

# Adding Value to Alberta's Natural Resources

- We are a key player in successfully executing the Alberta Government's value-add strategy
- We create value by upgrading Alberta's natural resources – in Alberta
- We invest here – about \$4 billion at the Joffre Site alone
- We are the largest customer of Alberta's natural gas producers (Joffre Site facilities account for about 22 percent of the total Alberta demand for natural gas)
- We are a major Canadian exporter, with global scale
- We are part of a \$10 billion plus Alberta-based industry, with the potential to double that number
- We plan to grow our business and industry right here in Alberta

## NOVA Chemicals in Alberta...

- Joffre Site – some of the largest manufacturing facilities in our industry
- Canadian Operating Centre located in Calgary – focused on feedstocks, petrochemicals and strategic growth
- Calgary Research and Technology Centres – investment and innovation

## A Snapshot

Upgrading Alberta's natural resources in Alberta creates value – one kilogram of polyethylene is worth ten times the value of the raw materials. We increase the value of products from our natural gas stream, provide highly-skilled jobs and contribute significantly to Alberta's economy.

R&D Investment	Employment	Salaries & Benefits	Feedstock Purchases	Goods & Services/ Procurement	Value of Product Sold
\$47 million*	1,170 full-time employees, 440 contractors	\$170 million*	\$1.1 billion*	\$380 million*	\$2.5 billion*

\*2007 data

## Commitment to Sustainability

At NOVA Chemicals, we believe that a sustainable business is a profitable and socially responsible business. We are committed to continual improvement in all three components of sustainability: environmental, social and economic.

Our approach to managing health, safety, security, environmental protection, sustainability and corporate social responsibility is implemented primarily through Responsible Care®, a global chemical industry performance initiative that helps member companies to continuously improve in these critical areas.





## Manufacturing in Central Alberta (Joffre Site)

NOVA Chemicals has made significant investments in the Joffre site since it began operations almost 30 years ago. Today, site operations are among the most competitive in the world because of the feedstock available in Alberta, economies of scale and our advanced technologies. It is the world's largest ethylene manufacturing site, producing more than six billion pounds of ethylene each year. The site also produces over two billion pounds of polyethylene annually.

We added 100 million pounds of polyethylene capacity in 2007 and will add another four percent of our total capacity or 150 million pounds by the end of 2009.

We use natural gas liquids (ethane and propane) as feedstock for our Joffre Site. These building blocks are extracted from natural gas and used in the production of ethylene and polyethylene.



## Canadian Operating Centre

NOVA Chemicals views Alberta as an attractive place to do business. We continue to invest and grow in Alberta, working closely with the provincial government, a strong partner with our industry, on important future development opportunities.

Our Canadian Operating Centre is located in Calgary where our Olefins and Feedstocks team is focused on feedstock acquisition, infrastructure development, optimizing our competitive advantage, and strategic growth prospects.



## Research and Technology

Calgary is NOVA Chemicals' global research and development headquarters, and home to world-class scientific achievements. Research and development supports our manufacturing facilities through development and application of innovative solutions.

Advanced SCLAIRTECH™ polyethylene production technology used at the Joffre site combines a new high-efficiency catalyst with an improved reactor design, providing customers with a slate of unique, value-added products.

New technological advances are key to optimizing potential future feedstock sources from Alberta's oil sands. Our technology developments have earned many awards for environmental innovation and commercial development.

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## Feedstock Today and Into the Future

An Alberta Advantaged feedstock position continues to be the cornerstone of our long-term competitive advantage in North America. In 2007, this averaged 17 cents per pound of ethylene over our competitors on the U.S. Gulf coast. Confidence in conventional and non-conventional feedstock supplies is building, and we expect this to be bolstered by significant increases in ethane supply available in Alberta over the foreseeable future.

In the short-term, we are optimizing the amount of ethane obtained from existing ethane extraction facilities. We are encouraging the extraction of ethane from natural gas before it reaches domestic and industrial markets (such as the oil sands) for use as fuel.

