

# TransCanada Power Market Update

August 2017

## Forward Prices Table

	Flat 7x24 (\$/MWh)	AB - 6x16 On Peak (\$/MWh)	AB - Off-Peak (\$/MWh)	AECO Gas (\$/GJ)	Heat Rate
<b>BOM</b>	\$28.00	\$37.80	\$14.00	\$1.79	15.6
<b>September</b>	\$26.50	\$35.78	\$13.25	\$1.87	14.2
<b>BOY</b>	\$28.75	\$38.81	\$14.38	\$2.14	13.4
<b>2018</b>	\$44.00	\$59.40	\$22.00	\$2.32	19.0
<b>2019</b>	\$45.00	\$60.75	\$22.50	\$2.27	19.8
<b>2020</b>	\$45.75	\$61.76	\$22.88	\$2.25	20.3

*All prices are indicative as of indicative of August 1, 2017. For Firm power price quotes please contact TransCanada's Power Marketing team. See contacts on the last page.*

## Alberta Market Recap – July 2017

July was an eventful month in terms of weather, starting with B.C.'s raging wildfires causing the province to call their first State of Emergency since 2003. The smoke was pushed through most of Central Alberta creating several Air Quality Advisories by Alberta Health Services. Tornado warnings were also given by Environment Canada, with one non-mesocyclone tornado reported in Calgary on July 10th which produced high winds and debris.

On July 7th, Alberta saw several record breaking temperatures in places such as Lethbridge, Banff, Cardston, Claresholm, Pincher Creek and Vauxhall. Although Calgary did not reach a new record temperature, it did hit 33 degrees Celsius which was only 0.9 degrees away from its previous record high temperature which was reached in 1896. So far this is the hottest recorded summer we've seen in over a hundred years, as reported by Dave Phillips, the senior climatologist with Environment Canada.

The persistence of these higher temperatures contributed greatly to the highest monthly average settle of 2017 at \$26.96/MWh. There were a total six hours that settled between the \$50.00/MWh and \$100.00/MWh mark in July and eight hours that settled above the \$100.00/MWh mark. For the first time in what seems like a century three hours actually settled at the market cap of \$999.99/MWh on July 26th between HE 17 and HE 19. These maximum priced hours were a result of very warm temperatures, virtually no wind generation, increased demand, and approximately 1,770 MW of coal generation offline at once. This is the first time Alberta saw prices settling at \$999.99 for at least an hour since July 30, 2014. To put this price increase into perspective, Alberta's July electricity was 61% above the settle price in June and 48% higher than July 2016. Alberta has not seen monthly electricity settle this high since August 2015.

As is typically the case in a deregulated market (but hasn't been for a long time in Alberta) higher prices are highly correlated to higher demand and that was the case in July. On average, Alberta Internal Load (AIL) for July was 9,371 MW ranging from a minimum of 8,024 MW to a maximum of 10,852 MW. This average demand was approximately a 6% higher than the averages for both June 2017 and July 2016, which averaged 8,844 MW. On Thursday July 27th, Alberta set a new summer electricity demand peak of 10,852 MW, as a result of scorching hot temperatures. This peak was the second record demand set in July, surpassing the previous peak that was set earlier in the month on July 9, 2017.

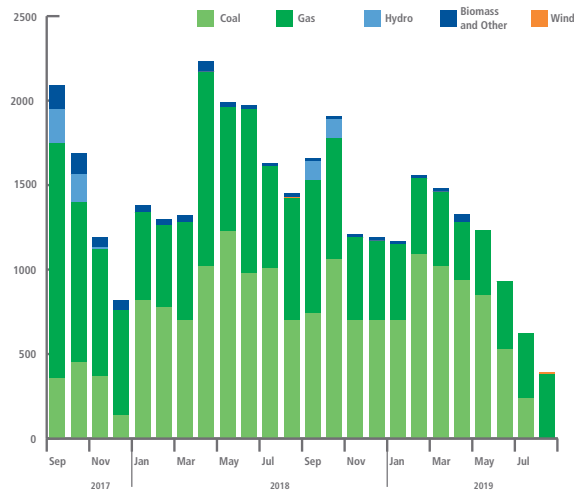
<sup>1</sup>FORWARD-LOOKING INFORMATION This publication contains certain information that is forward looking and is intended to provide useful and timely information to Alberta power market participants. All information is from sources deemed reliable and is subject to errors and omissions which we believe to be correct, however, assume no responsibility for. The words "anticipate", "forecast", "expect", "believe", "may", "should", "estimate", "plan" or other similar words are used to identify such forward-looking information. All forward-looking statements reflect TransCanada's beliefs and assumptions based on information available at the time of this publication and are not guarantees of future performance. By their nature, forward-looking statements are subject to various assumptions, risks and uncertainties which could cause actual outcomes to differ materially from the anticipated results or expectations expressed or implied in such statements. Readers are cautioned against placing undue reliance on forward-looking information and not to use future-oriented information or financial outlooks for anything other than their intended purpose. TransCanada undertakes no obligation to update or revise any forward-looking information except as required by law.

