

# AIHA Update Sturgeon County Council

*May 14, 2024*

Mark Plamondon,  
Executive Director, Alberta's Industrial Heartland Association

# ALBERTA'S INDUSTRIAL HEARTLAND

Alberta's Industrial Heartland is Canada's largest hydrocarbon processing region, consisting of over \$45 billion in industrial investments. AIH is home to 40+ companies in a variety of sectors, including producing and processing oil, gas, and petrochemicals, as well as advanced manufacturing



# ABOUT US

Alberta's Industrial Heartland Association (AIHA) is a municipal government supported economic development association. AIHA's mandate is to attract industrial assets into Alberta's Industrial Heartland.

AIHA is a 25-year partnership of five municipalities and three associate members. AIHA is non-profit and does not seek any financial reward from project developers.



Associate members:



[Industrialheartland.com](http://Industrialheartland.com)



# HOW WE ASSIST POTENTIAL INVESTORS

## INTERNAL DEPARTMENTS



### BUSINESS DEVELOPMENT

Works with companies to understand if AIH makes sense for their next investment



### EXTERNAL RELATIONS

Advocates for project sponsors at all levels of government



### COMMUNICATIONS AND COMMUNITY OUTREACH

Connects the community and stakeholders to activity in region

## STRATEGIC PILLARS

### Promote Project Opportunities in AIH

Attendance at notable global industry events, such as Gas Tech and World Methanol Conference

Marketing and advertising campaigns focusing on competitive advantages of the region

### Improve the Business Case for AIH

Robust study and intelligence building programs

Policy and engagement opportunities, such as the Designated Industrial Zone

### Advance AIH Social License and Community Support

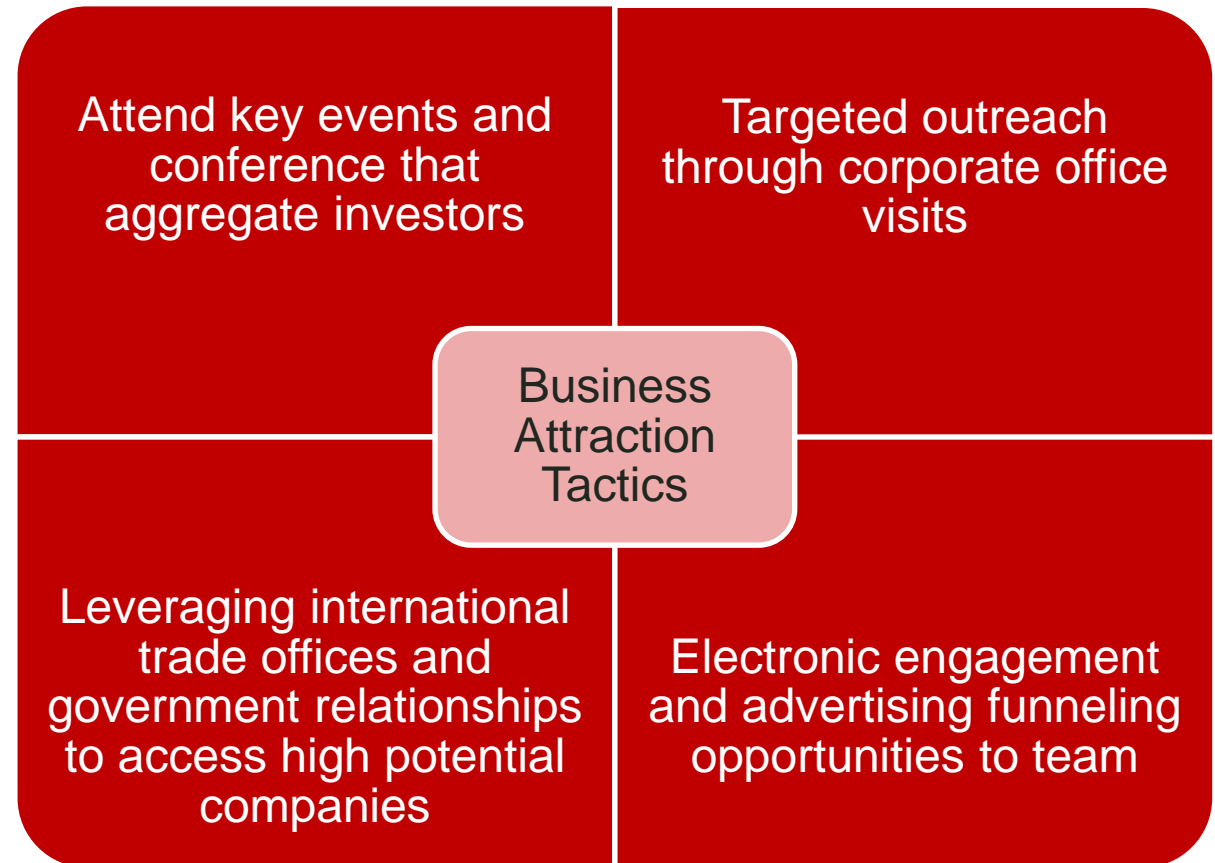
Supporting community engagement organizations such as Life in the Heartland

Indigenous engagement and Reconciliation Action Plan

# Pillar 1: Promote Project Opportunities in AiH

## Primary opportunities sought:

- Chemicals/Petrochemicals:
  - Methanol
  - Fertilizer (i.e. ammonia)
  - Ethylene and derivatives
  - Propylene and derivatives
  - Animal nutrition
  - Specialty chemical products and plastics
  - Midstream supporting infrastructure (fractionation, storage, short rail)
- Diversification and Sustainability:
  - Renewable fuels (SAF, Biodiesel)
  - Battery materials
  - Municipal waste to energy
  - Small modular nuclear reactors
  - Low-carbon power
  - Carbon capture, sequestration, and utilization (CCUS)
  - Hydrogen



# CURRENT PROJECTS

## RECENTLY COMPLETE



**Project:** Heartland Petrochemical Complex (HPC)

**Description:** HPC is Canada's first propane dehydrogenation and polypropylene production facility.

**Project Type:** PDH & PP

**Capacity:** 550 KTA

**Status:** Complete



**Project:** NGL North

**Description:** NGL North is an NGL recovery, transportation, and fractionation system, connecting Northern Alberta to AIH.

