

# TransCanada Power Market Update

December 2018

## Forward Prices Table

	Flat 7x24 (\$/MWh)	AB - 6x16 On Peak (\$/MWh)	AB - Off-Peak (\$/MWh)	AECO Gas (\$/GJ)	Heat Rate
<b>BOM</b>	\$49.00	\$59.78	\$37.58	\$1.60	30.63
<b>Jan</b>	\$63.00	\$80.01	\$44.10	\$1.61	39.13
<b>Feb-Dec 19</b>	\$54.82	\$66.88	\$39.47	\$1.15	47.67
<b>2019</b>	\$55.50	\$68.27	\$38.30	\$1.17	47.44
<b>2020</b>	\$48.25	\$58.38	\$34.26	\$1.29	37.40
<b>2021</b>	\$45.50	\$53.24	\$32.31	\$1.53	29.74
<b>2022</b>	\$43.50	\$49.16	\$30.89	\$1.67	26.05

All prices are indicative as of indicative of December 3, 2018. For Firm power price quotes please contact TransCanada's Power Marketing team. See contacts on the last page.

## Alberta Market Recap – November 2018

November 2018 settled at \$59.21/MWh representing an 136% increase from November 2017 settle of \$25.03/MWh and a 7% decrease from last month's settle of \$63.48/MWh.

In comparing November 2018 against October 2018, it's worth noting how much of an impact the highest priced hours in each month contributed to the 7x24 average settle in each respective month. The average for the bottom 90% of the hours was actually 4/MWh lower in October at \$45.41/MWh than in November at \$49.82/MWh, yet October's settle was 7% higher. October's 7x24 settle was 7% higher than November's due to the make-up of the top 10% of hours. In November the top 10% of hours averaged \$143.88/MWh ranging from \$91.01/MWh to \$685.78/MWh. Comparably in October the top 10% of hours averaged \$224.66/MWh ranging from \$92.29/MWh to \$941.18/MWh. In November only 1 hour settled over \$500/MWh versus in October, 8 hours settled over \$500/MWh including 3 hours that settled over \$900/MWh.

In November both the lowest and highest daily settles occurred at the beginning of the month, on November 4th and 5th respectively. The daily settle low came in at \$33.15/MWh while the high came in at \$101.64/MWh. This dramatic increase in the day-over-day settle occurred due to two key factors; decreasing wind generation and a coal unit coming offline. On November 4th wind generation stayed above 1,000 MWs for most of the on-peak hours, while on the 5th wind generation remained under 500 MW averaging 202 MWs for the on-peak. In addition to low wind generation on the 5th, Keephills #1 went on outage just before noon removing 395 MW from baseload generation with minimal wind generation to backstop the load obligation.

Average Alberta Internal Load (AIL) for the month was 10,159 MW, with peak load hitting 11,081 MW on November 16 18:00 MT. This is on par with last year's November average load of 10,030 MW and peak load of 11,098 MW.

The weighted average temperature across the province for November 2018 averaged -3.0° Celsius, a small increase from last November where the average weighted temperature was -6.0° Celsius. This increase year over year can be attributed to the 10 days in Alberta this month which averaged above 0° Celsius versus November 2017 where only 3 days averaged above 0° Celsius. Although temperatures moderated from this year, snow fall in Calgary for November was the same as last year with 27 cm of snow.

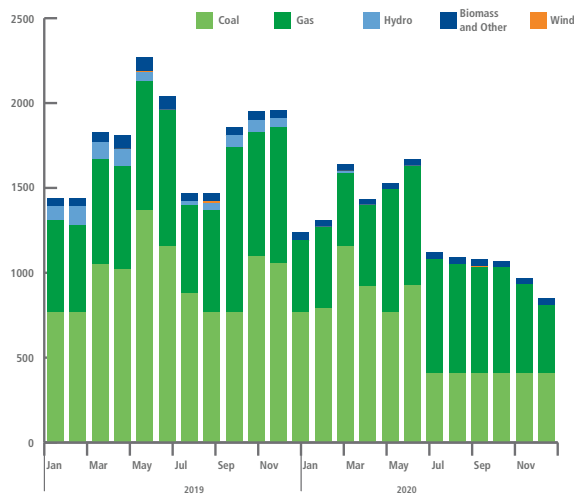
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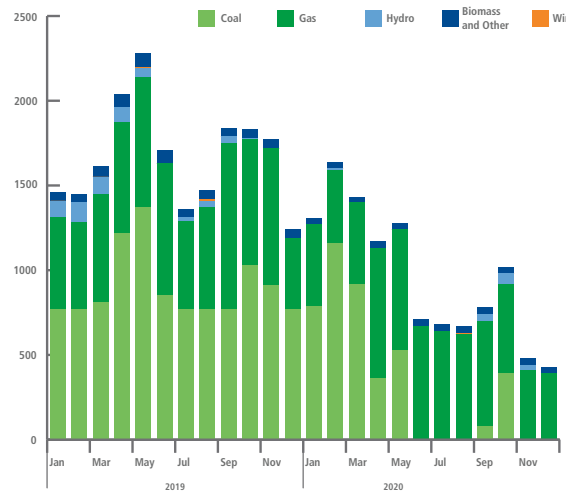
December 2018

