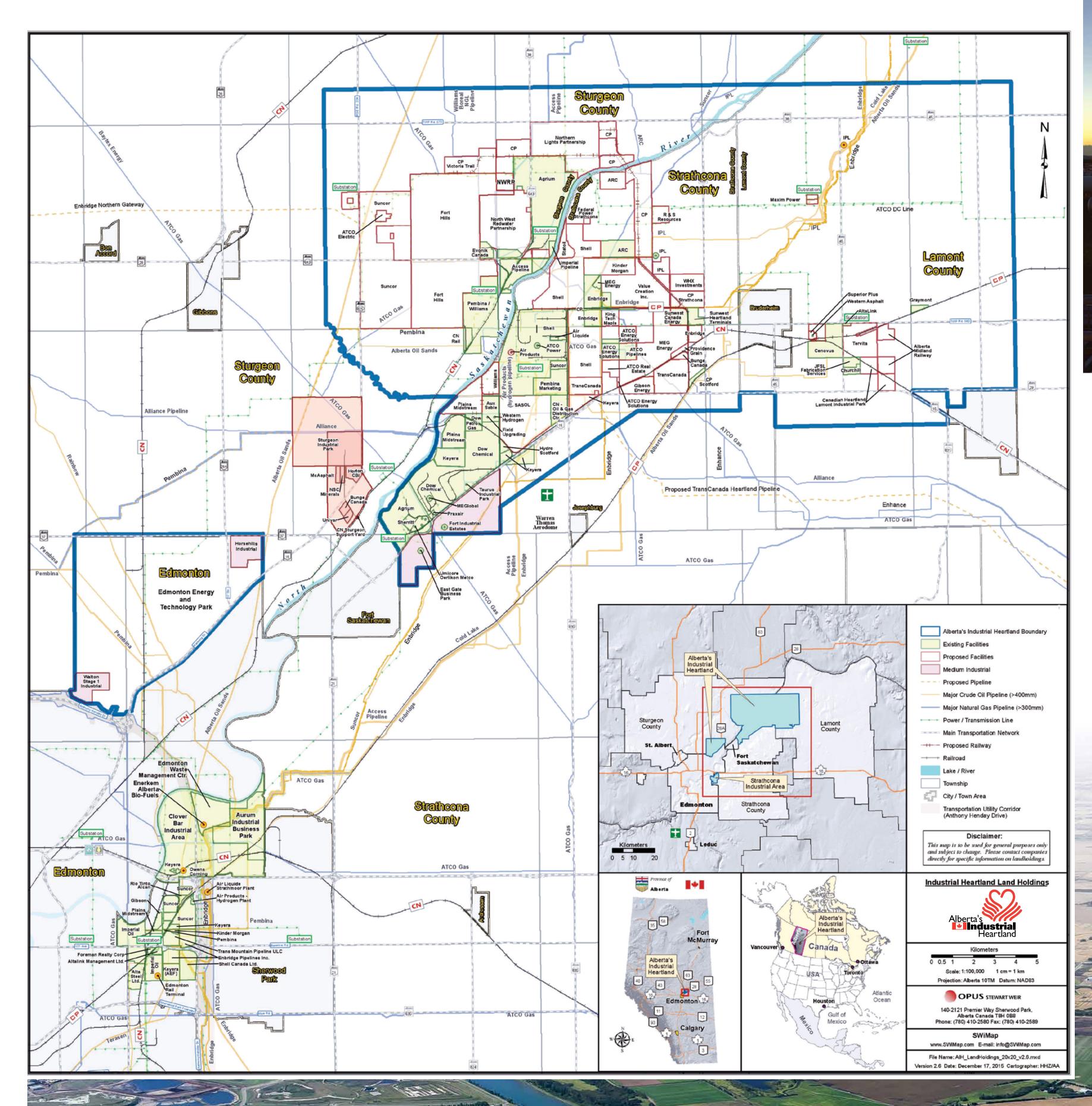
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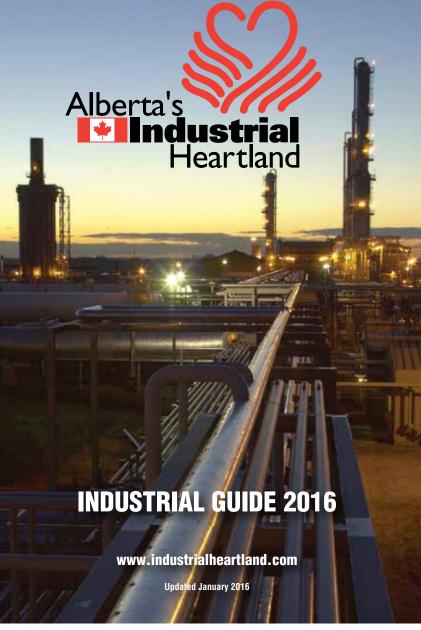
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#ABHeartland 📑 📴





Located in the northeast Greater Edmonton region, Alberta's Industrial Heartland is one of the world's most attractive locations for chemical, petrochemical, oil, and gas investment. It is Canada's largest hydrocarbon processing region with operating investments of over \$30 billion. Approximately \$15 billion in additional investment is proposed for the next decade.

The region's 40+ companies, several being world scale, provide fuels, fertilizers, power, petrochemicals and more to provincial and global consumers. The region presently accounts for 43% of Canada's basic chemical manufacturing.