**Project Type:** NGL capture, transportation and fractionation

**Capacity:** 70 KBbl/d

**Status:** Complete



**Project:** Scotford Solar

**Description:** Shell Canada and Silicon Ranch are constructing a 58-megawatt behind-the-meter solar farm to power Shell Canada Energy and Chemicals Park Scotford.

**Project Type:** Solar Power

**Capacity:** 58 MW

**Status:** Under Construction

## UNDER DEVELOPMENT



**Project:** Fort Sask Expansion

**Description:** Plains Midstream Canada sanctioned an expansion of their fractionation facility at Fort Saskatchewan.

**Project Type:** NGL

**Frac**

**Capacity:** 30 kbbl/d

**Status:** Under construction



**Project:** RFS IV

**Description:** Pembina is constructing its fourth fractionator in AIH. The C3+ frac will add 55 kbbl/d, bringing total frac capacity to 256 kbbl/d on site

**Project Type:** NGL

**Frac**

**Capacity:** 55 kbbl/d

**Status:** Under construction



**Project:** Path2Zero

**Description:** Path2Zero is Dow's, and the world's, first net-zero integrated ethane cracking complex which will utilize hydrogen as a clean fuel and third-party CCS.

**Project Type:** Ethylene and derivatives

**Capacity:** 1.8 MMTPA

**Status:** Sanctioned





# RECENT ANNOUNCEMENTS – UNDER STUDY



**Project:** Blue Hydrogen and Ammonia  
**Description:** Shell and Mitsubishi have signed a MOU relating to the production of low-carbon hydrogen/ammonia through the use of carbon capture and storage (CCS).

**Project Type:** Hydrogen and ammonia  
**Capacity:** 165 KTA hydrogen  
**Status:** Under Study



**Project:** Blue Ammonia and Blue Methanol  
**Description:** Itochu Corp., Petronas Canada and Inter Pipeline announced a partnership to evaluate the development of a world-scale integrated blue ammonia and blue methanol production facility.

**Project Type:** Ammonia and Methanol  
**Capacity:** 1.8 MMTPA  
**Status:** Under Study



**Project:** Blue Ammonia  
**Description:** Pembina and Marubeni announced an MOU to jointly develop a low carbon ammonia facility utilizing CCUS. The ammonia will be produced to serve the Asian market

**Project Type:** Low-carbon ammonia  
**Capacity:** 1.0 million mt/year  
**Status:** Under Study



**Project:** Hydrogen Canada Ammonia  
**Description:** Hydrogen Canada and E1 are collaborating on a blue ammonia facility in AIH.

**Project Type:** Blue ammonia  
**Capacity:** 1.0 MMTPA  
**Status:** Under Study



**Project:** Clean fuel export  
**Description:** ATCO and Kansai are collaborating to develop a clean fuels supply chain, producing clean hydrogen and derivatives for Asia.

**Project Type:** Hydrogen and derivatives (ammonia)  
**Capacity:**  
**Status:** Under Study

# RECENT ANNOUNCEMENTS – UNDER STUDY



**Project:** AIH Waste-to-Energy

**Description:** Varme signed an MOU with a major industrial partner in AIH to pursue the development of a waste-to-energy facility with integrated carbon capture in AIH.

**Project Type:** Waste-to-energy

**Capacity:**

**Status:** Under Study



**Project:** Sol Aurora

**Description:** Alpin Sun is proposing to build a 200 MW solar farm in AIH to make clean energy available to nearby industrials.

**Project Type:** Solar Farm

**Capacity:** 200 MW

**Status:** Under Study



**Project:** NICO Critical Mineral Refinery

**Description:** Fortune is studying the development of a critical mineral refinery in AIH which will produce cobalt, gold, copper, and bismuth from ore sourced from NWT, Canada.

**Project Type:**

Hydrometallurgical Refinery

**Capacity:**

**Status:** Under Study



# PILLAR 2: IMPROVE THE BUSINESS CASE FOR AIH

## INCENTIVES

- Federal investment tax credits for hydrogen production, Carbon Capture and Sequestration (CCS), clean technology
- Provincial ACCIP Program funded in 2024

## INFRASTRUCTURE

Alberta budget 2024 included:

- \$32 million over three years to the Designated Industrial Zone to construct new water intakes to attract new investment.
- Continued funding for Vinca Bridge Replacement

## STREAMLINING REGULATORY APPROVALS

Designated industrial zone continued to develop with funding for Zone Wide Environmental Impact Assessments, approval of the Master Drainage Plan, and installation of two new water monitoring stations in the North Saskatchewan River.



# Pillar 3: Advance AIH's social license and community support



LITH continues to engage with the community through a 360-degree approach:

- LITH Info Eve – April 10<sup>th</sup> in Gibbons
- Regional Advisory Committee – more meetings added
- Launch of In the Zone podcast
- Expanded digital presence by joining LinkedIn
- Community survey recently completed to better understand how residents want to hear from LITH and what issues they are concerned about
- FAP will be rebranding and launching a new name in May





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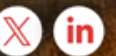
*The Capital Investment Destination*

# THANK YOU

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[Industrialheartland.com](https://Industrialheartland.com)







# Reference Materials

# AIHA ORGANIZATION

## BUSINESS DEVELOPMENT

Works with project sponsors to efficiently and effectively develop projects in AIH

## GOVERNMENT RELATIONS

Advocates for industry friendly policies and regulations

## COMMUNICATIONS AND COMMUNITY RELATIONS

Connects the communities and stakeholders with relevant association and development activities



# EXISTING INDUSTRY

## CHEMICALS & FUELS

- Ethylene – 1,300 KTA
- Polyethylene – 850 KTA
- PG propylene – 115 KTA
- Polypropylene – 550 KTA
- MEG/EO/EG– 800 KTA
- Iso-octane – 521 KTA
- Styrene monomer – 450 KTA
- Urea – 1,400 KTA
- Ammonium sulphate – 355 KTA
- Ammonia – 376 KTA
- Hydrogen – 821 KTA
- Refined fuels – 447 Kbpd
- Bitumen upgrading – 270 Kbpd
- Benzene – 370 KTA
- Aromatics
- Petcoke

## MIDSTREAM & UTILITIES

- NGL fractionation – 485 Kbpd
- Over 40 Salt cavern storage
- Oil, natural gas, and NGL pipelines
- Water and industrial gas systems
- Two operating world-scale CCUS systems
- Rail storage and loading

## DIVERSIFIED PRODUCTS

- High-purity nickel
- High-purity cobalt
- Nickel composite powders
- Cobalt powders
- Hydrogen peroxide
- Prilled sulfur
- Renewable power





Nutrien



MEGlobal



oerlikon  
metco



cenovus  
ENERGY



AUX SABLE



ATCO



sherritt



Petrogas  
Energy Corp.



