

# ARC

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## ARC Energy Charts

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### Chart Water

6 US inflation

10 Alberta e

25 Internati

38 US oil dr

39 Cdn Aug

Spot WTI Crude  
\$US/B

87.71

Spot Henry Hub  
\$US/MMBtu

8.25

Spot AESO Electricity  
\$/MWh

282.2

EUA Emissions (ICE)  
EUR/Tonne

71.4

1

### Broad Equity Markets

Daily Index Values; January 2020 to Present

Indexed to  
Jan 2020

150

140

130

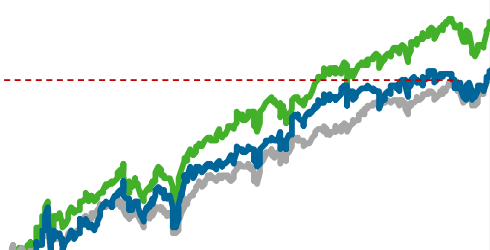
120

110

100

90

— MSCI Global ESG Index  
— S&P/TSX Composite  
— Dow Jones



Broad market indices are one the many vital signs measuring the health of the economy. Energy demand is a function of economic health.

Source: Bloomberg, ARC Financial Corp.

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### CI

Daily Index

Indexed to  
Jan 2020

400

300

200

The performance of global against each other.

Source: Bloomberg, ARC F

3

### Oil & Gas Service and Midstream Indices

Daily Index Values; January 2020 to Present

4

### Oil a

Daily Index

5

## Bloomberg Commodity Index

Daily Index Values; January 2020 to Present

Index Value

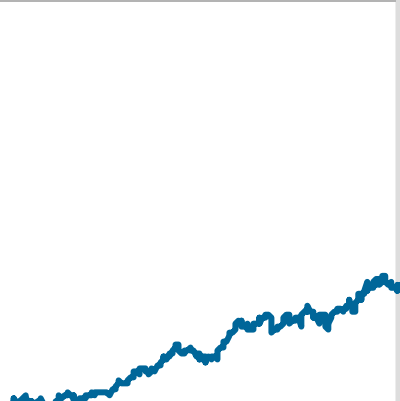
160

140

120

100

80



BCOM is a widely tracked benchmark for the commodities market. It is composed of 23 exchange-traded contracts on physical commodities.

Source: Bloomberg

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## 5-Yr, 5-Yr Forward

Daily

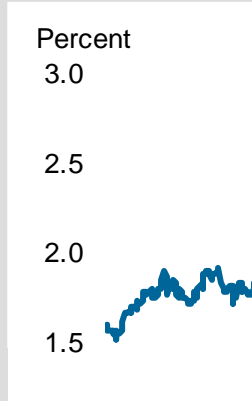
Percent

3.0

2.5

2.0

1.5



This series is a measure of the 5-year forward rate of interest for a period that begins five years from the start date.

Source: Federal Reserve Board

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## CO2e Emissions: ICE EUA Futures Contract

Daily; January 2020 to Present

EUR/Tonne

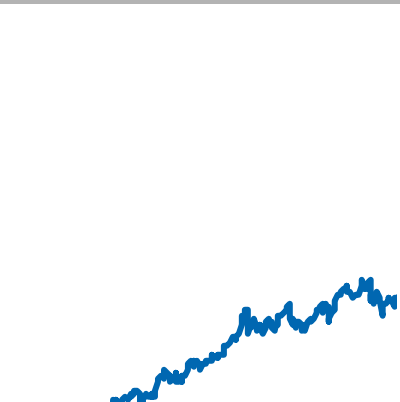
120

100

80

60

40



EU Allowances (EUA) are carbon credits equivalent to one tonne of CO<sub>2</sub> used in the European Union Emissions Trading Scheme (EU ETS).

Source: Bloomberg

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## Trend

Mauna Loa Wee

Parts per Million

424

422

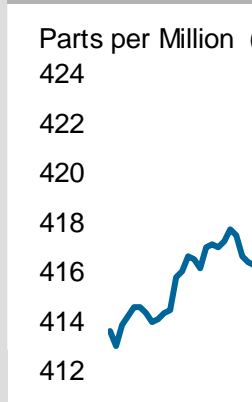
420

418

416

414

412



The carbon dioxide data on Mauna Loa is a direct measurement of CO<sub>2</sub> concentration in the atmosphere.