Refining opportunities in Alberta are not limited to oil, gas and petrochemicals. Alberta also has an emerging industrial biochemical sector using biomass as an alternative feedstock to petrochemicals in the production of energy products and industrial chemicals.

Industrial development is strong supported by municipal and provincial governments. Alberta has a democratic and business friendly political system in addition to a favourable tax structure.

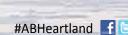


MUNICIPAL MEMBERS

Incorporated in 1998 Alberta's Industrial Heartland is guided by a nonprofit association of municipalities dedicated to sustainable eco-industrial development. Our funding partners include:







CITY OF EDMONTON

www.edmonton.ca

Horsehills Industrial (PROPOSED)

Horsehills Industrial is 526 acres of prime industrial land in the very northeast portion of the Energy and Technology Park, Bordered by Hwy 28a to the west and Hwy 37 to the north. Horsehills Industrial is zoned for General Industrial, Manufacturing and Logistics. Hwy 37 is the new High Load corridor and offers companies' access

to the rest of Alberta's Industrial



Alberta Midland

www.albertamidlandrail.ca

(PROPOSED)

Railway Terminal Ltd

Alberta Midland Railway Terminal is

a private company, with the primary

developers having ownership of a

similar rail logistics site in southern

Midland Railway Terminal also led

the development of a modern grain

terminal adjacent Transmark in 2006

known as Lethbridge Inland Terminal

Alberta Midland Railway Terminal,

through its alliances is planning to

provide key third-party rail services

within Alberta's Industrial Heartland.

Alberta built in 2001 (Transmark near

Lethbridge). The developers of Alberta

Walton Development and Management www.northernpremier.ca (Alberta) L.P. – Industrial Park (PROPOSED)

www.walton.com Walton Development has approximately 419 acres of land located in the Edmonton Energy and Technology Park (EETP) with access to Anthony Henday Drive and Manning Drive with immediate access to 66 Street and 195 Ave. Property within the EETP has land zoned for manufacturing uses and offers access to full City water and sanitary services natural gas and overhead power. The development is in close proximity to existing residential communities of McConachie, Brintnell and Hollick-Kenyon and the future Horsehills

CITY OF FORT SASKATCHEWAN www.forstsask.ca

Agrium **Fort Saskatchewan Nitrogen Operations** (OPERATIONAL)

www.agrium.com Occupying 227 hectares along the North Saskatchewan River, this facility produces 465,000 gross tonnes (192,000 net) of anhydrous ammonia, 430,000 tonnes of granular urea and 95,000 tonnes of 29% aqua ammonia. Raw materials for production include water, air and natural gas. Water is obtained from the adjacent North Saskatchewan River and natural gas is purchased from Alberta producers. The primary end consumer is the agriculture market — in particular.

growers of grains, oilseeds and other

crops who want to enhance crop yields

Aux Sable Canada Ltd. **Heartland Offgas Plant** ("HOP") (OPERATIONAL)

www.auxsable.com Aux Sable is a midstream gas processing company headquartered in Calgary,

Aux Sable owns and operates the Heartland Offgas Plant (HOP). The facility processes offgas from Shell's Scotford Complex and produces methane. hydrogen, ethane and a propane-plus

Chemtrade West Limited Partnership (OPERATIONAL)

www.chemtradelogistics.com At two plants in Fort Saskatchewan, Alberta, Chemtrade produces and supplies sulphur-enhanced chemicals to the majority of pulp and paper and oil and gas manufacturers in western Canada. Chemtrade also supplies water treatment chemicals to municipalities and industries throughout Alberta, British Columbia and Saskatchewan

Dow Chemical Canada ULC (OPERATIONAL)

Serving North America, Latin America

forms one of the largest petrochemical

monomers and plastics for a wide range

and the Pacific Rim, Dow's Fort

Saskatchewan manufacturing site

facilities in Canada. It uses natural

With four world-scale production

units on 2128 acres, Dow produces

hydrocarbons, ethylene, polyethylene

and electricity. More than 1.4 million

by rail and truck, with over half of it

tons of product leaves the site each year

bound for customers outside of Canada.

Eastgate Business Park

This mixed use commercial/light/

medium industrial park services the

has direct access to Highway 15/21.

It is serviced by municipal water and

sewer, natural gas, and electricity.

Heartland heavy industrial area as well

as the agricultural community. The Park

adjacent to the high load corridor to Fort

of industries and customers.

resources in the area to make olefin

www.dowcanada.com

Ferus Inc. (OPERATIONAL) www.Ferus.ca

The facility captures gaseous CO2, a process by-product of Sherritt's nearby ammonia process, liquefies it and stores it for sale and transport to Ferus' energy industry customers located throughout the Western Canada Sedimentary Basin. Commercial operations of the facility began in late 2009 and the plant has been operating at or near full capacity ever since.

Field Upgrading Limited (UNDER CONSTRUCTION)

www.fieldupgrading.com

Field Upgrading Limited is developing a new technology called DSU to remove acids, metals and sulphur from heavy oils. DSU has many applications worldwide, including upgrading bitumen into a refinery feedstock, processing refinery intermediate streams such as sour coker diesel, and producing low sulfur marine fuel oils from a variety of sour feedstocks such as bitumen, vacuum residuals and asphaltenes

Field is constructing a 10 bpd pilot plant to collect the design data for a 1000 bpd demonstration facility. The pilot plant will operate for approximately 18 months.

