Gerry Gabinet – Alberta Industrial Heartland
Presented April 2011 Exclusively to the Members of REIN™

Shifting Opportunities

REIN Update April 5, 2011

Gerry Gabinet – Manager, Economic Development and Tourism, Strathcona County

www.industrialheartland.com

Agenda

1. Update on Alberta Industrial Heartland
2. Project Update
3. New realities
4. Housing Impact
5. Towards the future

- Alberta's Industrial Heartland Association (AIHA) was formed in 1998 as a cooperative effort of the Counties of Lamont, Strathcona, Sturgeon and the City of Ft. Saskatchewan and, in 2010, the City of Edmonton
- Industrial region defined by a Complimentary Area Structure Plan (CASP) developed to take advantage of the natural assets the area has to offer

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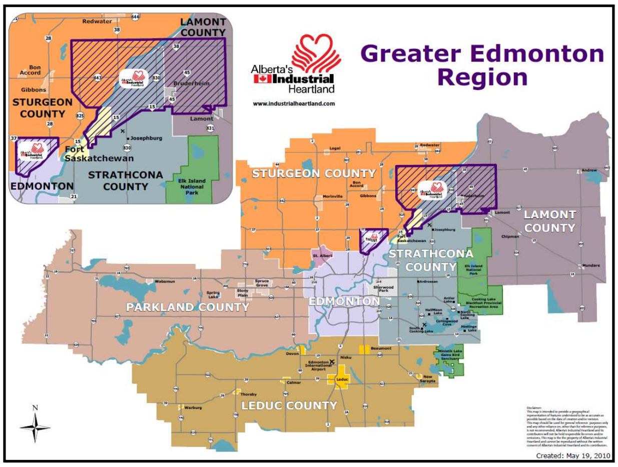

A New Reality

- Major shifts in business and economic cycles
- Overall strategy shifting to take advantage of new markets and opportunities
- Re-thinking of development potential
- Re-thinking the way we plan for growth

Project Updates

- Upgraders
  - Fort Hills: Suspended
  - Total: Suspended
  - Statoil: Suspended
  - Shell Phase 2-4: Suspended
  - BA: Suspended
  - Suncor & Northern Lights: Suspended
- Chemical Cluster based on gasification: Currently uneconomical

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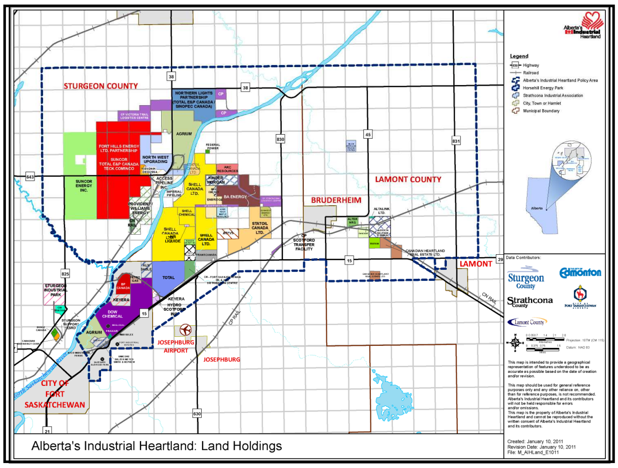
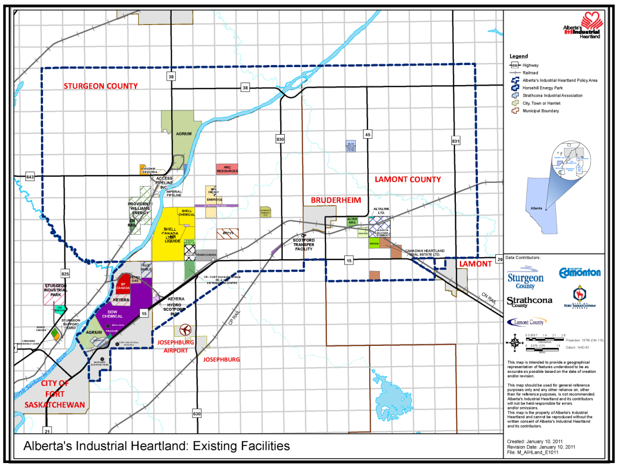
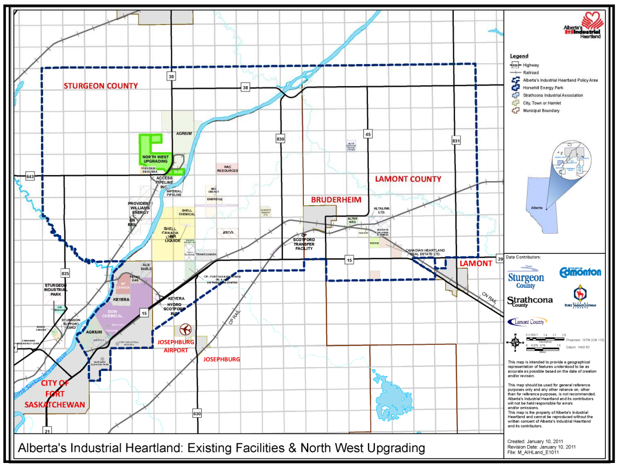