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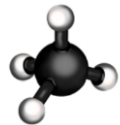




# TARGETED INDUSTRIAL OPPORTUNITIES IN AIH

## PETROCHEMICALS

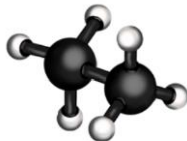
## DIVERSIFICATION



Methane

### METHANE

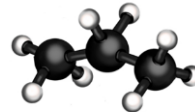
Methanol  
Fertilizer  
Fuel Ammonia  
Animal Nutrition  
Hydrogen  
Hydrogen Carriers



Ethane

### ETHANE

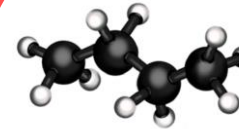
Ethylene  
EO / EG  
Chlor Alkali / EDC



Propane

### PROPANE

Propylene  
PO / PG  
SAP  
IPA  
Animal Nutrition



Butane

### BUTANE

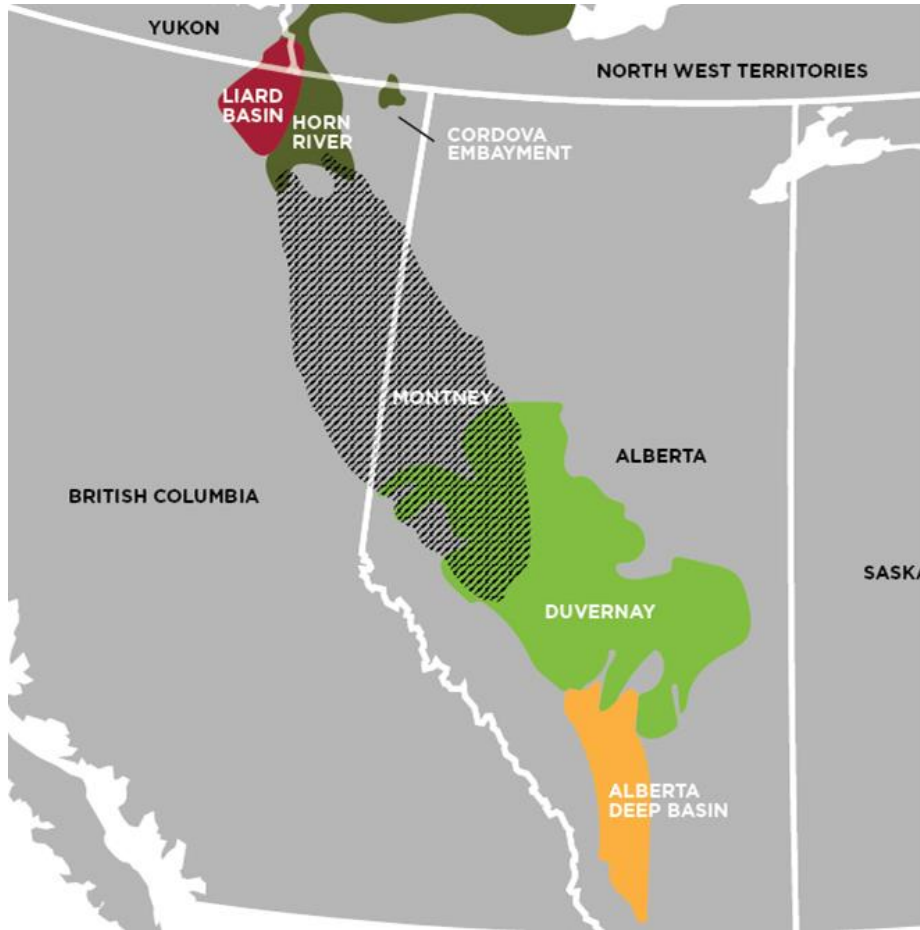
Maleic Anhydride  
Iso-butane  
Butadiene



### HEAVY INDUSTRY

Renewable Fuels  
Synthetic graphite  
Critical Mineral Refining  
Low-carbon Power  
Waste-to-energy  
Industrial Biotech

# FEEDSTOCK



## VAST NATURAL GAS AND NGL RESERVES

- Over 1,100 TCF of natural gas reserves, representing over 200 years of production at current demand
- Over 25 billion barrels of NGL representing over 100 years of production