North Saskatchewan River that provides

the foundation for integrated water and

wastewater services to industry, including

and disposal.

pipeline transportation, treatment, recycling

For the NGL and petrochemicals markets,

ATCO Energy Solutions develops custome

tailored infrastructure solutions, such as

Keyera (KFS) (OPERATIONAL) www.kevera.com

Fort Industrial Estates

This light/medium industrial park

area as well as the agricultural

services the Heartland heavy industrial

It has direct access to Highway 15/21,

to Fort McMurray and is serviced by

municipal water and sewer, natural gas

and electricity. They also have building

adjacent to the high load corridor

(OPERATIONAL)

community.

space for lease.

The Fort Saskatchewan Fractionation and Storage Facility receives natural gas liquids from connected pipeline systems and truck off loading. These streams are fractionated into ethane, propane, butane and pentane plus products. Following fractionation the products are shipped to customers through pipeline systems or truck loading facilities. Products that are not immediately delivered to customers are stored in deep underground storage caverns for subsequent delivery to markets

MEGIobal (OPERATIONAL) www.meglobal.biz

ATCO Power - Scotford

The Scotford Cogeneration Plant provides

steam and electricity to meet the thermal

and power needs of the Athabasca Oilsands

Upgrader. The 170 megawatt (MW) Scotford

Cogeneration Plant, constructed at the

Canadian National

Railway – Oil & Gas

Shell Scotford Refinery Site, is part of the

(OPERATIONAL)

Upgrader facility.

www.atcopower.com

MEGlobal is a world leader in the manufacture and marketing of merchant monoethylene glycol and diethylene glycol (EG). MEGlobal produces about 1.0 million metric tonnes per year of EG, and markets in excess of 2.5 million metric tonnes of EG per year. EG is used as a raw material in the manufacture of polyester fibers, polyethylene terephthalate resins (PET), antifreeze formulations and other industrial products.

Oerlikon Metco (Canada) Inc. (OPERATIONAL) www.oerlikon.com

Oerlikon Metco (Canada) Inc. operations at Fort Saskatchewan include manufacturing, R&D, analytical services. engineering, sales and marketing, and administration for all of Oerlikon Metco's operations in Canada. They produce a range of nickel-based composite powders for aerospace, power generation and electronics applications, as well as other specialty materials.

Enbridge Pipelines Inc. –

As part of a planned expansion of Enbridge

station is planned for the Stonefell termina

Additionally, Enbridge is also proposing to

Norealis Terminals near Fort McMurray.

construct and operate a new pipeline, Norlite

Pipeline project that would start at the Stonefel

Terminal and end at Enbridge's Athabasca and

Federal Power Strathcona

The proposed Federal Power Strathcona Inc.

power plant will be a natural gas-fired power

generation facility serving the fast-growing

industrial, commercial and residential

customer base in Alberta's Industrial

Athabasca's Waupisoo Pipeline, a new pump

Athabasca Inc. –

Stonefell Terminals

(UNDER CONSTRUCTION)

www.enbridge.com

Inc. (PROPOSED)

MEG Energy – Stonefell Terminal (OPERATIONAL)

Petrogas

EnergyCorp

(OPERATIONAL)

industrv.

Canada

shipments.

(OPERATIONAL)

www.petrogascorp.com

Operated as a division of Petrogas

Services Ltd. - Fort Saskatchewar

erminal provides the service of

onto trucks and rail cars for the

Plains Midstream

www.plainsmidstream.com

The Fort Saskatchewan site is a

gas liquids (NGLs) to be treated or

The facility consists of three

fractionated then stored for future

(COS) removal plant, five molecular

sieve units, ten storage caverns,

1,800 metres below the facility.

fractionation and underground storage

facility that brings in a stream of natural

fractionation plants, a Carbonal Sulphur

unmanned propane truck loading and a

control centre for the pipelines and the

facility plants. Storage for NGL products

occurs in solution mined salt caverns

The facility also marks the termination

point to the Alberta Ethane Gathering

ability to redeliver as ethane demand

warrants is key to the success of

Alberta's petrochemical business.

System (AEGS). Ethane storage and the

sale and distribution into Alberta's

netrochemical, refining and crude oil

receiving, storing and loading products

Energy Corp., the Petrogas Energy

MEG's 900,000 barrel Stonefell Terminal to MEG's production facilities through the Access Pipeline system with further connections to regional pipeline and railproducts to multiple markets, diversifying

Strathcona

Pembina's crude oil midstream business which connects key infrastructure in the a further build-out of PNT, servicing crude

rail, and related pipeline connectivity.

a landfill gas recovery system, bio solids lagoons, an electronics recycling facility and a paper and glass recycling facility.

Enbridge Pipelines Inc. – Athabasca Inc.

(OPERATIONAL)

www.enbridge.com The Edmonton Terminal, the starting point of Enbridge's mainline system has 31 tanks ranging in size from 10,000 barrels to 390,000 barrels and a total capacity of approximately 5 million

Energex Alberta Biofuels (OPERATIONAL)

www.enerkem.com

On June 4, 2014 Energex officially inaugurated its first full-scale municipa waste-to-biofuels and chemicals facility in Edmonton, Alberta. The breakthrough technology uses residual materials such as non-recyclable and non-compostable waste instead of fossil sources for the production of chemicals

Alberta Biofuels, is among the world's first commercial facilities to be built for the production of renewable chemicals and advanced biofuels.