Scotford Upgrader

Projected Capacity 280,000 bpd

Current Capacity
155,000 bdp – 2006

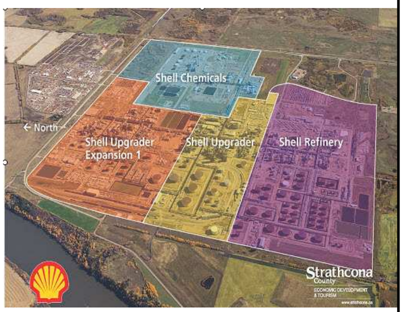
Phase 1
100,000 bpd- 2011

Future Phase
Debottlenecking
85,000 bbl/day

Peak Construction Labor Force
12000

Operating Labor
(1st Phase)
175+

Projected Capital
$12.8 Billion including mine in Ft. McMurray



Shell Update – Expansion One

By the numbers:

- Workforce peaked at 12,000 workers
- Over 133 bus used to transport workers
- Over 400 new full time and 100 contract workers
- This was the largest union construction project in Canada
- Enough concrete used to build a sidewalk to Ft.McMurray from Sherwood Park

Total E&P Canada Ltd.

Projected Capacity
295,000 bpd

Phase One 150,00 bpd
2013/2014 subject to final approval and market conditions

Phase Two 95,000 bpd
DE Bottle necking
50,000 bpd

Peak Construction Labor Force
4,000

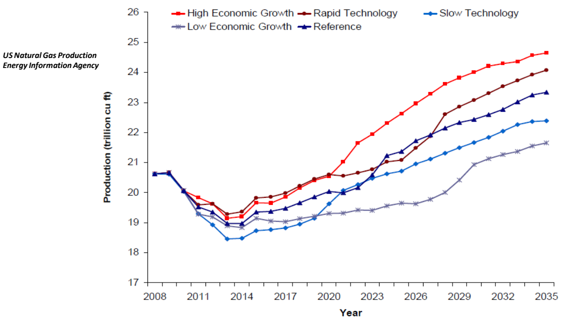
Operating Labor (1st Phase
400

Projected Capital
$10 billion +

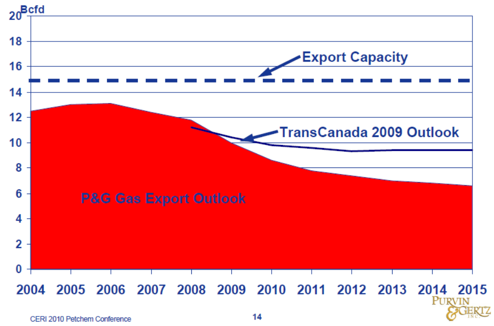
Future Influencing Factors

- Oil Sands outlook very positive, expected output to raise to 3 mm bpd by 2020, $180 billion in capital investment over the next decade
- Government Support for value added
  - BRIK phase one
  - Support for use of by-products (off-gases)
  - Future programs/Competitiveness review
- Changing Natural Gas economics
- Petrochemical industry shifts
- New Industry players and joint ventures
- Bitumen differential dynamics