Source: NOAA

## 11 WTI Crude Oil Price and Differential to Brent

Near-Month WTI and Brent Differential; Rolling 12-Month History

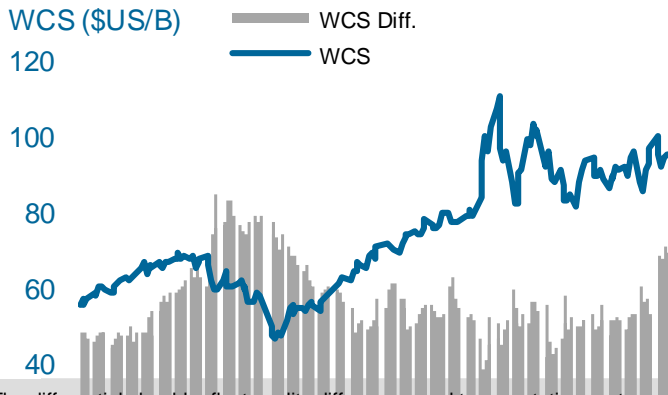


North American crude oil prices can sometimes disconnect from global prices depending on regional supply and demand dynamics.

Source: Bloomberg

## 13 CDN Heavy Oil Price Differential to WTI

Western Canadian Select (WCS) Differential; Rolling 12-Month History



The differential should reflect quality differences and transportation costs. Greater discounts can result from infrastructure or refinery outages.

Source: Bloomberg

## 12 US West Texas Intermediate

West Texas Intermediate

WTI \$US/B



Forward prices for WTI are shown against the same contracts.

Source: Bloomberg

## 14 CDN Light Crude Oil

WTI and Edmonton

Edm. Light (\$US/B)



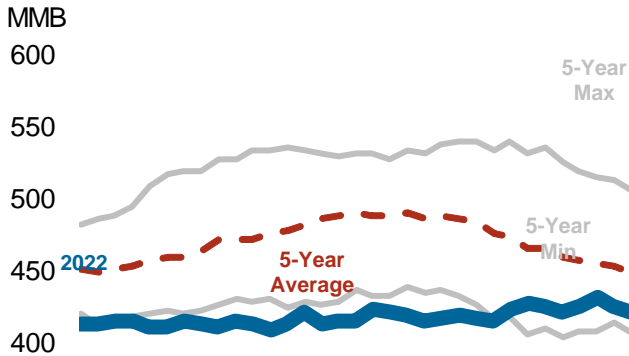
The differential should reflect quality differences and transportation costs. Greater discounts can result from infrastructure or refinery outages.

Source: Bloomberg

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## US Crude Oil Stocks

Historical Range and Current Year Levels



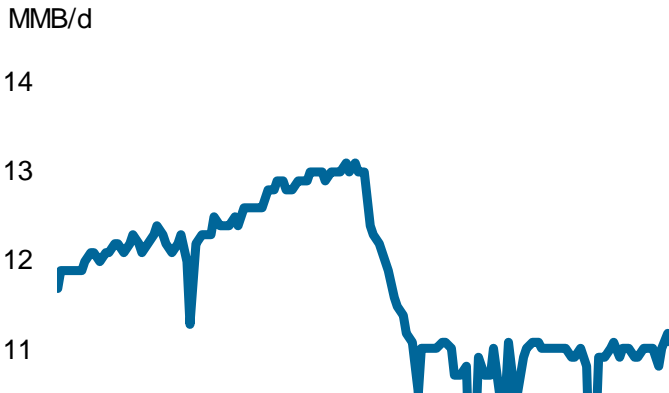
US crude oil stock levels can affect crude oil prices. Stock levels for the current year are represented by the blue line.

Source: U.S. Energy Information Administration

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## US Weekly Crude Oil Production

US Field Production of Crude Oil; 2019 to Present



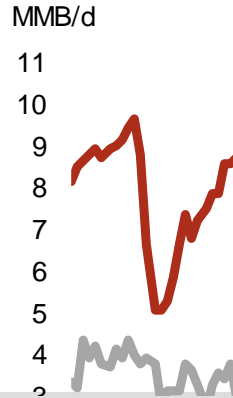
Weekly production is modelled by the EIA. It is less accurate than monthly reported numbers, but is instructive of up to date changes.

Source: U.S. Energy Information Administration

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## US Petroleum

Top Three Products



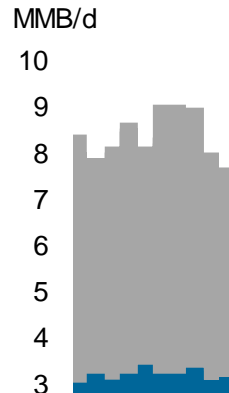
Gasoline, diesel and jet fuel are the top three petroleum products in the US.