Shell Canada Ltd.

www.megenergy.com

was completed in late 2013. It is connected loading facilities planned or already in place With these connections. Stonefell serves as the launch point for large volumes of blended MEG's sales of crude and purchases of diluent

Pembina Pipeline Corp. –

(UNDER DEVELOPMENT)

www.pembina.com

includes the Pembina Nexus Terminal (PNT). Edmonton/Fort Saskatchewan/Namao area via pipelines to other Pembina infrastructure Pembina's recent acquisition of the Heartland Hub Terminal in Strathcona County serves as oil and diluent customers for terminalling. storage and rail. The site is in close proximit to major oil sands pipeline rights-of-way, existing crude oil and petrochemical infrastructure and Pembina's RFS fractionation facility near Redwater, Alberta.

Sasol Canada (PROPOSED)

www.sasolcanada.com

Sasol Canada owns a 50 per cent working interest in two natural gas fields in British Columbia, Canada and is pursuing the opportunity to build the country's first Gas into high-quality transportation fuels. GTL is a proven technology that harnesses clean, abundant natural gas resources to make diesel, naphtha and petrochemical feedstocks

Praxair Inc. (OPERATIONAL)

Praxair, Inc. is the largest industrial

gases company in North and South

worldwide. The company produces,

process and specialty gases, and high-

performance surface coatings. Praxair

Industrial Heartland for over 30 years.

pipeline network (spanning over 60 km)

two large air separation units, carbon

The Fort Saskatchewan personnel

oversees the Heartland hydrogen

dioxide purification facilities, and

Sherritt International

Sherritt International Corporation

is a world leader in the mining and

refining of nickel from lateritic ores

with operations in Canada, Cuba and

Madagascar. The Corporation is the

largest independent energy producer

in Cuba, with extensive oil and powe

operations across the island. Sherritt

licenses its proprietary technologies

and provides metallurgical services

Sherritt's Fort Saskatchewan facilities are

a part of its integrated nickel business,

producing high-purity nickel and cobalt

produces ammonia-based fertilizers and

sulphuric acid for internal use and sale

Saskatchewan is also home to Sherritt's

into local and domestic markets. Fort

global metallurgical technologies

for international markets. The site

to commercial metals operations

Corporation (OPERATIONAL)

oxygen and nitrogen pipelines.

www.sherritt.com

worldwide.

Canada Inc. has proudly served Alberta's

sells and distributes atmospheric,

America, and one of the largest

www.praxair.com

(OPERATIONAL) www.shell.ca

consulting business.

Shell Scotford celebrated its 30th anniversary in the Fort Saskatchewan region in 2014. Scotford comprises two businesses the Scotford Upgrader and Scotford Manufacturing.

The Upgrader, a joint venture project with partners Chevron Canada and Marathon Oil LP, started processing bitumen from Shell Albian Sands in 2003 and has a design capacity of 255,000 bpd. The Upgrader converts the bitumen into synthetic crude before further refining at the Scotford Manufacturing facilities

The Manufacturing business is 100% Shell owned and includes refining and chemical production. The Refinery manufactures a suite of products that includes gasoline low sulphur diesel, jet fuel, propane and butane. The Chemical plant produces styrene nonomer (primarily used to manufacture hard plastics) and ethylene glycol (used for the production of soft plastics, polyester fabrics, and antifreeze). In 2015, the Quest Carbon Capture & Storage project began injecting carbon dioxide captured from the Scotford Upgrader into a rock formation more than two kilometers

underground. Quest will reduce emissions

from the Scotford Upgrader by more than

to taking 250,000 cars off the road. TransCanada

Athabasca oil sands area to the Heartland and Edmonton areas to meet growing energy

demands.

www.keyera.com

elsewhere in Alberta, Eastern Canada, and the United States.

The Heartland Pipeline Project will assist in the movement of crude oil from Alberta's Industrial Heartland area to the Hardisty, Alberta hub, and will be a key development to safely connect important crude oil resources in northern Alberta to markets in Alberta, Eastern Canada and the United States.

Taurus Industria

This strategically situated 25 acre

heavy industrial site boasts access

to the Heavy Haul Corridor (Hwy 15)

making it a logical choice to marsha

for large projects in Western Canada

This secure site is graveled to heavy

load standards and is equipped with

workplace. With rail access available

corridors, the possibilities are limitless

for this Heavy Industrial future Plant

Umicore Canada Inc.

Umicore Canada is part of Umicore's

Energy Materials business group and

produces micron and sub-micron sized

spherical fine cobalt powder for use

as a binder in cutting tools. Umicore

Canada makes its powder through

a proprietary hydrometallurgical

processing advantages for the

The TransCanada Terminals project will

oil from northern Alberta and will help

provide a connection to access markets

facilitate the efficient movement of crude

process that provides unique

(OPERATIONAL)

www.umicore.com

engineered area lighting providing

for the highest quality in a safe

and being adjacent to pipeline

Business Park

www.taurusprojects.ca

(OPERATIONAL)

Value Creation Inc. **Value Chain Solutions** - Heartland Complex (VCS-H) (PROPOSED) www.vctek.com

Value Creation received AER approval of its Clean Oil Cracking ("COCTM") Amendment Application. The VCS-H will include an independent merchant crude customization complex with an approved capacity of up to 260,000 bpd of diluted bitumen. The VCS-H will utilize VCI's previously approved Accelerated De-contamination ("ADCTM") and COCTM technologies, which transforms extraheavy hydrocarbons (including bitumen, extra-heavy-oils, residues, etc.) to premium medium crude oil under the brand Clean Oil La Fit, best fitting the majority of refineries globally, at lowest costs and higher environmental performance.