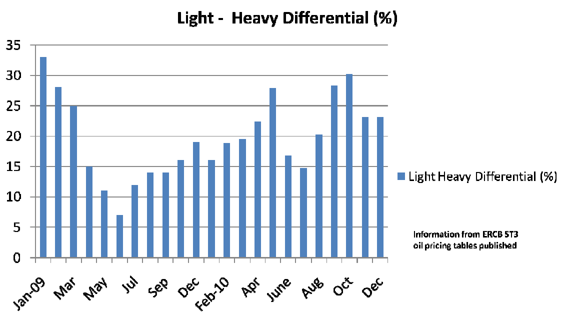
Natural Gas supply trends



Alberta NG Export Challenges



Strengthening Bitumen Differentials



New Opportunities

- Additional upgrading capacity will be required, government support for adding value in Alberta will help ensure the investments made in Alberta (BRIK 2 ?)
- New petrochemical feed stocks from upgrading by-products
- New products from cost advantaged natural gas
- Changing electrical power dynamics
- Climate Change and CCS

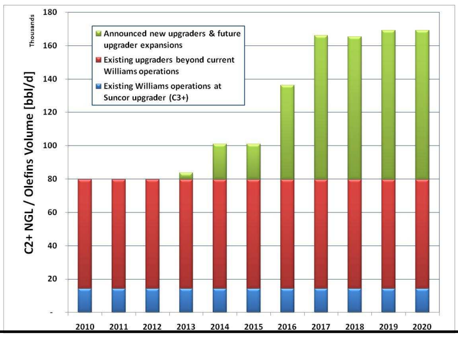
Petrochemicals From Natural Gas

- Variety of products can be produced from natural gas
  - Fertilizers (Ammonia)
  - Methanol
  - “Gas to Liquids”
- Alberta’s natural gas bubble was “popped” with the introduction on the Alliance pipeline contributing to the closure of Celanese in Edmonton
- A new “bubble” may make these investments attractive once more.

GoA – AIHA Feedstocks Study

- Consultant engaged to determine current and future trends in feedstock supplies for the petrochemical industry in Alberta and North America
- Results will point out where Alberta has an advantage that can be used to sustain the existing industry and attract new investments
- May help define policy changes required to enable growth

Upgrader Off-Gas Potential



Recent Announcements:

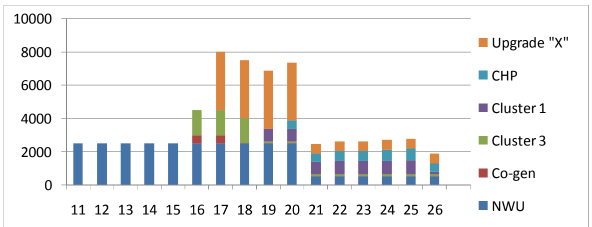
- Williams to supply 17,000 bpd of ethane and ethylene to Nova Chemicals near Joffre
- Will spend $311 million on oilsands off-gas extraction plant near Ft. McMurray
- Construct a 420 km. pipeline to Redwater from Ft. McMurray at 43,000 bpd increasing to 123,00 bpd
- Off-gas production (natural gas liquids and olefins) in Ft. McMurray is currently is around 90,000 bpd and could increase to 175,00 bpd

AIHA Growth Projections

- North West Upgrading
- Upgrader “X”
- Petrochemical complex “C1”
- Petrochemical complex “C3”
- Combined Heat and Power Center(s)
- Others?