## PROVEN PRODUCTION

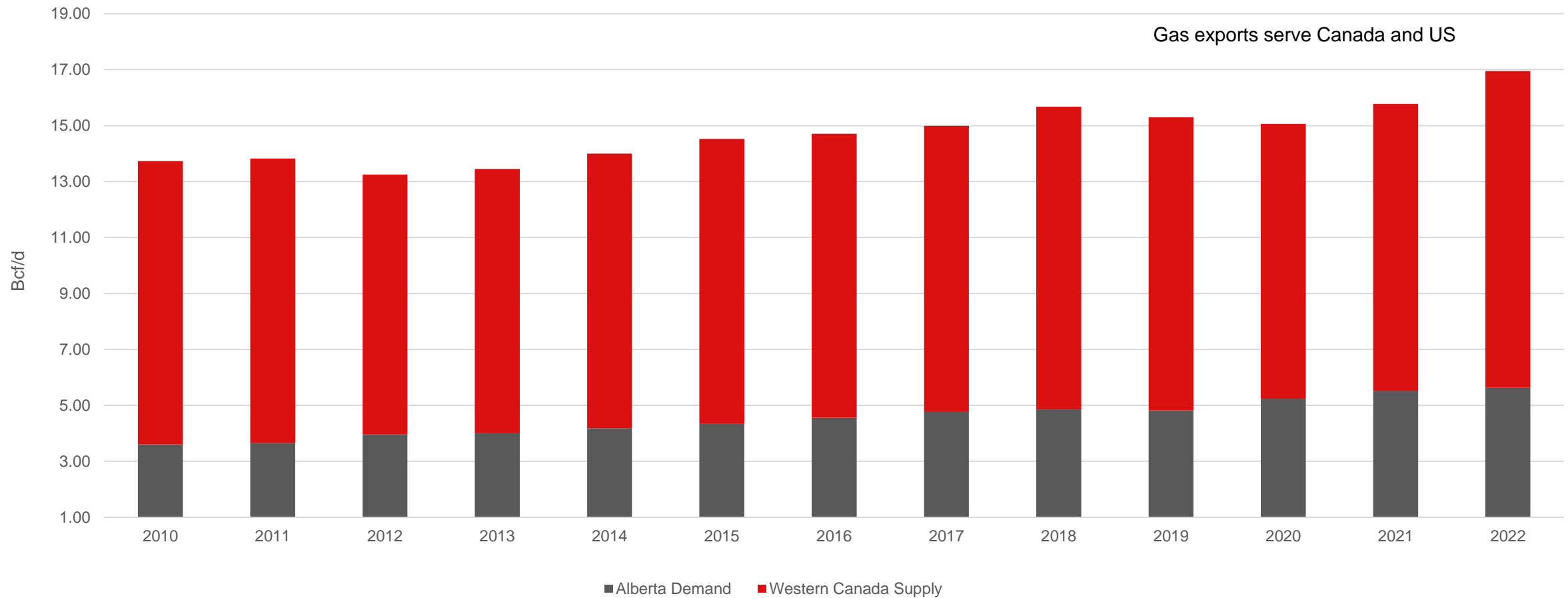
- Approximately 17 bcf/d of gas production with significant volumes flowing through AIH
- Over 500 kbpd of fractionation capacity in AIH

## OPTIONALITY ON SUPPLY

- TC Energy's NGTL pipeline system extends over 24 thousand kilometers connecting producers, marketers, and aggregators across western Canada to downstream users in AIH
- At peak, NGTL moves ~14.3 bcf/d of natural gas