COC[™] is a VCI proprietary, low cost cracking process that can achieve very high conversion of the Clean Resinous Heavy Hydrocarbons produced by VCI proprietary of micro-carbonaceous particles in form allows for solid carbon sequestration and

Western Hydrogen Ltd. (OPERATIONAL) www.westernhydrogen.com Western Hydrogen Limited is a Canadian company, based in Calgary, Alberta dedicated to the development

end customer and improved tool

properties. The facility maintains ISO

recognized by Alberta Environment as

9001 and 14001 registration and is

EnviroChampions.

and commercialization of a new hydrogen manufacturing technology called Molten Salt Gasification. The pilot plant construction was completed in August 2013 and first hydrogen production was achieved on September 5, 2013. As a result of successful initial testing, the pilo plant will move into a long term testing phase to develop the data for a commercial sized plant. The Molten Salt Gasification process is projected to have significant economi and environmental advantages ove current hydrogen manufacturing technologies including lower hydroge supply costs, maximum feedstock flexibility, significantly lower GHG emissions, high pressure hydrogen production and lower cost CO2

reduction of Greenhouse Gases. VCI intends to add a specialized Clean Oil Refinery synergistically integrated with ADC[™] and COC[™], to produce Ultra Quality Fuel Products in an environmentally responsible manner.

capture.

Williams Energy Canada ULC (PDH) (PROPOSED) www.williams.com/canada

Williams is planning to construct a PDH

(propane dehydrogenation) facility which will produce 1.1 billion pounds (500 KTA) of polymer grade propylen targeted to go into service late 2018. This will be Canada's first and only PDH facility. Initially, approximately two thirds of the propane feedstock will be sourced from Williams' own oi sands offgas source (Redwater Olefin Fractionator in Sturgeon County), with the potential for more propane from offgas sources used in the facility in futur vears. Williams is working to secure a polypropylene (plastic) manufacturer as a partner to take most of its propylene production and turn it into plastic right here in the Heartland. This complex will provide important and significant added value to Alberta's propane.



STURGEON COUNTY www.startinsturgeon.ca

www.accesspipeline.com

Corporation, each with an undivided 50% working interest. They operate bitumen blend and diluent pipelines between their Owners' Conklin area production sites and Alberta's Industrial Heartland. The Access Pipeline Regional Office is located in Fort Saskatchewan

Fertilizer Operations (OPERATIONAL)

www.agrium.com

Occupying 372 hectares along the North Saskatchewan Rive this facility is the largest fertilizer complex in North America, producing approximately 680,000 tonnes of ammonium phosphate (MAP) and close to 1.4 million tonnes of nitrogen based nutrients. Raw materials for production include: natural gas, air, water, sulphur and phosphate rock. The water comes from the nearby North Saskatchewan River, natural gas and sulphur are purchased from Alberta producers, and the phosphate rock is imported from Morocco.

residential development with access to utilities and transit services.

LAMONT **Heartland Lamont** COUNTY **Industrial Park** www.lamontcounty.ca (PROPOSED)

The Park offers light/medium industrial lots that vary in size from 8 acres and up. Features include regional water line. 3 phase power internal road infrastructure and storm water management, easy access to highway 45 and 15, potential for CN

rail sidings onsite, access to CN Rail,

and the town of Lamont for staffing

and within minutes of Bruderheim

Cenovus

Canadian

www.cenovus.com Cenovus is committed to being a responsible developer of one of Canada's most valuable resource - the oil sands. They apply fresh, progressive thinking to minimize the impact on the environment while

safely producing energy resources the

www.conserveoilcorporation.com

(OPERATIONAL)

Cenovus is focused on creating value through the development of their vast oil sands assets in northern Alberta, where they drill for oil and use specialized methods to pump it to the surface. The company also nas established conventional natura gas and oil production in Alberta and Saskatchewan and 50 percent ownership in two U.S. refineries Cenovus is based in Calgary, Alberta and has more than 4,000 staff

members across their operations.

Graymont Western Canada Inc.

(OPERATIONAL)

and quality.

www.graymont.com Graymont is a family owned business that has been in the lime business for over 50 years. Their operations in Lamont County includes a lime hydrating and distribution facility.

JFSL Fabrication **Services Inc.** (OPERATIONAL)

www.tritonprojects.com Located on a 75-acre lot east of Bruderheim, JFSL Fabrication offers a unique execution strategy in module construction. The company focuses on maximizing efficiencies, safety measures and product quality by constructing within the 47,000 square feet of its fabrication facility and reducing the outdoor exposure associated with traditional methods.

Energy Corp (UNDER CONSTRUCTION)

www.megenergy.com MEG is in the process of building and operating the HI-Q Field Demonstration Pilot Facility. The facility would allow bitumen to be shipped in pipelines without blending with light hydrocarbons. The facility is planned on processing between 1,500 and 3,000 parrels of bitumen per day. Anticipated completion date - 2017.

