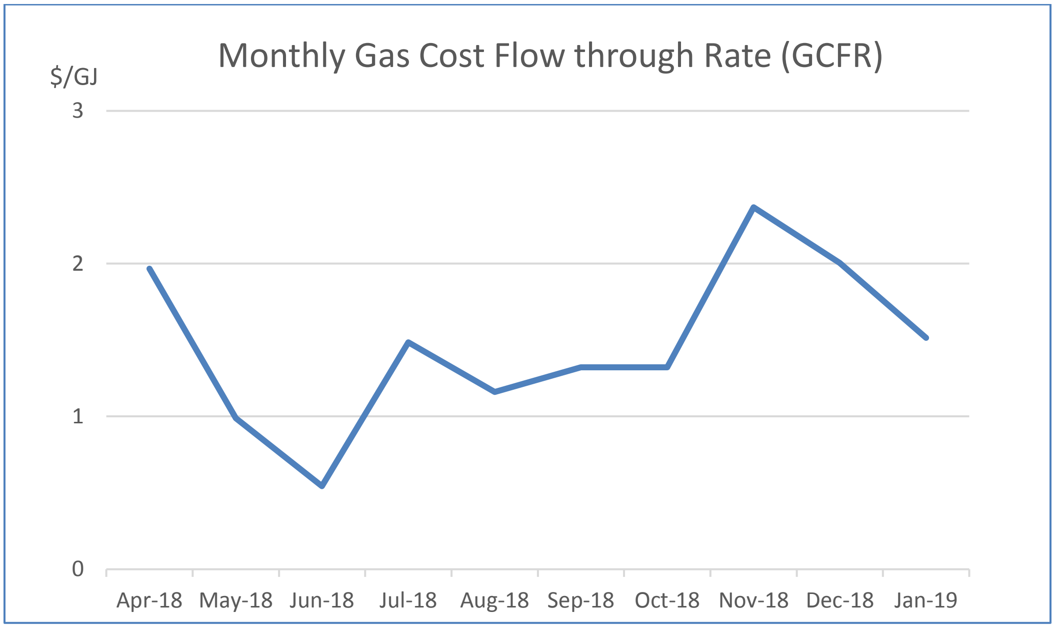
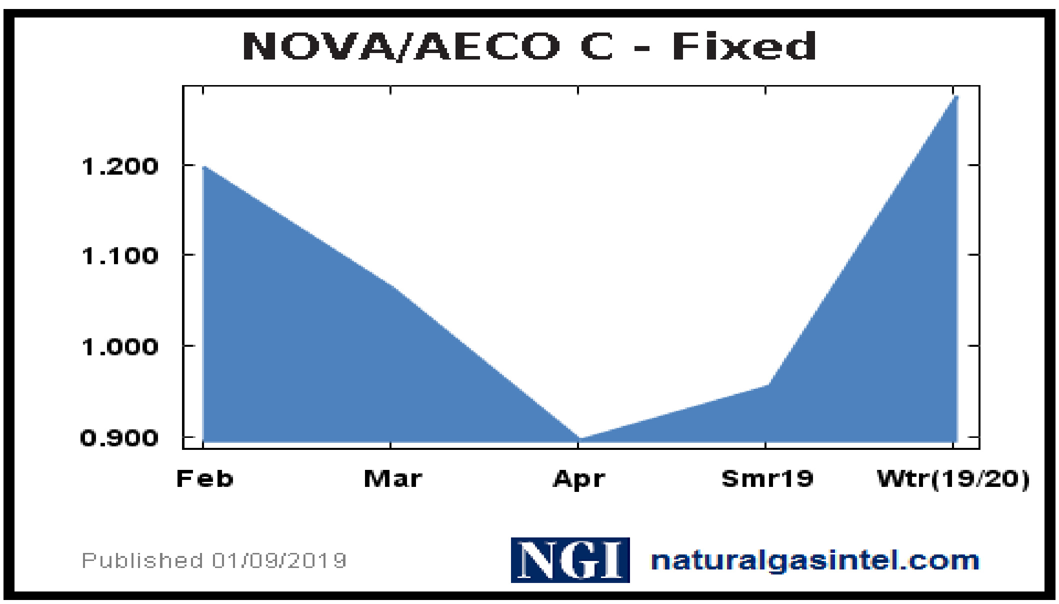
ENERGY PRICES AND MARKETS

Natural Gas

The January gas cost flow-through rate (GCFR) was $1.52/GJ.



