



TC Energy

# POWER MARKET UPDATE

## FORWARD PRICES TABLE (INDICATIVE AS OF JULY 3<sup>RD</sup>, 2023)

	Flat 7x24 (\$/MWh)	AB - 7x16 On Peak (\$/MWh)	AB - 7x8 Off-Peak (\$/MWh)	AECO Gas (\$/GJ)	Heat Rate
BoM	\$224.16	\$285.95	\$100.57	\$2.16	103.77778
August	\$249.00	\$322.50	\$102.00	\$2.15	115.81395
BoY	\$190.50	\$236.62	\$98.40	\$2.51	75.89641
2024	\$95.99	\$114.13	\$60.01	\$2.91	32.98625
2025	\$72.25	\$87.52	\$41.75	\$3.47	20.82133
2026	\$72.50	\$86.88	\$43.75	\$3.57	20.30812

All prices are indicative as of July 3<sup>rd</sup>, 2023. For Firm power price quotes please contact TC Energy's Power Marketing team. See contacts on the last page.

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## ALBERTA MARKET RECAP — JUNE 2023

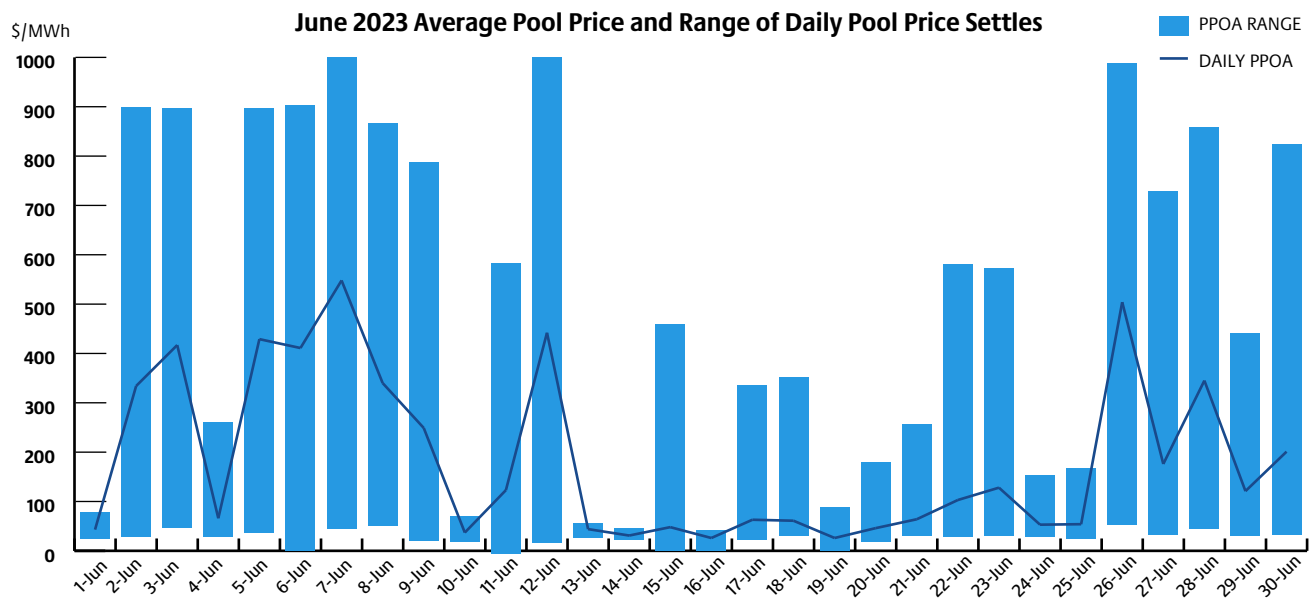
June 2023 settled at \$184.41/MWh, representing a 43% increase from June 2022's settle of \$129.08/MWh and a 21% increase from May's settle of \$152.85/MWh. The maximum pool price was \$999.99/MWh for June, compared to the maximum pool price settle of \$999.95/MWh in May. The average price between the on-peak and off-peak for June differed by \$193.52/MWh, resulting in on-peak and off-peak prices of \$248.92/MWh and \$55.40/MWh, respectively. June forwards traded between \$125.25 and \$169, 30 days preceding the month.