Source: U.S. Energy Information Administration

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## US Weekly

Crude Oil Imports

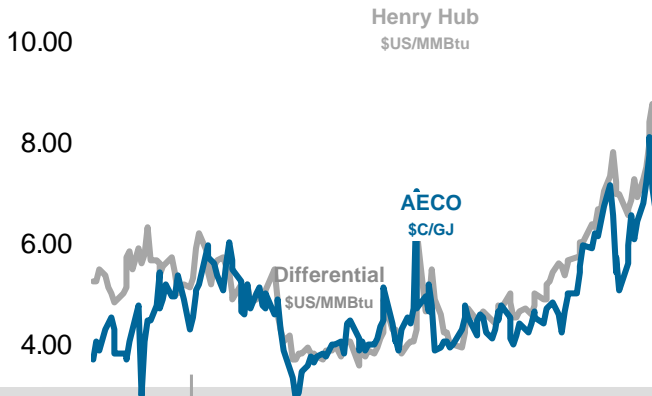


Crude oil imports from Canada and Mexico are the top two sources of US crude oil imports.

Source: U.S. Energy Information Administration

## 23 Near-Month North American Natural Gas Prices

Daily Prices; Rolling 12-Month History

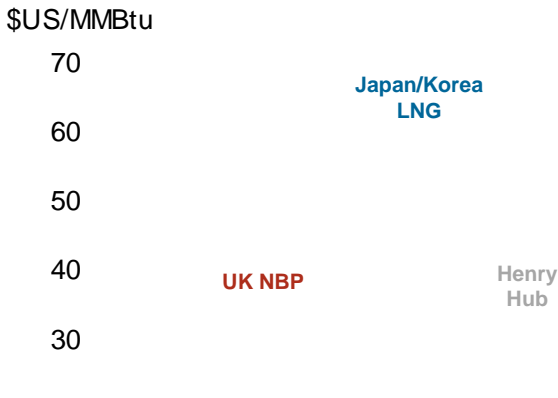


Near-month prices at AECO track Henry Hub prices, the exchange rate and the cost of transportation. Local factors can also affect price.

Source: Bloomberg

## 25 Global Natural Gas Prices

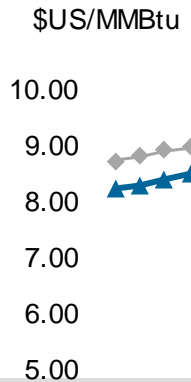
Japan/Korea, UK NBP, Henry Hub; 10-Day Moving Average Price



International natural gas prices strongly impact the economics of proposed LNG projects.

## 24 US

Nymex

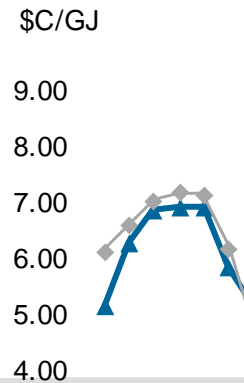


Forward contract prices are against the curve one month

Source: Bloomberg

## 26 CDN

AECO Hub (B

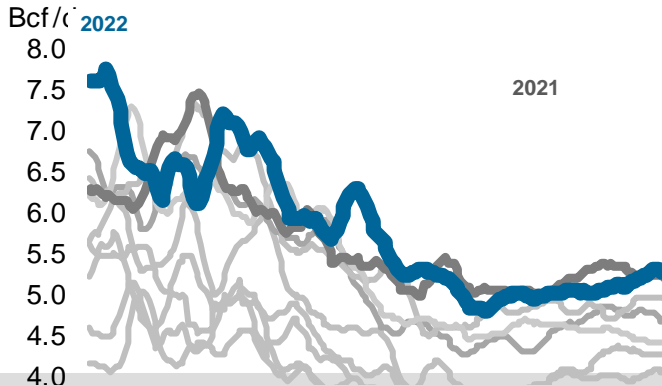


AECO forward prices mimicking

29

## Alberta Natural Gas Demand

TransCanada Intra-AB Deliveries; Current Year and Historical Tracks



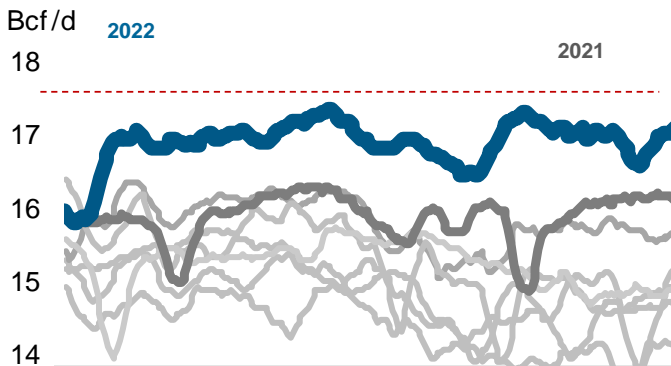
Alberta natural gas demand has grown steadily in recent years, largely driven by new oil sands demand and power generation projects.