Superior Plus Corp (SPB.TO)

Superior Plus, through its 100% equity interest in ERCO Worldwide, owns strategically located property in the Lamont County area. The industria zoned property is situated with direct access to both Canadian Class 1 railroads and within major petroleum logistics corridors. The site is well suited for an energy midstream facility development Serving North American and international markets, Superior Plus has a portfolio of diversified businesses including energy services, specialty chemicals and construction products distribution. As one of the largest buyers of propane in Canada, the primary activities of the Superior energy services business include the procurement,

Western Asphalt

Products (OPERATIONAL)

www.westernasphalt.ca Western Asphalt Products opened a state of the art Asphalt Emulsion Facilit located in Bruderheim Alberta in Spring 2013. Asphalt Emulsion is used in the process of recycling existing roadways and also preventative road maintenance extending the life of our current infrastructure. Asphalt Emulsion is a environmentally friendly cost effective alternative to hot mix aspha Western Asphalt is pre-qualified to

supply all Western Canadian provinces.

(PROPOSED)

www.superiorplus.com

(OPERATIONAL) applications

aggregation, marketing, and wholesale & retail distribution of natural gas liquids.

STRATHCONA COUNTY www.strathcona.ca

(OPERATIONAL)

McMurray

Air Liguide Canada Inc.

www.ca.airliquide.com At the Scotford complex, oxygen and nitrogen gases are produced for local industry along with liquid oxygen, nitrogen and argon for broader distribution throughout Alberta and the U.S. A cogeneration plant produces electricity and steam for Shell Chemicals and Air Liquide's internal uses, while supplying any surplus power to the Alberta grid. A CO2 plant recovers and purifies by-product carbon dioxide from Shell's plant for enhanced recovery of oil and gas, and food-grade

Air Products

(UNDER CONSTRUCTION) www.airproducts.com/canada

Air Products is building a new world-scale hydrogen production plant adjacent to Shell Canada's Scotford facility. The new facility is scheduled to be in operation in 2016 and will produce over 150 million standard cubi feet/day of hydrogen and will be connected to the existing Air Products Heartland hydrogen pipeline.

ATCO Energy Solutions

www.atcoenergysolutions.com ATCO Energy Solutions builds, owns and operates industrial water and NGL infrastructure and storage facilities. The company has an established multi-

user water system, the ATCO Heartland

Industrial Water System, connected to the

development of a third fractionator (RFS

service in the third quarter of 2017. The

capital costs for RFSIII and its associated

pipeline is \$460M.

ULC (OPERATIONAL)

III) at Redwater, RFSIII is expected to be in

Williams Energy Canada

Williams fractionates an NGL/olefins

upgrader offgas into components of

liquids mixture sourced from oil sands

ethane, ethylene, propane, propylene,

butane, butylene and condensate. This

Williams Boreal Pipeline. The propylene

polymer grade, the only facility producing

liquids mix arrives at the site through

made at this facility is a high purity

polymer grade propylene in Canada.

Separating propane and propylene is a

difficult task, because the boiling points

are only 1 ½ degrees apart. Williams

gas processing, salt cavern storage, NGL

pipelines, and fractionation and terminalling services. Currently the company is developing four salt caverns, with the capacity to store approximately 400,000 cubic meters of propane, butane and ethane. The storage facility is located at ATCO's Heartland Energy Centre near Fort Saskatchewan. ATCO Pipelines

(OPERATIONAL) www.atcopipelines.com ATCO Pipelines owns and operates an

integrated high-pressure pipeline system and cavern storage facility that supports growth in the Fort Saskatchewan area. ATCO Pipelines has approximately 8,500 km of high pressure natural gas pipelines in Alberta of which 280 km are in the Alberta's Industrial Heartland area. ATCO Pipelines has natural gas storage caverns with injection & withdrawal facilities located in the Heartland.

ATCO Power (PROPOSED) www.atcopower.com

ATCO Power is proposing to build and operate a 400 megawatt (MW) natural gas-fired power generation station called the ATCO Heartland Generating Station. The proposed ATCO Heartland Generating Station will be built as a combined cycle gas turbine power station using state of-the-art

gas and steam turbine technology to achieve

high energy efficiency while producing low

air emissions for the amount of electricity

STRATHCONA

Industries are located in both Strathcona

County and the City of Edmonton. The

SIA has close links to the Heartland

Several companies in SIA also have

region via pipelines, trains and trucks

operations in the AIH region. Several of

the companies in the area belong to the

Strathcona Industrial Association. Refer

Air Products Canada

Air Products Canada Ltd. manufactures

Suncor, Imperial and other customers

They are planning to expand their

to the Shell Scotford Facility and an

to NWRP's Redwater Facility.

hydrogen system to be located next

extension pipeline to provide hydrogen

AltaSteel Ltd. (OPERATIONAL)

Ltd. (OPERATIONAL)

www.airproducts.com/canada

hydrogen. Their facility, adjacent

to Suncor, supplies hydrogen to

from a 45 km pipeline network.

to their website for further information.

INDUSTRIAL

AREA

produced.

Canadian Pacific Railway Strathcona Logistics Centre (PROPOSED)

Canadian Pacific (CP) provides rail freight service to the Industrial Heartland. Trans liquids, steel, aggregates, and bulk Fransfer Facility at Elk Island siding. CP is capability by development of its new "Strathcona Logistics Centre." In addition to Strathcona Logistics Centre CP has the potential to construct 16 miles of new rail

Heartland and the Alberta Capital Region **Gibson Energy** Partnership Ltd.