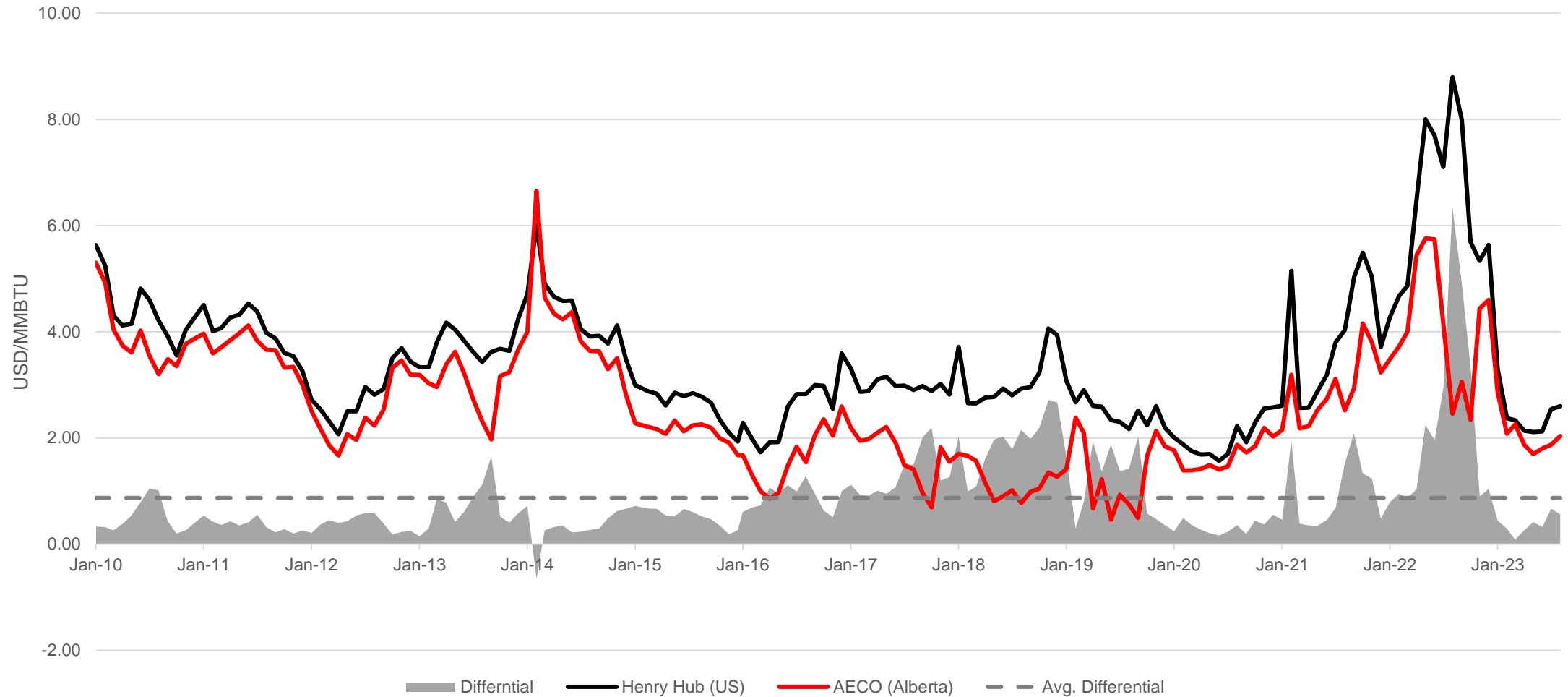
# NATURAL GAS

## Abundant and available



# NATURAL GAS

## Low cost and secure



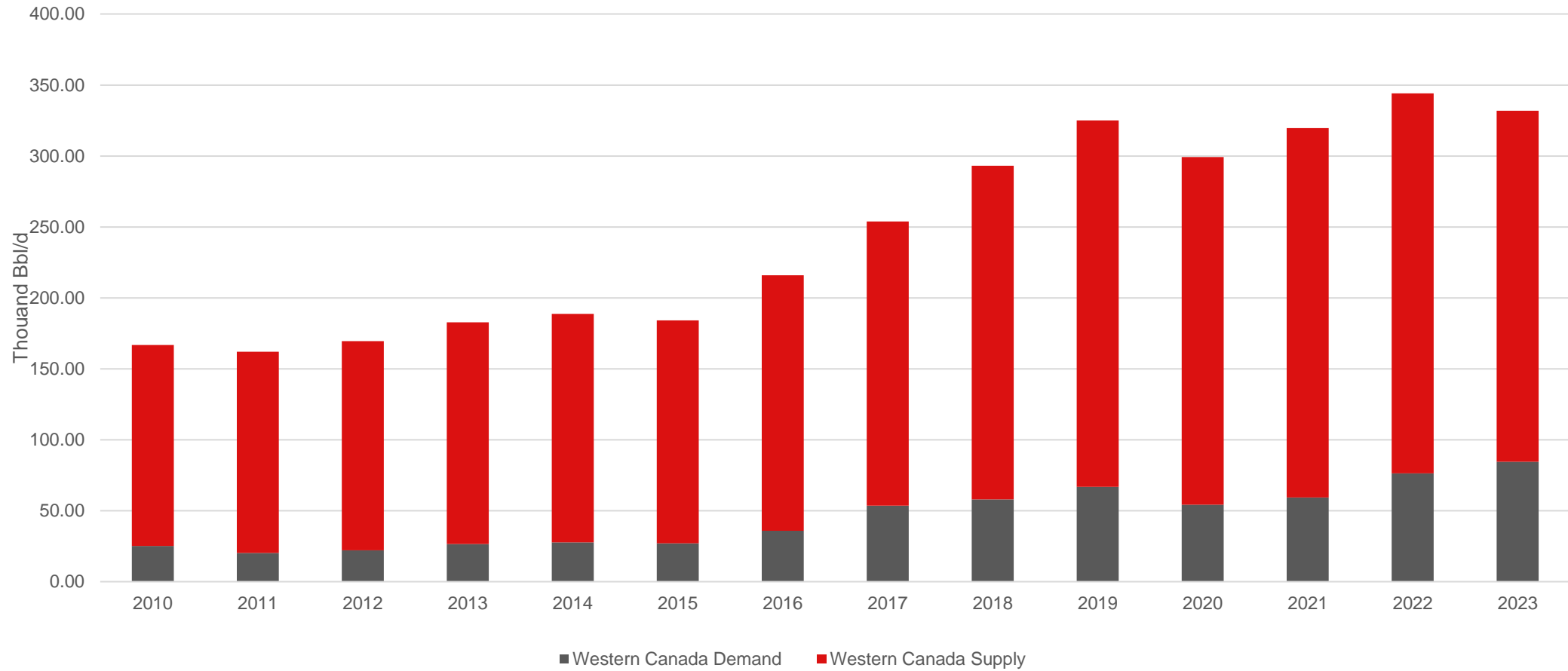
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# PROPANE

## Abundant and available



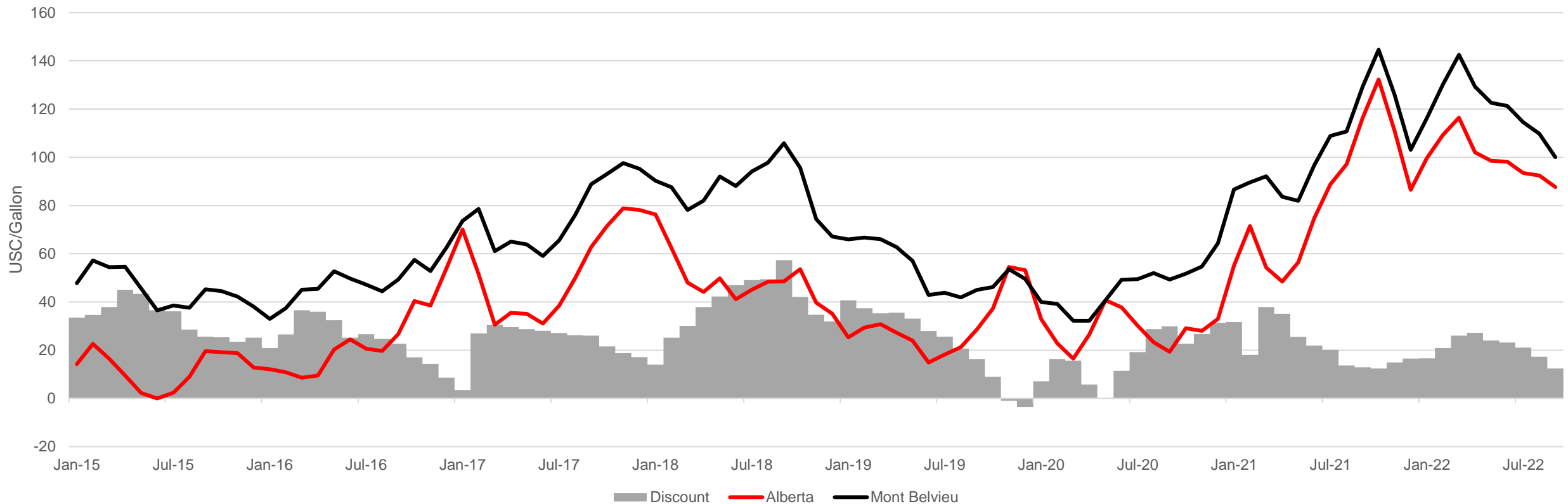
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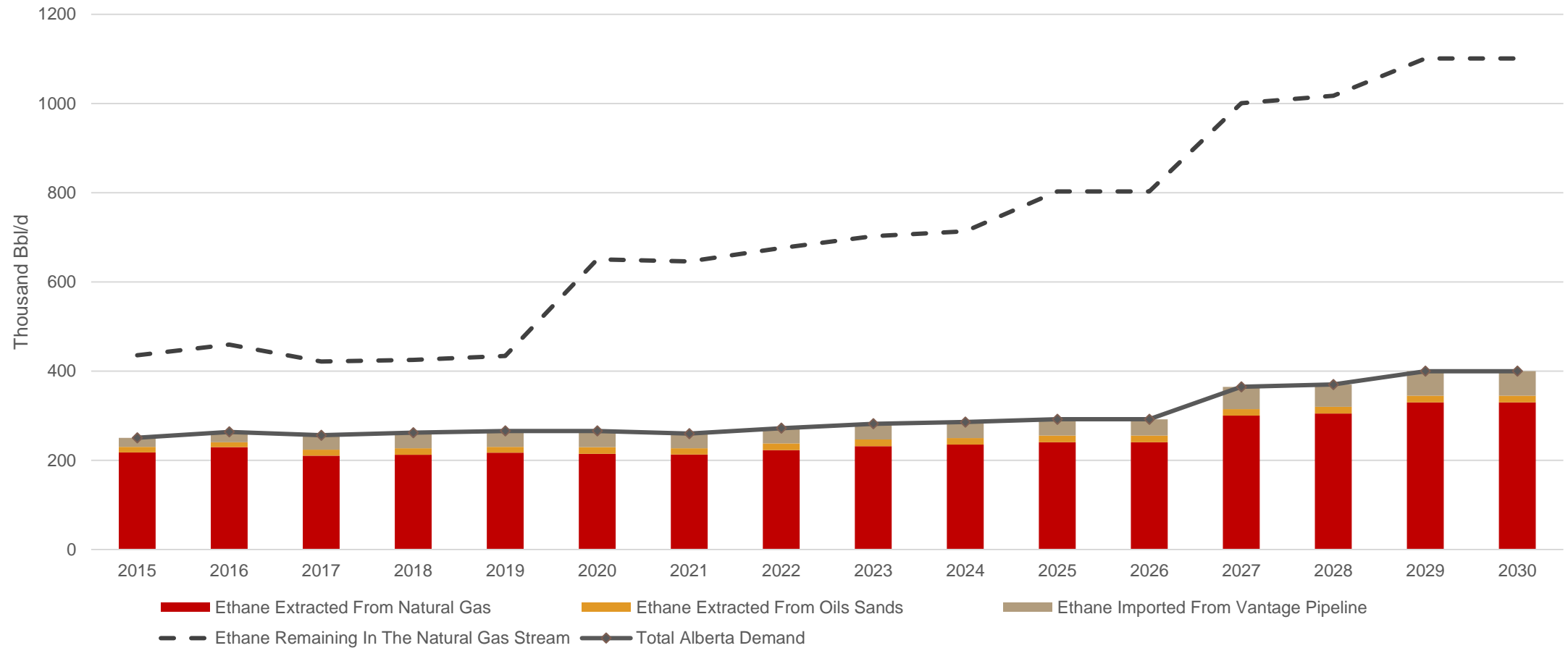
# PROPANE