AIHA Development Scenario

Additional Workforce Requirements for Construction and Operation



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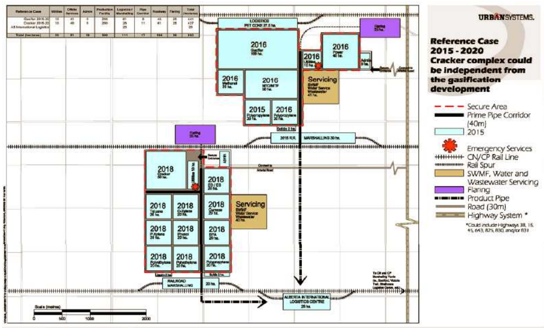
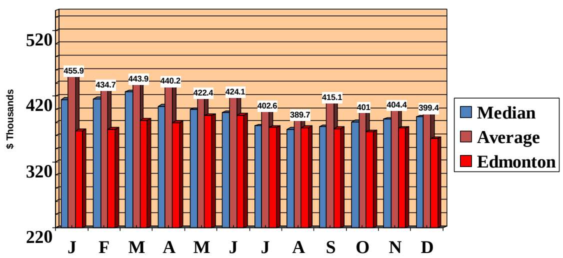
Co-gen Opportunities

- Low natural gas pricing makes CCGT projects competitive
- Environmental advantage over coal
- Potential for "Combined Heat and Power" (CHP) distributed heat industrial/agricultural centers


Energy "Cluster" Layout



Average House Price Sherwood Park 2010



Average House Price Sherwood Park 2011

CMHC Residential Construction Strathcona Update 2010

Housing Starts 2010

- Single Family 511
- Multi Family 304
- Total 815

New Dwelling Absorbed

- Single Family 431
- Multi Family 199
- Total 630

Housing Starts 2009

- Single Family 373
- Multi Family 145
- Total 518

New Dwelling Absorbed

- Single Family 371
- Multi Family 396
- Total 767

New Housing Stats 2010

Housing type		Average Price
–Bungalow	70	–$748,056
–Split Level	26	–$537,239
–Two Storey	330	–$574,129
–Other	5	–$645,400
Total	431	–$598,676

SFD by Price Range

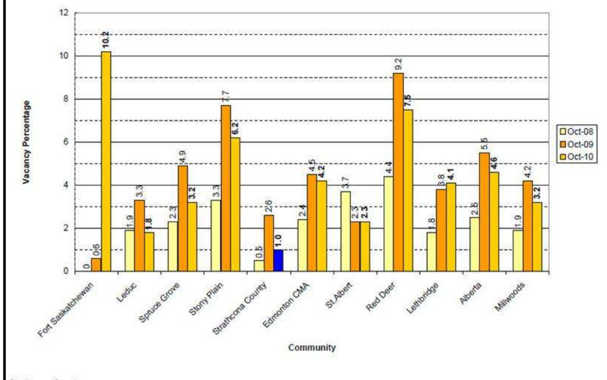
Strathcona County

- 9 under $300,000
- 33 $300k to $399.9K
- 203 $400k to $499.9k
- 90 $500k to $599.9k
- 24 $600k to $699.9k
- 72 $700k and over
- Total 431
- Total all rural 2177

Edmonton

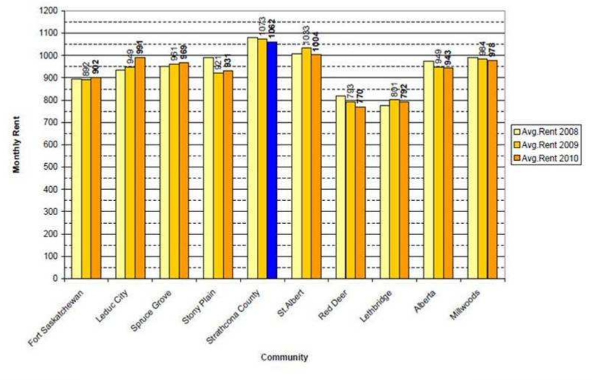
- 129 under $300k
- 1018 $300k to $399.9k
- 1082 $400k to $499.9k
- 437 $500k to $599.9k
- 186 $600k to $699.9k
- 271 $700k and over
- Total 3123
- Total Metro Edmonton 5300