Source: TransCanada Pipelines

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## Daily Western CDN Production

Estimated Using Major Pipeline Receipts

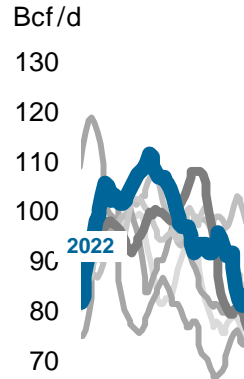


This includes receipts on the TCPL, Alliance, WestCoast and TransGas pipelines.

30

## US Domestic

Daily; Historical



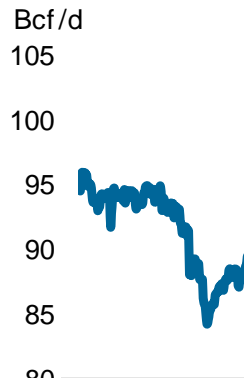
Domestic US demand fluctuates significantly, and weather is an important driver.

Source: Bloomberg

32

## Total US D

D



US production started ramping up over the year.

### 35 Canada: Weekly Gas Drilling Activity

Baker Hughes Drilling Rig Count; Current Year and Historical Range

# of Rigs

175

150

125

100

75

2022

5-Year  
Max

5-Year  
Average

5-Year  
Min

Unlike US drilling activity, Canadian rigs are dispatched seasonally. Capital allocation by operators is driven by views of future oil and gas prices.

Source: Baker Hughes

### 36 United States

Baker Hughes

# of Gas Rigs - P

180

160

140

120

100

80

60

Tracking US gas drilling by  
of US gas supply and growth

Source: Baker Hughes

### 37 Canada: Weekly Oil Drilling Activity

Baker Hughes Drilling Rig Count; Current Year and Historical Range

# of Rigs

250

200

150

100

2022

5-Year  
Max

5-Year  
Average

5-Year  
Min

Unlike US drilling activity, Canadian rigs are dispatched seasonally. Capital allocation by operators is driven by views of future oil and gas prices.

Source: Baker Hughes

### 38 United States

Baker Hughes

# of Oil Rigs - P

800

700

600

500

400

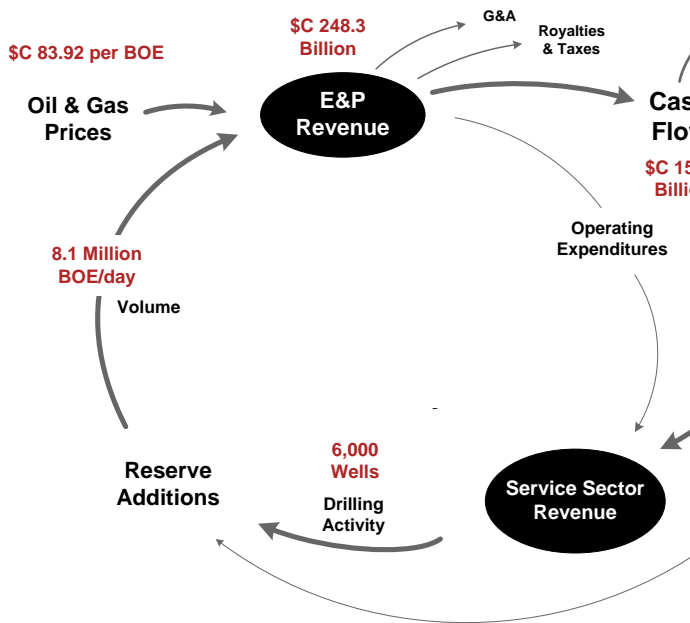
300

Tracking US oil drilling by  
US oil supply and growth

Source: Baker Hughes

## Estimated Capital Flow in the Canadian Oil and Gas Economy

Industry Revenue, Cash Flow, Reinvestment, Drilling Activity and Production



Price			Production Volume			
Average Price	Edmonton Par	AECO	Conv. Liquids	Bitumen + Synthetic	Natural Gas	Total Volume
\$/BOE	\$C/B	\$C/GJ	Average MBOE/d	Average MBOE/d	MBOE/d (@ 6:1)	MBOE/d (@ 6:1)