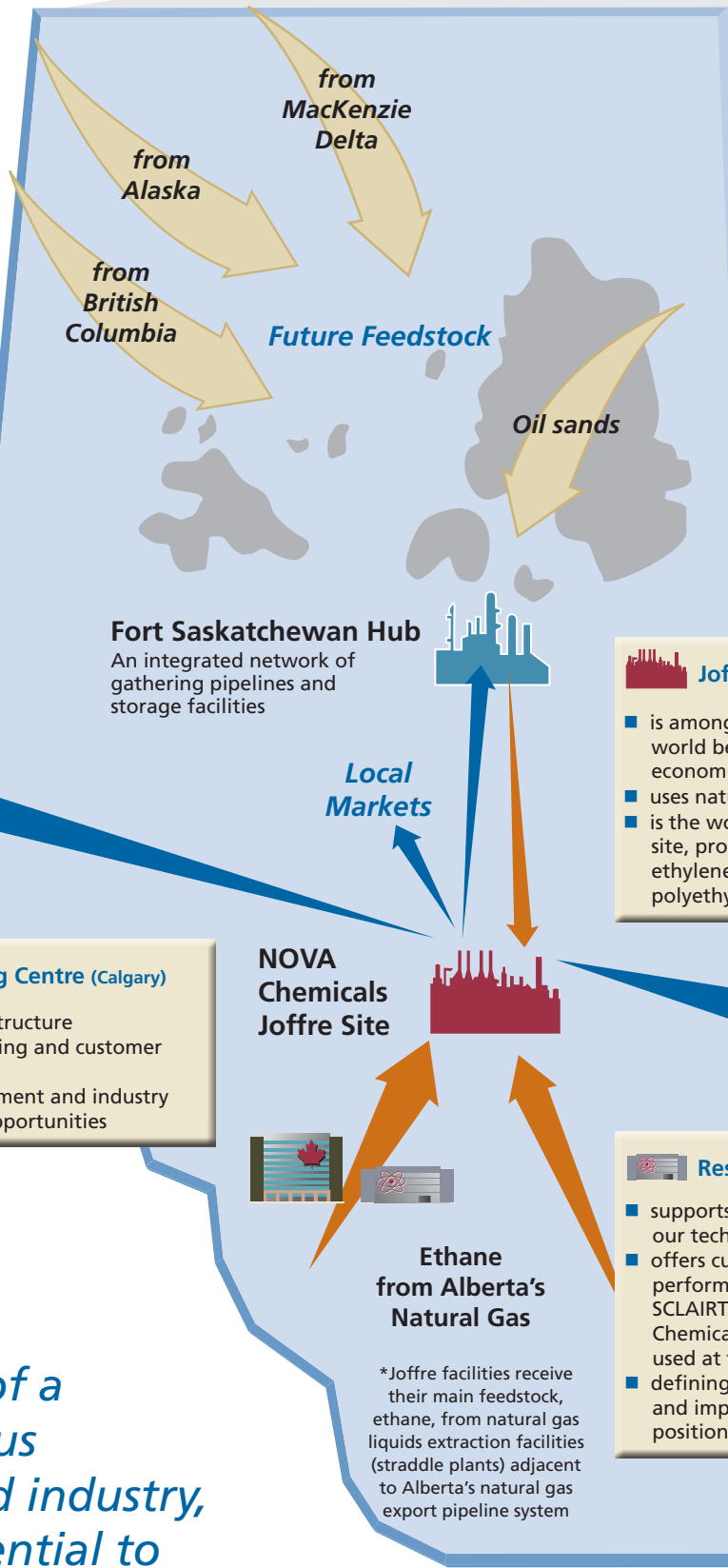
In the medium- and long-term (2011 and beyond), we are aggressively pursuing the potential of removing ethane from oil sands off-gas streams. Beyond their value as a new source of ethane feedstock, oil sands off-gas projects will result in immediate greenhouse gas reductions by removing natural gas liquids before they are burned. In addition, recent large discoveries of unconventional gas in British Columbia and Alberta are expected to add significant proven natural gas reserves to the Western Canadian Sedimentary Basin. These resources, destined to use the Alberta Hub infrastructure, also present a promising new feedstock source.

Over the long-term (2015), the prospect of future gas flows from the Canadian Arctic and Alaska through Alberta offers unprecedented growth opportunity for Alberta's petrochemical industry. This value-add industry has the scale, infrastructure and expertise to position Alberta, and Canada, for sustained benefit from our northern resources.

# in Alberta



-  Feedstock Today
-  Future Feedstock
-  Finished Product Shipments



**Joffre Manufacturing Site**

- is among the most cost competitive in the world because of our feedstock supply, economies of scale and advanced technologies
- uses natural gas as a fuel and a feedstock\*
- is the world's largest ethylene manufacturing site, producing over six billion pounds of ethylene and two billion pounds of polyethylene annually

**Canadian Operating Centre (Calgary)**

- focused on business infrastructure development, and marketing and customer relationships
- works closely with government and industry on future development opportunities

**Research & Technology Centres (Calgary)**

- supports our global manufacturing facilities, our technology licensees and our customers
- offers customers a slate of unique, performance products, through our Advanced SCLAIRTECH™ technology and NOVA Chemicals' proprietary single site catalysts, used at the Joffre Site
- defining potential future feedstock sources and improving our competitive feedstock position through new technological advances

**NOVA Chemicals Joffre Site**

**Ethane from Alberta's Natural Gas**

\*Joffre facilities receive their main feedstock, ethane, from natural gas liquids extraction facilities (straddle plants) adjacent to Alberta's natural gas export pipeline system

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