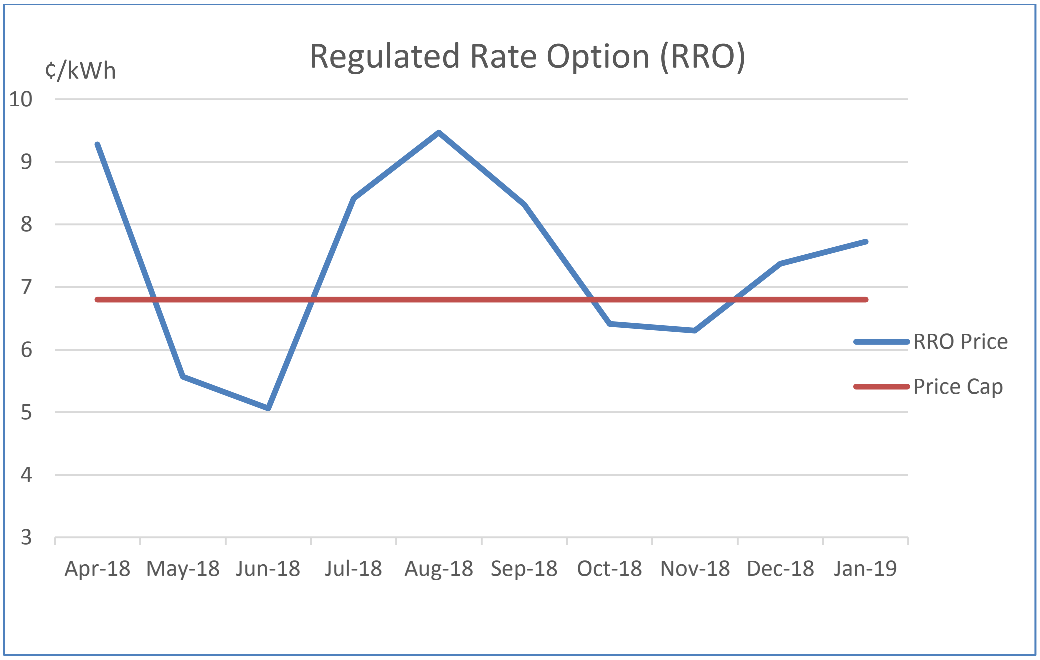
Natural Gas prices are forecast to remain low throughout 2019. The recent forward curve for Alberta natural gas shows prices trending around $1/GJ out to 2020.



The natural gas franchise fee forecast developed by Regulatory staff in June 2018 used a price forecast of $1.65/GJ for 2019. As actual gas price is a component of the natural gas franchise fees received by The City, Regulatory will continue to monitor the forecast price changes in 2019.

Electricity

The ENMAX regulated rate option (RRO) in January was $77.270/MWh (7.73¢ per kWh).



The RRO has surpassed the Government of Alberta rate cap (which took effect June 1, 2017) of 6.8 cents six times beginning in April of 2018. The provincial government protects RRO customers at 6.8 cents per kWh and pays the difference using funds collected through its Carbon Levy. Customers with a retail contract such as ENMAX's Easymax will not benefit from the rate cap. The cost to Alberta taxpayers of the rate cap thus far is estimated at $35 million.

For reference the prices for all of December 2017 averaged $2.2 cents/kWh. Power prices are forecast to remain strong in 2019 as a tight supply cushion will continue to promote price volatility.

Oil Price Spread

The Notice of Motion, Standing Up for Canada's Responsible Energy Industry (C2018-1448), submitted to the 2018 December 17 regular meeting of Council, directed Administration to develop a strategy for The City to advocate for improved market access for Canada's responsible energy industry. This information is provided as background on the oil price discount.

Western Canada Select (WCS) is the largest commercial stream of heavy oil in Canada. It is comprised of;

- Non-upgraded bitumen produced from the oil sands in Alberta.
- Twenty (20) heavy conventional oil streams produced in Western Canada.
- Upgraded bitumen, also known as light synthetic crude oil (SCO) usually from mining facilities.
- Diluent or condensate to meet pipeline viscosity requirements for transportation.

West Texas Intermediate (WTI) stands as one of the three primary benchmarks (WTI, Brent, Dubai) frequently used as a reference price for buyers and sellers of oil around the world. Similar to WCS, WTI is a blend of several U.S. domestic streams of sweet light crude oils.

Production of most of the WTI streams is in landlocked regions of the United States, and collection is at facilities in Cushing, Oklahoma. Subsequently, the oil is shipped via pipeline to the Midwest and Gulf Coast for refining, sale and transport to global markets.