## Low cost and secure



# ETHANE

## Opportunity for Petrochemical Expansion



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# EXISTING CCUS INFRASTRUCTURE

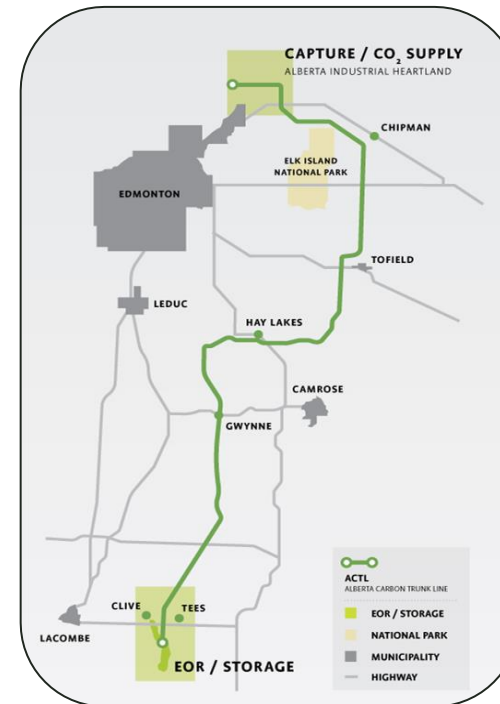


- A world-class capture project designed to capture and store over 1 million tonnes of CO<sub>2</sub> per year
- Quest began operations in 2015 and, to date, has captured and stored more than 4 million tonnes of CO<sub>2</sub>