(PROPOSED) www.gibsons.com Gibson Energy is planning to build out a crude and NGL terminal along with truck,

Keyera - Josephburg Rail Terminal

(OPERATIONAL)

www.kevera.com This project came on stream during the second half of 2015. The primary purpose of this development is to load propane on rail cars for export to a variety of markets. It will be pipeline connected to other Keyera infrastructure in the region.

Gibson Energy **Partnership Ltd.**

(OPERATIONAL) www.gibsons.com

Gibson is engaged in the movement, storage, blending, processing, marketing and distribution of crude oil, condensate, natural gas liquids, water, oilfield waste and refined products. Gibson transports energy products by utilizing its network of terminals, pipelines, storage tanks, and trucks located throughout western Canada and through its significant truck transportation and injection station network in the United States.

Imperial (OPERATIONAL) www.imperialoil.com

Imperial is one of Canada's largest corporations and a leading member of the country's petroleum industry. The company is a major producer of crude oil and natural gas, Canada's largest petroleum refiner and a key petrochemical producer. The refinery processes approx. 185,000 barrels per day.

Inter Pipeline Fund (OPERATIONAL)

www.interpipelinefund.com

Inter Pipeline operates approximately 6,600 kilometers of petroleum pipelines

Kevera Alberta Diluent Terminal (OPERATIONAL)

The Alberta Diluent Terminal (ADT),

owned by Keyera, is located north of the Edmonton Terminal in the Edmonton/ Fort Saskatchewan energy hub. ADT features a rail offloading rack, rail storage spurs, a truck loading rack and above ground storage tanks. The rail offloading rack can handle up to 80 cars per day and the above ground storage tanks have the capacity to store over 400,000 barrels of product. In 2014 the

adjacent Alberta Crude Terminal (ACT)

became operational to load crude oil

on rail cars for shipment to market.

Keyera (KAEF) (OPERATIONAL)

www.keyera.com

Keyera Alberta Envirofuels (KAEF) is the largest iso-octane manufacturing facility in the world. Iso-Octane is a high octane gasoline blending component The facility produces enough product to fuel approx. 45,000 vehicles per day. Product is sold to refineries in Western Canada and the United States for blending into their premium gasolines.

Keyera (KET) (OPERATIONAL) www.kevera.com

Kevera's Edmonton Terminal includes a rail and truck loading/offloading facility, propane treating and storage facilities, and a number of incoming and outgoing pipelines. The Edmonton Terminal is a distribution hub for propane, butane and condensate in the Edmonton and Fort Saskatchewan area

Kinder Morgan Canada Inc. (OPERATIONAL) www.kindermorgan.com

This location comprises both of Kinder Morgan Canada Terminals' (Kinder Morgan) Edmonton South and North Forty tank farms in Sherwood Park. AB. The Edmonton South and North Forty terminals have more than 20 feeder lines from across Alberta while featuring 19 legacy and 9 new tanks, respectively, with a combined storage volume of 761,867 m3 (or 4,792,000

Owens Corning Insulating Systems Canada LP (OPERATIONAL)

Owens Corning is a global leader in residential, commercial and industrial ouilding materials ranging from nsulation to roofing. It invented fiberglass and fiberglass insulation over 70 years ago, and is best known for its "Pink" insulation products.

Pembina Pipeline **Corporation** (OPERATIONAL) www.pembina.com

www.owenscornings.ca

Calgary-based Pembina is a well-managed and responsible transportation and service provider to western Canada's energy industry. Today the company also provides transportation support to Alberta's oil sands industry, has a network of liquids terminals and storage facilities and offers natural gas gathering and processing.

site contains four NGL Storage Spheres plus above ground infrastructure to support surge capacity, storage and pumping to/from connecting pipelines. EST is connected to the COED Pipeline, the FSPL to the Plains Midstream Fort Saskatchewan site and the pipeline from the Plains Midstream Fort Saskatchewan site to EST, and to Enbridge.

(OPERATIONAL)

ships by rail to RTA plants in British Columbia and Quebec, as well as Alcoa plants in Quebec, Washington State, and New York State.

(OPERATIONAL) www.suncor.com Suncor Energy's Edmonton Refinery

has been operating in Strathcona County since 1951. The refinery processes approximately 142,000 barrels per day of crude oil into a wide range of consumer products Suncor has converted its refinery to upgrade and refine oil sands feedstock exclusively.

Access Pipeline

Access Pipeline is owned by Devon NEC Corporation and MEG Energy

Agrium Redwater buyers account for the largest amount of their customers, with a small percentage the urea and ammonia products marketed for industrial use

Support Yard (DEFERRED) The new CN Rail vard will be sized and developed over time to support growth in Alberta's Industrial Heartland. The new five track Sturgeon Support Yard is located directly north of the highway 15 overpass. Here, regional trains will drop off blocks of rail cars to local industry customers.

Timing of the support track

construction is TBD.

CN Sturgeon County

Evonik Canada Inc.

(OPERATIONAL)

www.evonik.com This facility manufactures and distributes hydrogen peroxide. The chemical is widely used in the pulp and mining industries and also has environmental applications. The Gibbons site is a key part of the Evonik Active Oxygens business, a global supplier of hydrogen peroxide, operating production facilities in more than ten countries and supplying customers in every region in the world.