The differential between WCS and WTI is caused by;

- increased production from Canadian energy companies
- limited pipeline capacity to ship WCS to market
- a lack of access to international markets other than the United States

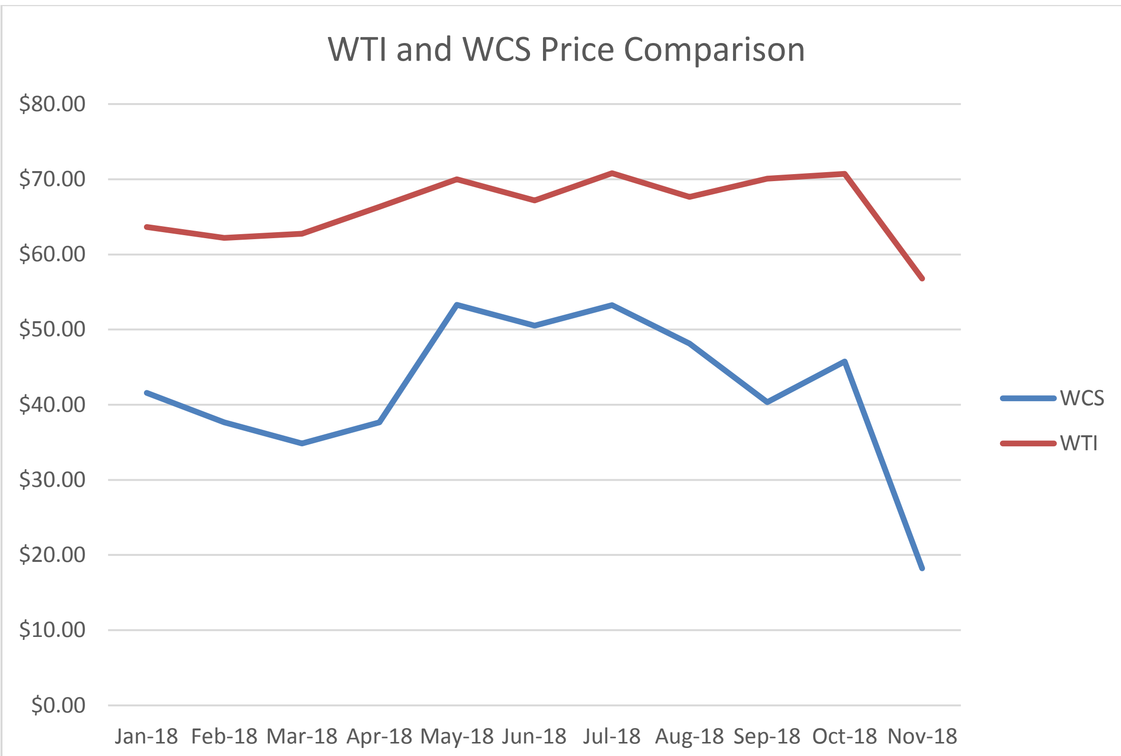


*Chart data from www.gljpc.com/price-charts

The United States buys around 98 per cent of the oil Canada sells. Canadian producers have had to sell their product at a vastly discounted price. This has resulted in financial loss for both governments and many oil companies. Interestingly, oil companies such as Imperial Oil, which are able to refine WCS oil and sell the refined product, have benefitted from the large differential.

The Alberta Government has estimated that with the recent record setting price differential (USD $55 as of October 12th, 2018), the lost revenue is between $80 and $100 million a day.

The lack of pipeline infrastructure connecting the east and the west, has resulted in eastern Canada importing oil from Saudi Arabia, Africa and Venezuela. Canadian companies have spent $20.9 billion (dollar figure from StatsCanada) on Saudi crude between 2007 and 2017.