## Monthly Outages

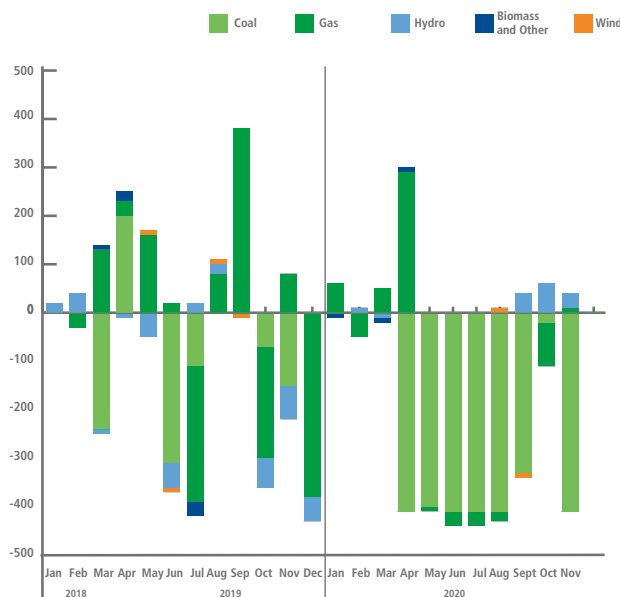
AESO Monthly Outages (as of November 2018)



AESO Monthly Outages (as of December 2018)



Month-over-Month Change in Outages  
(December 2018 over November 2018)



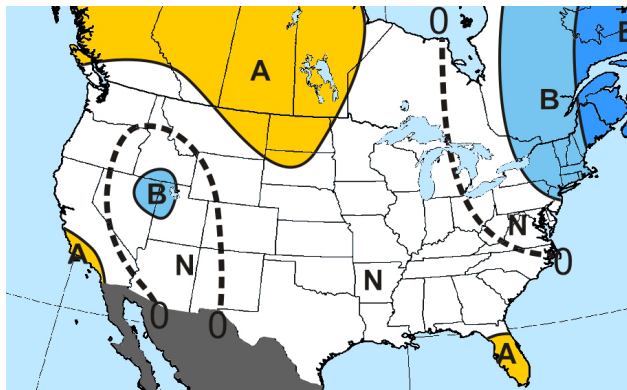
There have been some significant changes in the AESO monthly outage schedule from last month. For 2019, the updated monthly outage schedule shows a cumulative reduction in coal outages by 680 MWs, gas outages by 40 MWs and hydro outages by 200 MWs. In 2020, the schedule has been updated to show a reduction in coal outages by 2800 MWs, and additional gas and hydro outages of 120 MWs and 130 MWs respectively. It is noteworthy that from April-August 2020 the AESO has removed 410 MW of coal outages from each month, possibly indicating that the mothballing of a Sundance unit may be postponed to a later date.

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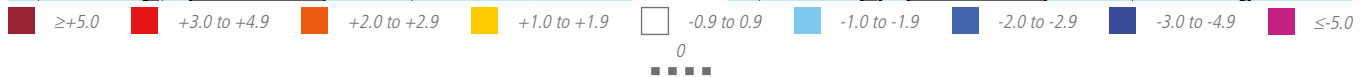
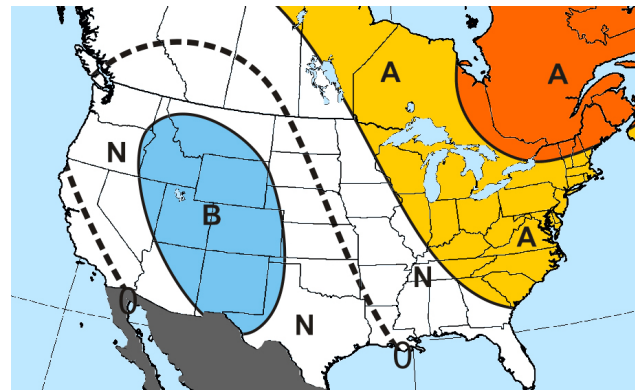
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## Radiant Solutions 30-60 Day Outlook

December 2018



January 2019



According to Radiant Solutions, November featured widespread temperatures below normal across the South-Eastern side of the continent and above normal temperatures across the South-Western side. The cool temperatures in the East contributed to placed November 2018 as the 3rd coldest November since 2000 in North America. On a smaller scale, temperatures in Alberta moderated from initial projections, with the warmest day falling on November 14th with a weighted average temperature of 4.4° C, while the coldest day fell on the 16th with the weighted average temperature of -12.1° C.

Radiant Solutions Outlook for December 2018 projects a warmer than normal front across the North-Western parts of North America. This would be a nice holiday treat as last December's temperatures across the province stayed below -25° C from the 25th to the 31st of the month, reaching as low as -39° C in Fort McMurray on December 26th, 2017.

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