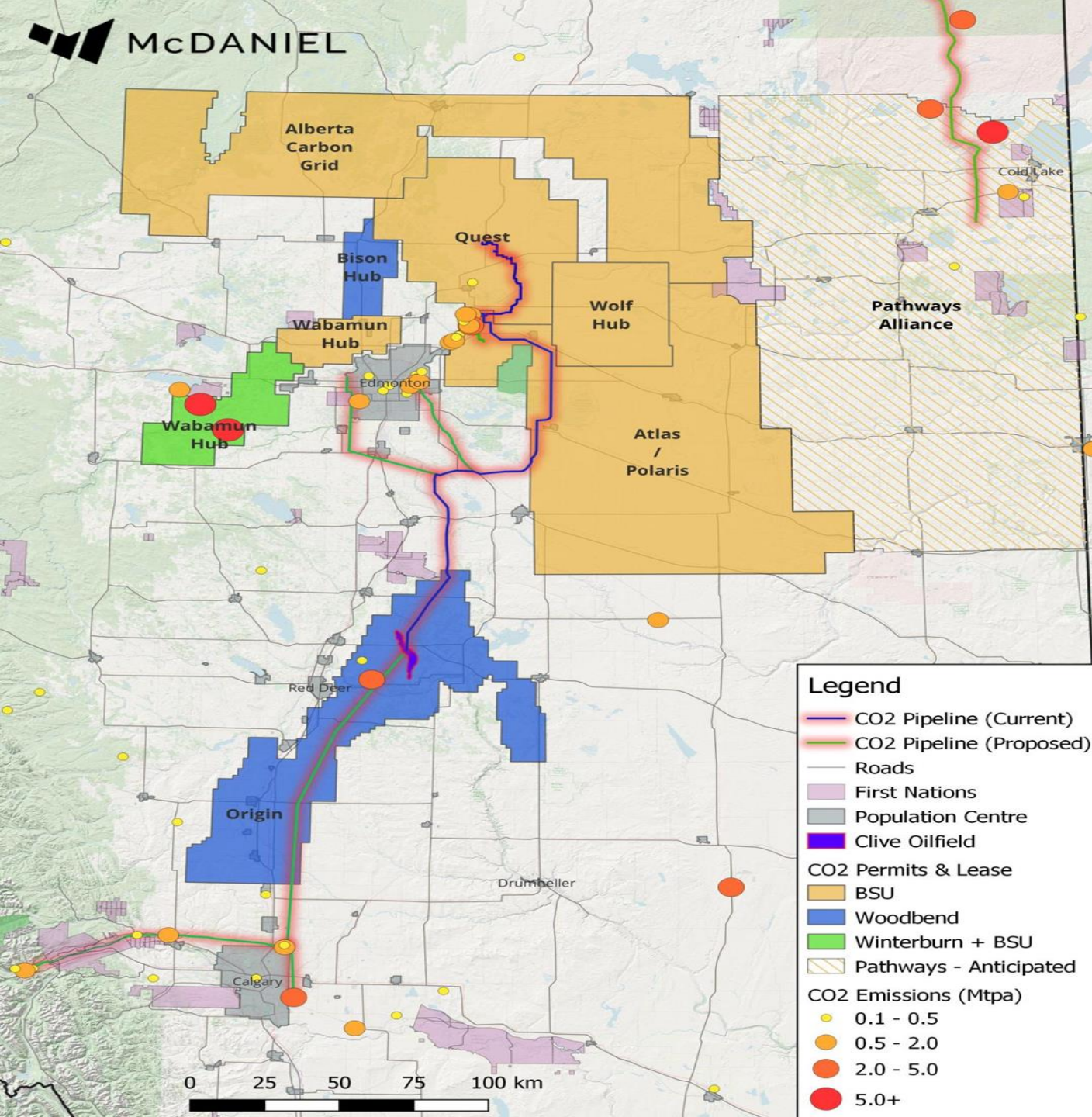
QUEST



ACTL



- Alberta's first large-scale carbon capture utilization and storage project
- Consists of a 240-kilometre pipeline collecting and transporting up to 14.6 million tonnes per year of CO<sub>2</sub> for enhanced oil recovery and storage



## NEW CCUS OPERATORS

Alberta has moved to a regulated sequestration market when certain parties have been granted the exclusive right to sequester CO2 emissions in Alberta.

- This allows new emitters to work with a designated number of companies that have proven technical proficiency in sequestering emissions.
- New emitters have options to negotiate the commercial value of their emissions and cost of transportation / sequestration services
- In AIH, 6 companies/partnerships were granted exclusivity to sequester emissions:

Atlas Carbon – Shell Canada, ATCO, & Suncor

Meadowlark – Bison Low Carbon Ventures

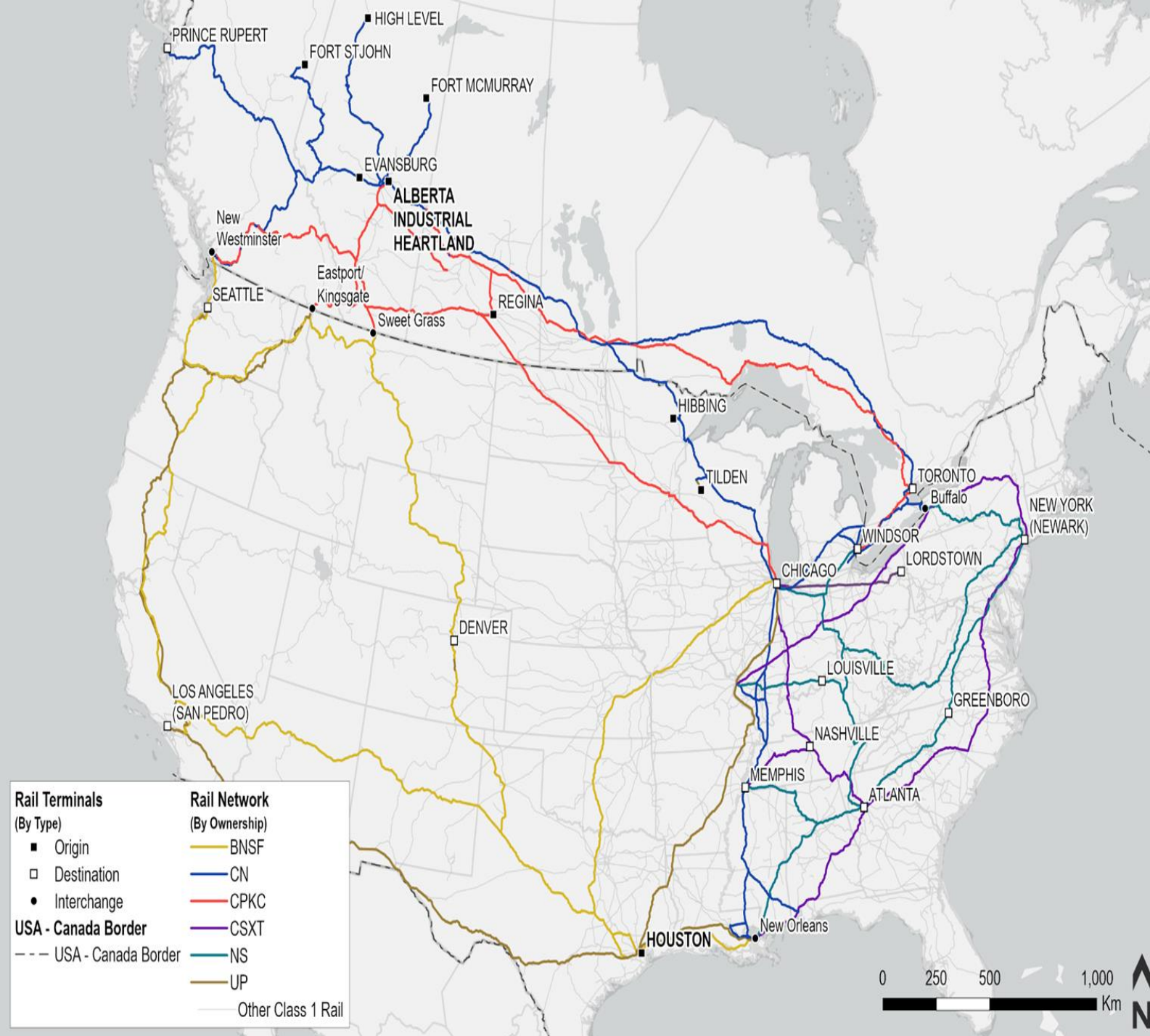
Alberta Carbon Grid – Pembina & TC Energy

Wabamun Hub – Enbridge

Wolf Hub – Wolf Midstream

Origin Hub – Enhance Energy





## TIER 1 RAIL IN AIH

- Canada's two class 1 railroads, the Canadian National (CN) and the Canadian Pacific Kansas City (CPKC), provide direct and indirect access to North American markets and export ports on three coasts.