Rental Apartment Vacancy Rates



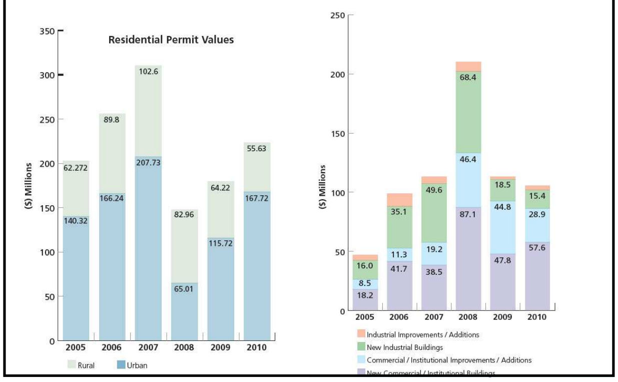
Strathcona County
Economic Development and Tourism (RAR)
Source CMHC - October 2009

Average Apartment Rents



Strathcona County
Economic Development and Tourism (RAR)
Source CMHC Rental Reports
October 2009

Building Permits



TIMELINES

NWU has completed and implemented the following important time consuming steps in the project development process:

- Expert team in place with the necessary real-world experience, including gasification design and operations experience, to successfully execute the project
- Site selected and purchased in 2005
- Process selection, licensor selection and regulatory engineering complete
- Regulatory approvals in place for all three phases to proceed
- Front end and design basis engineering complete and ready to proceed to the detailed engineering phase
- Order and delivery of approximately $150 million worth of long-lead delivery items including six heavy walled vessels, ebullating pumps and high alloy/carbon steel plate

Next steps:

- Detailed Project Engineering - immediately
- Operations - targeted end of 2014
- Construction – 2011 - 2014

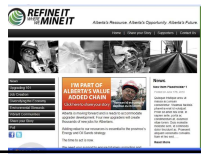
SOCIO-ECONOMIC BENEFITS TO ALBERTANS
NORTH WEST UPGRADING OVER THREE PHASES

	Construction	From 30 Years of Operation	Total
Gross Output Direct, Indirect, and Induced	$23.5b	$123.6b	$147.1b
Alberta GDP Direct, Indirect, and Induced	$10.6b	$80.7b	$91.3b
Alberta Household Income Direct, Indirect, and Induced	$5.8b	$24.4b	$30.2b
Person Years of Employment in Alberta Direct, Indirect, and Induced	101,000	417,000	518,000
Combined Taxes Direct, Indirect personal and corporate income tax to Alberta, and Alberta-based municipal tax			$10.3b

Source: Canadian Energy Research Institute (CERI).
Note: Values are undiscounted for three phases of North West Upgrading. All numbers include Direct, Indirect, and Induced benefits as defined by Statistics Canada.

Refine It Where We Mine It

- Continue with government advocacy
- More than just upgrading
- Build and strengthen coalition
- Increase public awareness and continue the discussions on this matter



Heartland Advantage

- Cross roads of Alberta's oil/gas pipeline system
- Road, rail and air logistical centers in the region
- Pre-zoned industrial lands
- Manufacturing and service/supply support
- Skills workforce and training centers
- Support organizations and agencies
- Synergistic opportunities with existing industrial base
- Proximity to northern resources
- Water availability in the North Saskatchewan river
- Center for Carbon Capture and Storage

Summation

- The "Heartland Advantage" provides new opportunities for hydrocarbon and mineral processing
- Marketing and development plans adapting to economic realities
- Continue to be pro-active in preparing for growth
- Cooperation needed at the provincial and federal levels of government

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