Fort Hills Energy Limited Partnership (DEFERRED)

Fort Hills Energy Limited Partnership exists between Suncor Energy, Total E & P Canada and Tech Cominco, Development plans are on hold. Suncor is the managing

North West Redwater **Partnership** (Sturgeon Refinery (UNDER CONSTRUCTION)

www.nwrpartnership.com

North West Redwater Partnership, an Alberta-based Partnership, is building phase 1 of an independent heavy oil bitumen refinery with a total planned capacity of 231,000 bpd of blended feedstock (150,000 bpd of crude bitumen) over three phases. This facility will produce high quality Ultra Low Sulphur Diesel fuel and diluent, through the process of hydrocracking and hydrogen addition. The process will utilize gasification to make hydrogen

from the heaviest liquid components, thereby maximizing the production of high value components, minimizing waste products, and enabling the capture and sequestration of pure carbon dioxide. which will be used by others for enhanced oil recovery and then sequestration in

Northern Lights

Phase 1 mechanical construction commenced in 2014, and will continue through to commissioning. The first phase will commence operations in late 2017.

Partnership (DEFERRED) www.total-ep-canada.com Total E&P Canada and SinoCanada have an equal joint interest in the Northern Lights Upgrader Project. Total acts as the Managing Partner. The Upgrader proposed for this site is under review to

corporate interests and projects. **Pembina Pipeline** (OPERATIONAL)

www.pembina.com With RFS II (Redwater Fractionator &

Storage Project – Phase Two), Pembina will essentially be twinning the Company's existing Redwater Fractionator to address a portion of the anticipated shortfall in fractionation capacity within the Fort Saskatchewan area. Ethane produced at RFS II will be sold under a long-term arrangement with NOVA Chemicals Corporation. Pembina expects RFS II to be in-service in 2016 at an estimated cost of \$415 million. Pembina announced plans to spend

approximately \$25 million to upsize

certain facilities associated with its second

fractionator to accommodate the future

assess its compatibility with the partners' accomplishes this with their 320 foot, 213 tray splitter – the distinctive red and white tower on the site. It is the tallest fractionation tower in western Canada. The facility has recently been expanded to receive an ethane/ethylene stream from the oil sands. The new de-ethanizer splits these products, supplying ethane and ethylene to Alberta's petrochemical producers. Williams contracts Pembina Pipelines to operate the facility.

www.altasteel.com AltaSteel operates a scrap-based steel mini mill with melting and continuous casting facilities. They are the largest recycler in Alberta and the largest steel plant in Western Canada with a production capability of over 350,000 onnes of steel billets annually.

Distribution Centre (OPERATIONAL) www.cn.ca Strategically located in Scotford on 230 acres

of land, the facility has the capability to move anything from pipe and frack sand to crude oil diluents, machinery, construction materials and dimensional loads to Alberta. Also, when paired with CN's extensive rail network, the centre will assist the ability to move liquefied petroleum gases, sulphur and diesel to end markets.

www.cpr.ca oading services for construction materials, commodities are provided at CP's Scotford further proposing to expand trans loading

line on existing right-of-way to service new or existing customers in Strathcona and Sturgeon Counties

Edmonton Rail Termina

(UNDER CONSTRUCTION) www.kindermorgan.com

Kinder Morgan Energy Partners with its 50-50 joint venture with Imperial Oil Limited announced a planned expansion project to add incremental capacity of 110,000 barrels per day (bpd) at the Edmonton Rail Terminal. The Edmonton Rail Terminal will increase its capacity to over 210,000 bpd and potentially up to 250,000 bpd. The terminal wil be connected via pipeline to Kinder Morgan's adjacent Edmonton storage terminal and will be capable of sourcing all crude streams handled by Kinder Morgan for delivery by rail to North American markets and refineries. The rail terminal is being constructed and

Edmonton Waste Management Centre

The EWMC is North America's largest collection of modern, sustainable waste processing and research facilities. Facilities include a modern waste

will be operated by Kinder Morgan, and will connect to both Canadian National and Canadian Pacific mainlines.

(OPERATIONAL) www.edmonton.ca

processing and recycling centre, North America's largest co-composting facility,

and liquid transportation fuels. This facility, operated by Energex

and 4.8 million barrels of storage in western Canada. These systems transport approximately 950,000 barrels per day of oil sands bitumen and conventional crude oil, representing approximately 15% of total western Canadian conventional volumes and approximately 39% of oil sands volumes

over a much larger market segment.

one million tonnes a year which is equivalent

Pipelines Ltd. (PROPOSED) www.transcanada.com

TransCanada has proposed three separate projects in Alberta's Industrial Heartland: connect crude oil resources from the wes

ADC[™] process. The ADC[™] transforms bitumen into Clean Heavy Oil by very selective and almost complete remova of asphaltenes (as solid aggregates). This

Canada (OPERATIONAL www.plainsmidstream.com

The Edmonton Storage Terminal (EST)

Rio Tinto Alcan

www.riotintoalcan.com Rio Tinto Alcan produces 180,000 metric tons of calcined product and

Suncor Energy Edmonton Refinery

Updated January 2016

The facility has 22 km of track capable of storing 600 railcars. Agricultural