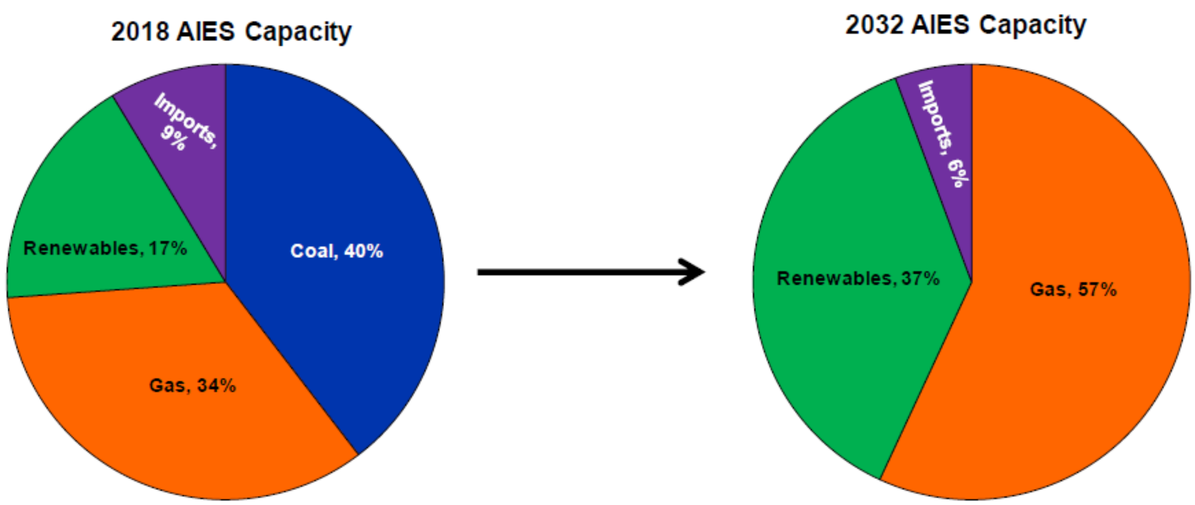
UTILITY REGULATION

Capacity Market Design and Implementation

The Alberta Electric System Operator (AESO) has finalized the capacity market design. Industry stakeholders have had their last opportunity to review the design and provide feedback to the AESO. Further stakeholder consultations are taking place to develop ISO Rules to implement the capacity market, contracts and legislation as required. AESO is also hosting consultations on the associated ISO Tariff for allocating the costs of capacity procurement.

Beyond the uncertainty over how the transition to the capacity market will ultimately play out, the future of Alberta's existing generation fleet is also uncertain. Owners of coal-fired units are actively considering re-firing their boilers to burn natural gas instead of coal. Although low natural gas price expectations and recently released proposed federal regulations favor conversion, the outcome of the 2019 provincial election and potential changes to carbon policies could alter the economics of these conversions.

The plan to phase out coal is aggressive as coal currently accounts for 40% of the Alberta Integrated Electricity System (AIES) capacity. The current target for complete coal shutdown by 2032 will require a large increase in the amount of natural gas and renewable electricity production coming on-line.



Federal Government scaling back Carbon Pricing plan

At the beginning of August 2018 the federal government indicated it would be adjusting its plan to price carbon after hearing concerns from industry about how the carbon tax would affect their ability to compete.

Environment and Climate Change Canada issued new guidelines in 2018 that lower the percentage of emissions on which large polluters will have to pay the carbon tax and offer bigger breaks for energy-intensive companies that face tough international competition. The federal government still intends to impose its carbon tax in Ontario, as well as in Saskatchewan and, either in whole or in part, in those provinces that do not meet Ottawa's stringent standards.

Draft regulations in January 2019 had companies paying the carbon tax on roughly 30% of their emissions, with a benchmark set at 70% of their industry's average emissions performance. The new rules to start in January 2019 will lower that requirement to pay tax on 20% of emissions (e.g., mining, potash, pulp & paper, oil refineries), and some particularly vulnerable industries (cement, steel making, lime and nitrogen) will pay tax on roughly 10% of their greenhouse gas emissions.

The decision to raise the cutoff point for carbon taxes will have the biggest impact on companies that are already more efficient than the industry average, or are close to the average. They should see their tax bill decline substantially, and some of the most efficient could find themselves paying no carbon tax at all.

The Alberta Carbon pricing scheme assigns an output based "benchmark" for all competitors in the same industry. Electricity generation employs a "good as best gas" output-based allocation of 0.370 tonnes of GHG emissions per megawatt hour. Many of the established benchmarks for other industries in Alberta are designed to reflect a benchmark of 80% of production-weighted average emissions intensity for their sector. This analysis suggests that the Alberta carbon pricing scheme for large emitters is more onerous than that being proposed by the federal government. The federal government carbon pricing plan therefore has no impact on Alberta at this time.

On December 20, 2018 the Federal Government released the *Policy Regarding Voluntary Participation in the Output-Based Pricing System.* The overall aim is to minimize the loss of competitiveness and carbon leakage risks from the exposure of a sector to the federal fuel charge while retaining a price signal on carbon pollution that creates an incentive to reduce greenhouse gas emissions. The Federal Government is requesting comments from stakeholders on the proposed policy by February 15, 2019. This change will weaken the carbon pricing plan as large emitters will seek to have their business fall under the voluntary participation umbrella.

Regardless of the above, the federal fuel charge comes into effect on April 1, 2019 for provinces which do not currently have a carbon tax (Ontario, New Brunswick, Saskatchewan, and Manitoba). Starting April 1, 2019 these provinces will be subject to this new tax which is estimated to increase the cost of gasoline by 4.42 cents per litre and an additional $8 per month for natural gas used by the average household. The federal carbon pricing regulatory regime remains in a state of flux. As 2019 is an election year further changes or adjustments to this policy may be forthcoming. Regulatory will continue to follow the federal carbon pricing issue as it unfolds.