June 2023 had sixteen triple digit daily settles, occurring on June 2nd-3rd, 5th-9th, 11th-12th, 22nd-23rd, and 26th-30th, ranging from a 'low' of \$102.55/MWh on June 22nd to a 'high' of \$548.01/MWh on June 7th. The month saw 196 hours settle above \$100/MWh, with the SMP peaking at market cap of \$999.99/MWh on June 7th during HE (Hour Ending) 16-21 and on June 12th during HE 18-21.

June 7th saw the highest daily average and on-peak price settles of \$548.01/MWh and \$763.12/MWh, respectively, whereas June 3rd saw the highest off-peak price settle

of \$161.84/MWh. On June 7th, an Energy Emergency was declared from HE 16 through HE 22, coinciding with the SMP reaching the market cap of \$999.99/MWh for those hours. Average on-peak load was 9,922 MW, peaking at 10,556 MW. Minimal renewable generation was a considerable factor, especially on-peak wind generation, which averaged at 197 MWh or 5% capacity factor. Average solar capacity factor was 43%, about 10% higher than the monthly average. Thermal availability also played a role, as multiple outages contributed to a 49% coal availability factor and a 68% gas availability factor, accounting for roughly 4,000 MW of outages in the province. Around 400 MWh of imports were flowing collectively from all three interties.

Conversely, June 16th saw the lowest daily average and on-peak price settles of \$25.88/MWh and \$28.09/MWh, respectively, whereas June 11th saw the lowest off-peak price settle of \$11.94/MWh. On June 16th, load averaged at 9,258 MW and peaked at 10,036 MW, both lower than the monthly averages. Robust renewable generation was observed on this day, with wind and solar capacity factors of 50% and 38%, respectively, combining for over 3,300 MW of generation during its peak in the afternoon. Despite several thermal units offline on this day, both coal and gas availability were higher than the 30-day average, at 97% and 73%, respectively.



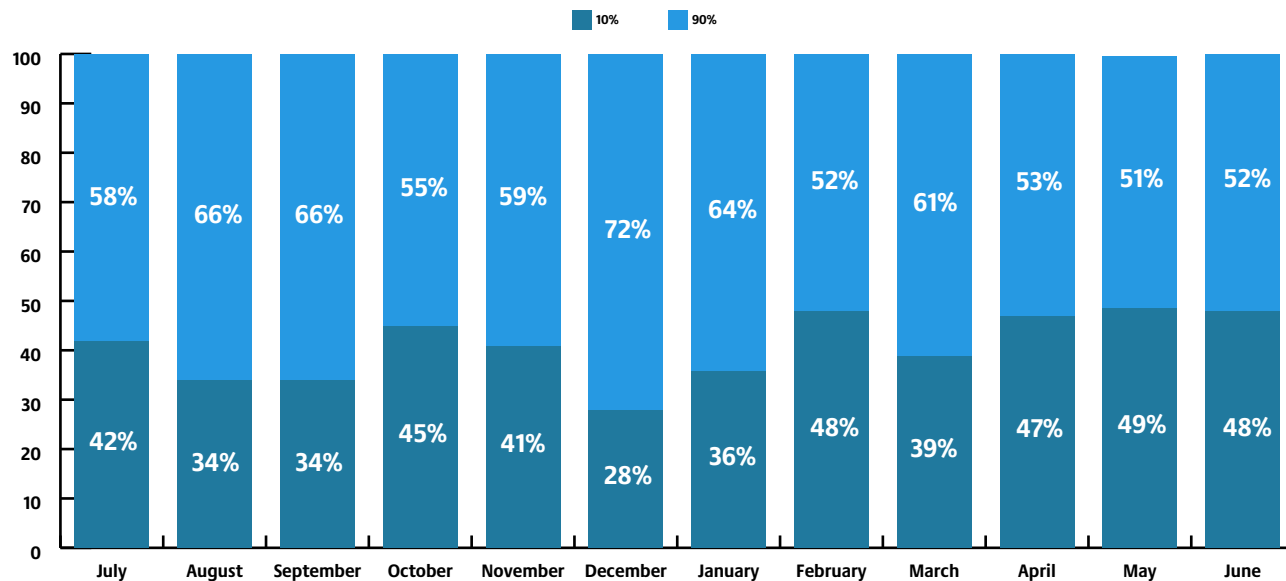
Average Alberta Internal Load (AIL) for the month was 9,449 MW, with hourly peak load hitting 11,199 MW on June 29th HE 17. This represents a 2.0% increase from June 2022's average AIL of 9,265 MW and an 8.8% increase from its hourly peak load of 10,294 MW.

