1 Broad Equity Markets
Indexed to 12 Months Ago

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

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

Source: Bloomberg, ARC Financial Corp.

2 Oil and Gas E&P Indices
Indexed to 12 Months Ago

- ARC Junior E&P Index
- S&P 500 E&P
- S&P/TSX E&P Index

Performance of Canadian and US oil & gas equities are compared against each other.

Source: Bloomberg, ARC Financial Corp.

3 Oil & Gas Service and Midstream Indices
Indexed to 12 Months Ago

- Philadelphia Service Index
- PSAC Canadian Index
- S&P/TSX Oil & Gas Storage & Transportation Index

The performance of Canadian oil and gas service and midstream equities are plotted in tandem with the corresponding US Oilfield index.

Source: Bloomberg, Petroleum Services Association of Canada

4 Canadian Currency Exchange
Indexed to 12 Months Ago

- $US/$Cdn

Much of Canada’s oil and gas production is sold in US dollars. As such, the exchange rate significantly impacts corporate revenues and profits.

Source: Bloomberg

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Daily infection rates and active cases of COVID-19 will determine reopening and recovery of the world’s largest economy.  
Source: Worldometer

Traffic congestion levels show a real-time picture of the number of vehicles on the road; an indication of gasoline demand and economic recovery.  
Source: TomTom International BV

Jobless claims are an important leading indicator on the state of the employment situation and the health of the economy.  
Source: US Labor Department
North American crude oil prices can sometimes disconnect from global prices depending on regional supply and demand dynamics. Source: Bloomberg

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

Natural gas liquids have become critical contributors to producer’s cash flow. Prices are influenced by the price of oil as well as local supply and demand. Source: Bloomberg, ARC Financial Corp.

Long contracts take the position that WTI oil price will increase, while short contracts expect a decline. Source: Bloomberg, U.S. Commodity Futures Trading Commission
**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

**US Refined Product Stocks**
Historical Range and Current Year Levels

- Total stocks of gasoline, diesel and jet fuel are shown. Stock levels for the current year are represented by the blue line.
- Source: U.S. Energy Information Administration

**US Weekly Refinery Utilization Rates (%)**
Historical Range and Current Year Levels

- Refinery utilization rates change the supply of refined products, impacting price. Utilization for the current year is blue.
- Source: U.S. Energy Information Administration

**US Petroleum Product Consumption**
Top Three Product Categories; Year to Date

- Gasoline, diesel and jet fuel consumption represent the majority of oil use in the US.
- Source: U.S. Energy Information Administration

**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

**US Oil Drilling Activity**
Baker Hughes Oil Rig Counts; 2019 to Present

- Tracking US oil drilling by major play provides insight into the composition of US oil supply and growth trends.
- Source: Baker Hughes
**23 US Crude Oil Imports**  
Weekly Data; 2016 to Present

Crude oil imports from Canada are taking market share from overseas imports.  
*Source: U.S. Energy Information Administration*

**24 US Exports of Crude Oil and Refined Products**  
Weekly Data; 2016 to Present

The US exports more refined products than crude oil. With the rapid growth of tight oil, most export growth should come from crude oil exports.  
*Source: U.S. Energy Information Administration*

**25 Total US Oil Production**  
Monthly; 2010 to Present

The advancement of drilling and completion methods is increasing US crude oil production.  
*Source: Bloomberg, U.S. Energy Information Administration*

**26 OPEC and Russian Oil Production**  
Monthly; Rolling 60-Month History

OPEC’s production levels relative to its sustainable and spare capacity influences global crude prices. Note: scale has been expanded.  
*Source: Petroleum Intelligence Weekly*

**27 Alberta Oil Production**  
Monthly; Conventional and Oil Sands

Most of Canada’s oil production comes from Alberta; split between oil sands and conventional production.  
*Source: Alberta Energy Regulator*

**28 OECD Total Industry Oil Stocks**  
Monthly; 2012 to Present

OECD stock levels can affect crude oil prices.  
*Source: International Energy Agency*
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

Long contracts take the position that Henry Hub gas price will increase, while short contracts expect a decline.

Source: U.S. Commodity Futures Trading Commission

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

Source: Bloomberg, Japanese Ministry of Economy, Trade and Industry

This graph illustrates when it may be economic to begin coal-gas switching in power generation. Average power plant efficiencies are assumed.

Source: Bloomberg
Closing Spot Prices at North American Natural Gas Hubs
Superimposed on Relative Pipeline Flows

North America has an integrated natural gas market. Prices are determined by regional supply and demand, and pipeline flows.
Source: Bloomberg

All prices in $US/MMBtu

Pipeline Flows Out of Western Canada
Daily; Historical Tracks and Current Year Levels

The ability of gas producers to move gas out of the WCSB to eastern markets and the US is a major factor in local natural gas prices.
Source: Various Pipeline Companies

US Natural Gas Exports – Excluding Canada
Daily; Historical Tracks and Current Year Levels

Between exports to Mexico and LNG shipments, the US is growing as a natural gas exporter. Robust US supply growth has driven this trend.
Source: S&P Global Platts
Alberta natural gas demand has grown steadily in recent years, largely driven by new oil sands demand and power generation projects. 

Source: TransCanada Pipelines

Total US demand fluctuates in the summer and during the winter as weather is an important driver of consumption.

Source: S&P Global Platts

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

Source: Various Pipeline Companies

US production started ramping up in late 2007 and continues to grow year over year.

Source: S&P Global Platts

Canada’s natural gas storage level provides a good metric if the country is well stocked. Abnormally high or low storage can affect the basis.

Source: Bloomberg

The EIA reports changes in US natural gas inventories held in underground storage facilities on a weekly basis.

Source: U.S. Energy Information Administration
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

Tracking US gas drilling by major play provides insight into the composition of US gas supply and growth trends.

Source: Baker Hughes

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

Tracking total US rigs provides insight into oil field services demand and total industry activity.

Source: Baker Hughes

Total rig-releases for exploratory and development wells are highlighted in this chart. Rig releases for the current year are shown in red.

Source: Daily Oil Bulletin/JWN

Total wells drilled in US Drilling Productivity Report regions are shown. These are the most active onshore US plays.

Source: EIA