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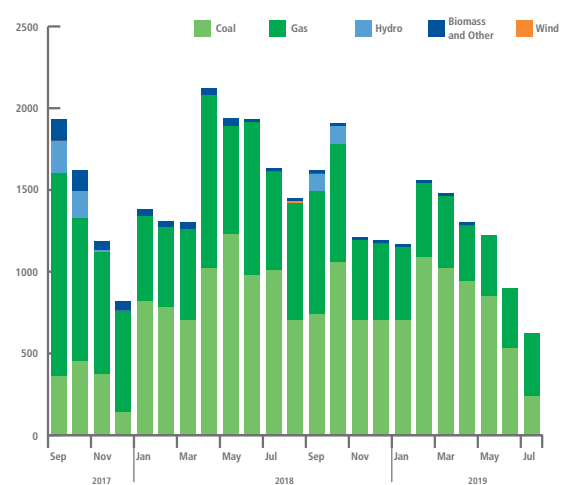
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## Monthly Outages

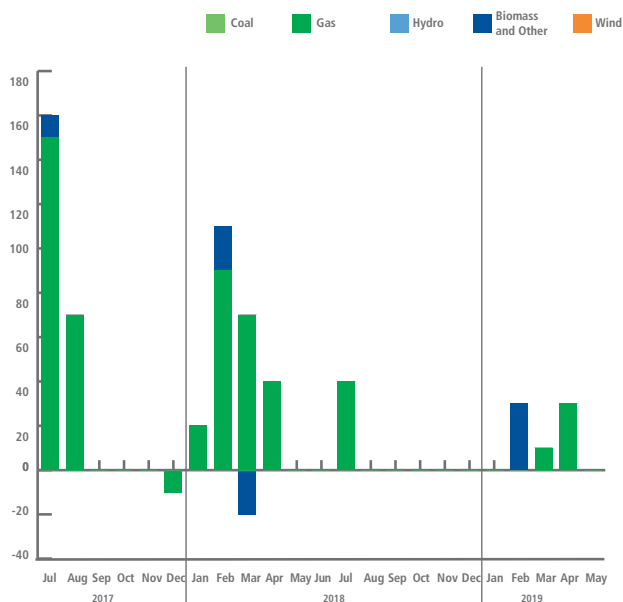
AESO Monthly Outages (as of August 1, 2017)



AESO Monthly Outages (as of July 6, 2017)



Month-over-Month Change in Outages  
(August 2017 over July 2017)



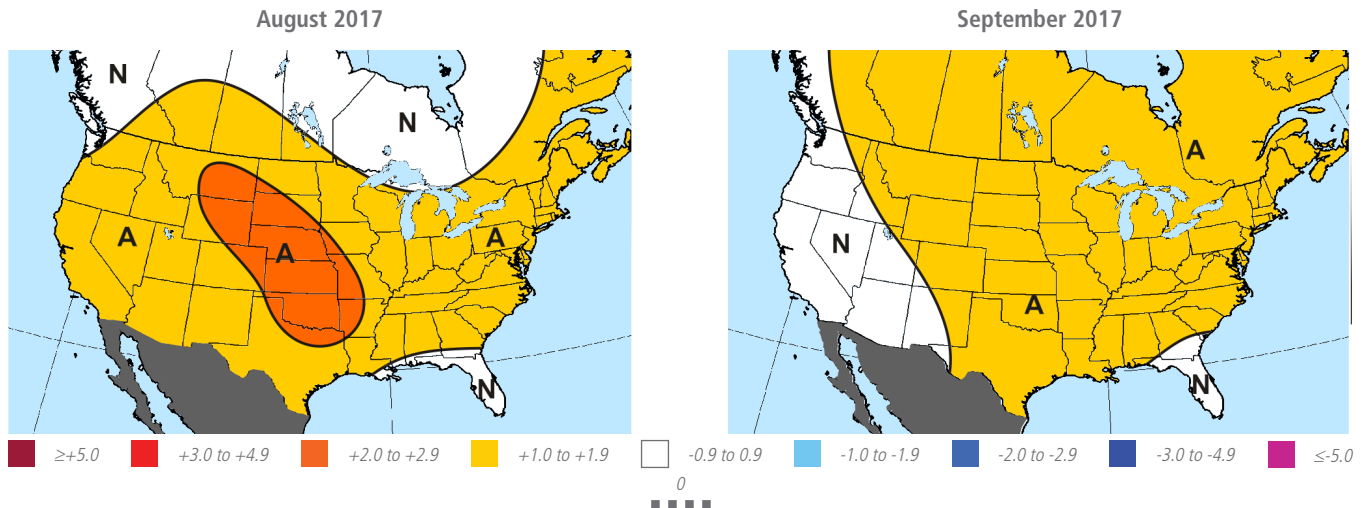
As seen in the Month-Over-Month Change in Outages graph, not many changes have occurred since last month. It appears that the most significant change in outages is in September, 2017, where approximately 160 MW of generation has been added to the outage mix. This change accounts for primarily gas outages with smaller impacts from biomass and other types of generation.

According to the Alberta Electric System Operator (AESO) on August 1st, 2017, over the next two years, the largest number of outages will occur in April 2018 with approximately 2,230 MW of gas and coal generation offline throughout the month.

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## MDA Weather Services 30-60 Day Outlook



July was a hot, record-breaking month in Alberta with several heat warnings issued over multiple days. According to Dave Phillips, senior climatologist with Environment Canada, this relatively abnormal heat is likely due to the high-pressure "sky dome" in the Prairies that doesn't let in any weather and causes warmer temperatures to build up.

As seen in the MDA Weather Outlook images, temperatures for the rest of summer will stay above normal with North Western trends getting hotter and anomalies in Alberta reaching +1.0 to as high as +3.0 Farenheit. Weather patterns are unstable due to storm influences in the Pacific, however the western-tropical winds bring certainty to warmer weather throughout North America. September shows warmer than normal temperatures through most of the Rockies, Central and Eastern Continent with only a small portion of British Columbia and the States located in the normal temperature range.

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