The weighted average temperature across the province for June was 17.02°C representing a 1.92°C increase from last June when the average was 15.10°C. June 2023 temperatures in Alberta ranged from a high of 32°C in

Lethbridge and Medicine Hat on June 29th and 30th for various hours in the evening (HE15-20) to a low of 2°C seen in Lethbridge on June 22nd HE 6.

The top 10% of high-priced hours for June averaged \$878.73/MWh, contributing 48% to the monthly settle, while the bottom 90% of hours averaged \$107.26/MWh.

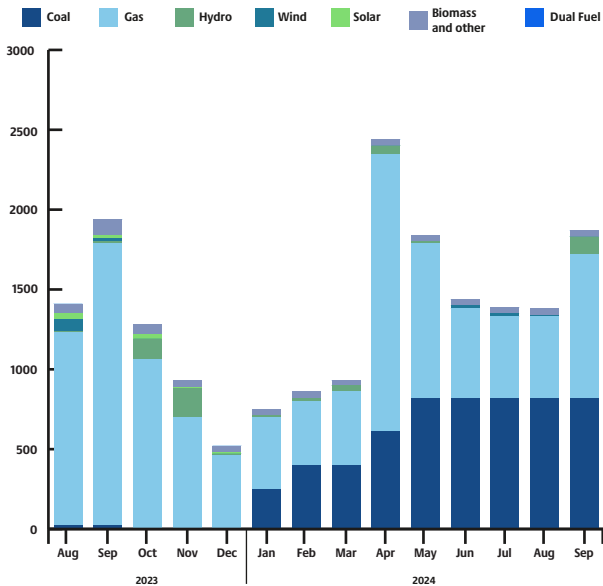
### Hours contributing to monthly average price



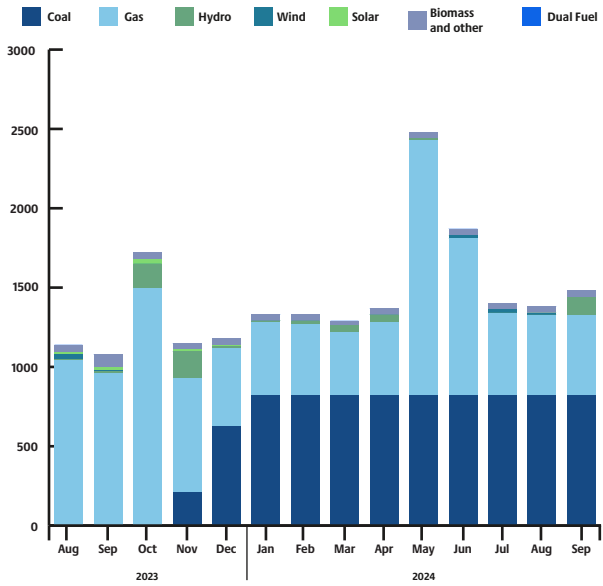
# MONTHLY OUTAGES

Since last month's outage report, there have been noteworthy changes in gas and coal outages. Gas outages increased by 160 MW in August 2023, 260 MW in September 2023, 280 MW in October 2023, 210 MW in November 2023, and 130 MW in April 2024. Coal outages decreased substantially from November 2023 through April 2024, varying from 210 MW to 630 MW.

