1. **Broad Equity Markets Year-to-Date**
   - Daily Index Values; Rolling 12-Month History
   - Indexed to 12 Months Ago
   - Sources: Bloomberg, ARC Financial Corp.

2. **Performance of Oil and Gas Equities Year-to-Date**
   - Daily Index Values; Rolling 12-Month History
   - Indexed to 12 Months Ago
   - Sources: Bloomberg, ARC Financial Corp.

3. **Oil & Gas Service Equities Year-to-Date**
   - Daily Index Values; Rolling 12-Month History
   - Indexed to 12 Months Ago
   - Source: Bloomberg, Petroleum Services Association of Canada

4. **Canadian Currency Exchange**
   - Daily Close Values; Rolling 24-Month History
   - Sources: Bloomberg

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**Chart Watch**

- The Fed announced a rate cut last Wednesday
- WTI oil fell ~$5/B on trade war escalation
- US oil production fell by 26 kB/d in May
- Henry Hub has fallen to its lowest since 2016
- PSAC cut its 2019 drilling forecast to 5.100

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**Performance of Oil and Gas Equities**

Broad market indices are one the many vital signs measuring the health of the economy. Energy demand is a function of economic health. Performance of Canadian and US oil & gas equities are compared against each other. Much of Canada’s oil and gas production is sold in US dollars. As such, the exchange rate significantly impacts corporate revenues and profits.

The performance of Canadian oil and gas service equities are plotted in tandem with the corresponding US index. The performance of Canadian oil and gas service equities are compared against each other. Much of Canada’s oil and gas production is sold in US dollars. As such, the exchange rate significantly impacts corporate revenues and profits.

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**Spot WTI Crude** | **Edmonton Light** | **Spot Henry Hub**
---|---|---
$54.69$ | $52.84$ | $2.02$

**Spot AECO** | **Spot AECO Basis** | **Currency**
---|---|---
$1.14$ | $1.11$ | $0.7557$

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Please see **Advisories and Disclaimers** at the end of the publication for important cautionary advisory and disclaimer language.
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*

Rail is expected to grow as the pipelines have hit the limit for moving additional barrels of crude oil, and supply is still growing. 
*Source: National Energy Board*
Most of Canada’s oil production comes from Alberta; split between oil sands and conventional production.

Source: Alberta Energy Regulator

Negative numbers indicate a global crude shortfall, while positive numbers indicate an oversupply.

Source: International Energy Agency

Crude oil imports from Canada are taking market share from overseas imports.

Source: U.S. Energy Information Administration

OPEC’s production levels relative to its sustainable and spare capacity influences global crude prices.

Source: Petroleum Intelligence Weekly

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

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
Tracking US oil drilling by major play provides insight into the composition of US oil supply and growth trends. 
Source: Baker Hughes

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.
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

24 US Natural Gas Futures
Nymex (Henry Hub) 2019 to 2021

Forward contract prices are plotted against months in the calendar year. Years are distinguished by color and symbol coding.
Source: Bloomberg

25 Long and Short Contracts – Henry Hub
Managed Money - Futures

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

26 Canadian Natural Gas Futures
AECO Hub (Bloomberg Estimate) 2019 to 2021

AECO forward prices mimic Henry Hub futures minus a differential.
Source: Bloomberg

27 Global Natural Gas Prices
Japanese LNG, UK NBP, Henry Hub; Average Monthly Prices

International natural gas prices strongly impact the economics of proposed LNG projects.
Source: Bloomberg, Japanese Ministry of Economy, Trade and Industry

28 US Coal and Natural Gas Power Generation Cost
 Converted to a $/MWh Equivalent

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 Physical Volumes Traded

All prices in $US/MMBtu

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

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: Bentek
Weekly natural gas demand is directly tied to the weather. The current year is in dark blue.
Source: National Oceanic and Atmospheric Administration

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

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

Weekly gas storage reports provide a snapshot of supply and demand. Current year changes are represented by the blue line.
Source: U.S. Energy Information Administration

The EIA reports changes in US natural gas inventories held in underground storage facilities on a weekly basis.
Source: U.S. Energy Information Administration
Alberta natural gas demand has grown steadily in recent years, largely driven by new oil sands demand and power generation projects. Source: TransCanada Pipelines

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

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

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

Land prices are an important component of F&D costs. In Alberta, sales of petroleum and natural gas rights are held every two weeks. Source: Alberta Department of Energy

Relative year-over-year drilling activity is highlighted in this chart.Cumulative well completions for the current year are shown in blue. Source: Daily Oil Bulletin/JWN
**Estimated Capital Flow in the Canadian Oil and Gas Economy for 2019**

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

- **$40.23** per BOE
- **$111.3** Billion
- **$47.1** Billion
- **$31.5** Billion

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**Canadian Industry Statistics: Historical Data and Forecast**

### Canadian Industry Metrics

<table>
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<tr>
<th>Price</th>
<th>Production Volume</th>
<th>Capital Inflow</th>
<th>Reinvestment</th>
<th>Drilling</th>
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