## THIRD PARTY SERVICE

- Alberta rail services offer seamless intermodal transport solutions through its network of professional partners.
- Existing third party rail service providers in AIH can provide efficient and economical supply chain services to industries.

# GLOBAL MARKET ACCESS

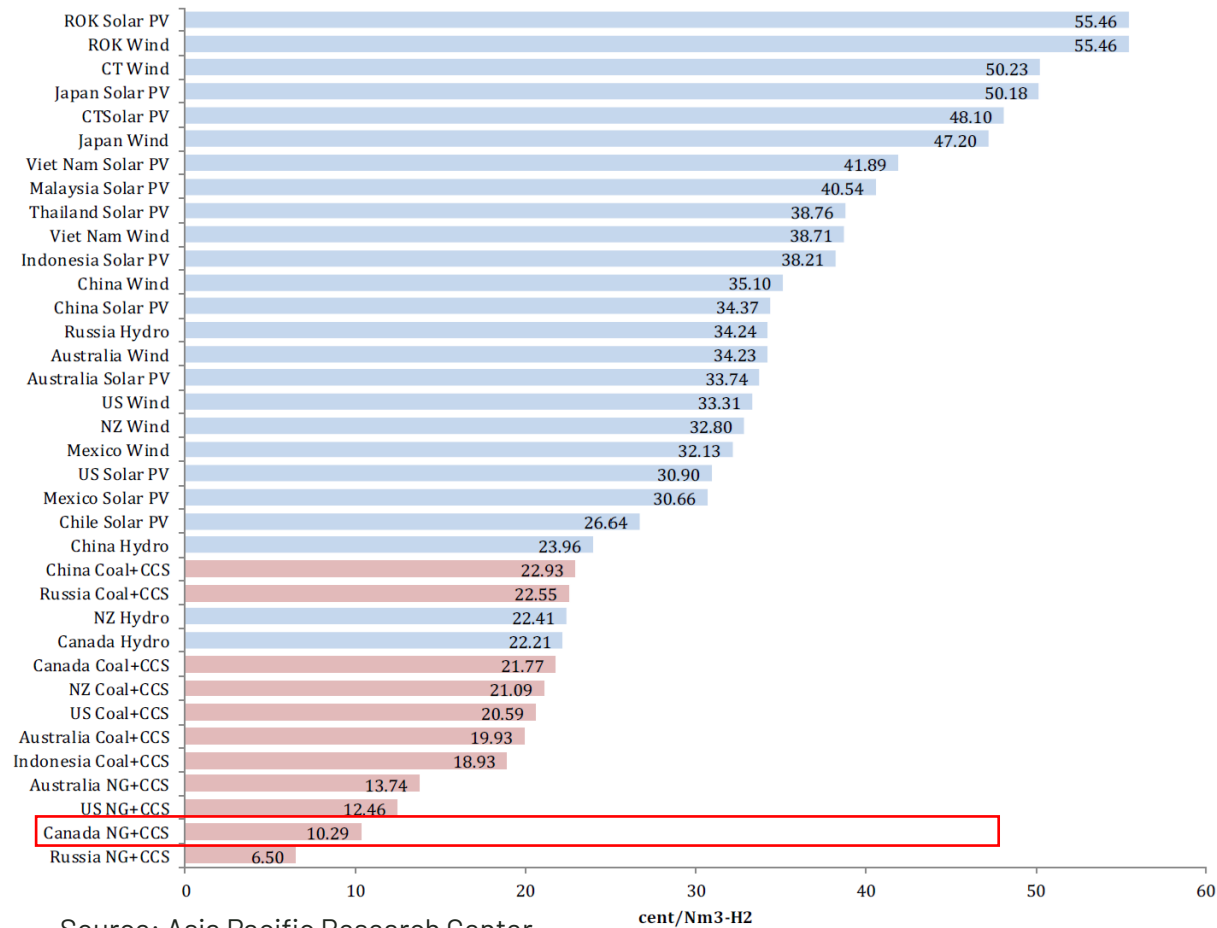
## Gateway to Asia



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# LOW-COST HYDROGEN



# COMPREHENSIVE GOVERNMENT SUPPORT

## Federal Incentives

Strategic Innovation Fund – Funding envelopes for strategic projects

Scientific Research and Experimental Design – Tax credits for research and design in Canada

Accelerated Capital Cost Allowance – Accelerated depreciation for manufacturing projects

Clean Technology Investment Tax Credit (ITC) – 30% refundable tax credit for ‘clean technologies’

Carbon Capture Utilization and Storage ITC – Refundable tax credits for CCUS; 60% for DAC, 50% for carbon capture (other than from ambient air), and 37.5% for carbon transpiration, sequestration, and utilization

Clean Hydrogen ITC – 15-40% refundable tax credit for projects that produce hydrogen (based on CI)

Clean Technology ITC – 30% refundable tax credit for investments to be used in clean technology manufacturing and critical mineral and processing.

## Provincial Incentives

Alberta Petrochemical Incentive Program – Grants for 12% of capital cost of petrochemical projects

Alberta Carbon Capture Incentive Program – Grants for 12% of capital cost of carbon capture projects

TIER – Heavy emitter regulation in which new facilities can generate monetizable carbon credits for facilities which have better emission profiles than stated benchmarks

## Municipal incentives

Heartland Incentive Program – Property tax abatement up to 2.5% of capital cost of project

Designated Industrial Zone – Regulatory streamlining for projects in Alberta’s Industrial Heartland (fast tracked environmental permitting in region)