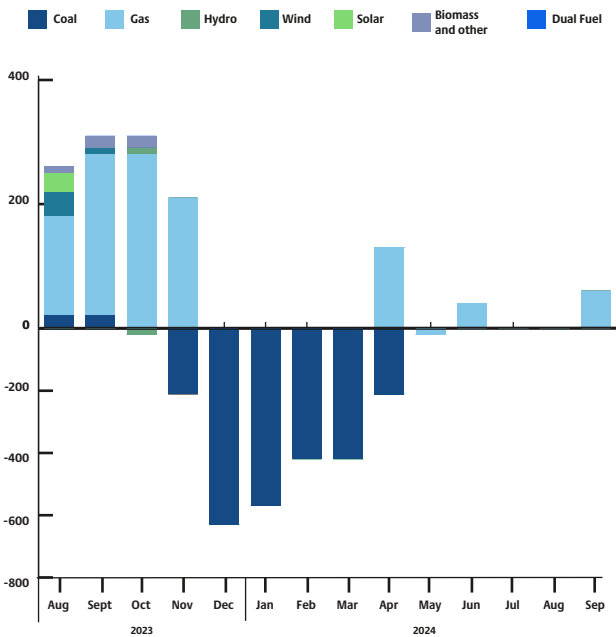
AESO monthly outages (as of July 2023)



AESO monthly outages (as of June 2023)



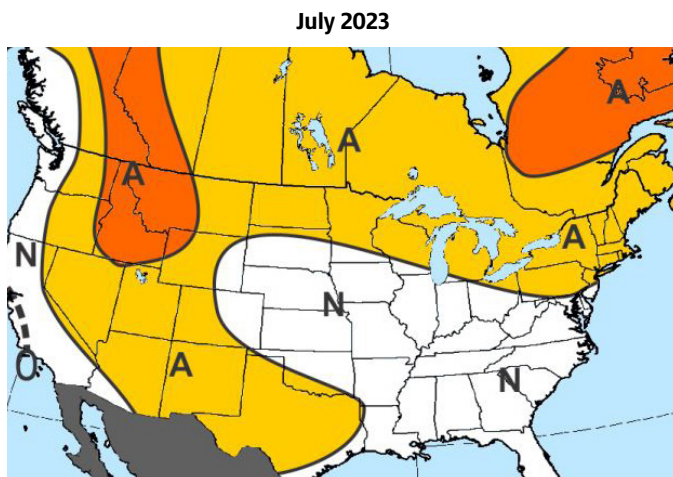
Month-over-month change in outages  
(July 2023 over June 2023)



## MAXAR'S 30-60 DAY OUTLOOK

Maxar's final July outlook undergoes a mix of changes, trending cooler in areas of the Plains and hotter in the West. The medium range outlook out to July 12 focuses aboves across the West and to a lesser extent Texas and New England, with aboves then focused over the Interior West to northern Plains in the 16-30 Day outlook. This somewhat resembles correlations to a low-amplitude MJO (Madden-Julian Oscillation) within a +GLAAM (Global Atmospheric Angular Momentum) base state. Longer-term signals such as +AMO (Atlantic Multi-decadal Oscillation) and warm west-tropical Pacific waters are also in support of this. The ECMWF (European Centre for Medium-Range Weather Forecasts) weeklies are hotter in the Central US but have been biased in that regard. If monsoon activity continues to lack, risks may be hotter in the SW.

August remains unchanged, continuing to project above normal temperatures in the West and East and near normal in Central/South, with PWCCDs (Population-Weighted Cooling Degree Days) right at the 10-year normal. The forecast gives consideration to sea surface indicators including the +AMO, -PDO (Pacific Decadal Oscillation), and strengthening El Niño. Risks may be to the cooler side per the correlation with El Niño; however, this may be dependent upon western Pacific tropical activity which is an unknown in this lead time. On the contrary, recent CFS (Climate Forecast System) model guidance is hotter than Maxar's outlook across the Central US.



Legend for temperature outlook (in degrees Fahrenheit):

Color	Temperature Outlook
Dark Red	≥+5.0
Red	+3.0 to +4.9
Orange	+2.0 to +2.9
Yellow	+1.0 to +1.9
White	-0.9 to 0.9
Grey	0
Light Blue	-1.0 to -1.9
Blue	-2.0 to -2.9
Dark Blue	-3.0 to -4.9
Purple	≤-5.0

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