



TC Energy Power Market update.

Forward prices table (indicative as of January 3rd, 2023)

	Flat 7x24 (\$/MWh)	AB - 7x16 On Peak (\$/MWh)	AB - 7x8 Off-Peak (\$/MWh)	AECO Gas (\$/GJ)	Heat Rate
BoM	\$294.83	\$358.63	\$167.22	\$4.02	73.34080
Feb	\$306.00	\$374.00	\$170.00	\$4.18	73.20574
BoY	\$176.11	\$221.64	\$85.02	\$3.37	52.25816
2024	\$99.83	\$122.24	\$55.00	\$3.57	27.96359
2025	\$88.50	\$107.75	\$50.00	\$3.95	22.40506
2026	\$78.75	\$93.13	\$50.00	\$4.34	18.14516

All prices are indicative as of January 3rd, 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 – December 2022

December 2022 settled at \$311.73/MWh, representing a 147% increase from December 2021's settle of \$126.27/MWh, and a 67% increase from last month's settle of \$186.84/MWh. The maximum pool price was \$999.99/MWh for December, same as November. The average price between the on-peak and off-peak for December differed by \$120.34/MWh, resulting in on-peak and off-peak prices of \$351.84/MWh and \$231.50/MWh, respectively. December forwards traded between \$211 and \$255, 30 days preceding the month.

December 2022 had 29 triple digit daily settles, occurring on all days of the month, except for December 3rd and 8th, ranging from a 'low' of \$104.17/MWh on December 7th to a 'high' of \$738.07/MWh on December 20th. The month saw 545 hours settle above \$100/MWh, with the SMP peaking at the market cap of \$999.99/MWh on multiple days, occurring on December 1st HE 18-19, December 2nd HE 18, December 20th HE 18, and December 21st HE 12-13, 17-18.

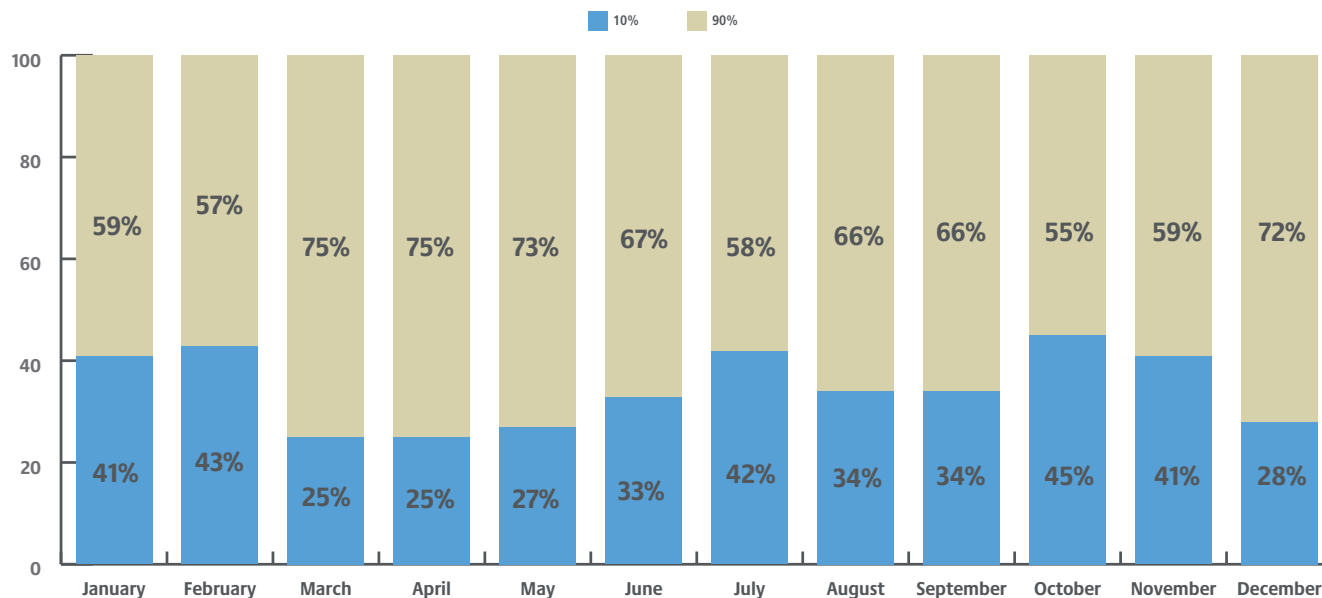
Since most days in December settled in the triple digits, it is noteworthy to highlight that the market fundamentals which contributed to these prices. Extreme cold temperatures in the province contributed to a strong load profile for the month and broke the all-time peak demand record twice on December 19th and 21st, reaching 12,187 MW and 12,193 MW, respectively, compared to the previous high of 11,939 MW from January. Renewable generation remained relatively low this month, especially during the coldest days of the month, with the monthly capacity factor for wind and solar averaging at 25% and 6%, respectively. Lastly, the province was a net exporter during the month, with majority of the MWs flowing out of the BC intertie, which contributed to higher off-peak prices.

December 20th saw the highest daily average and off-peak price settle of \$738.07/MWh and \$630.03/MWh, respectively, whereas December 21st saw the highest daily on-peak price settle of \$823.37/MWh. These days were a couple of the coldest of the month, with temperatures reaching -41°C in some parts of the province. Renewable

generation was mostly absent on the 20th, as average wind and solar capacity factor only reached 4% and 2%, respectively. Furthermore, several unplanned outages over the course of both days, induced the SMP hit the market cap of \$999.99/MWh and settled at that price for 7 hours. During those periods, the AESO declared several Energy Emergency Alerts.

Conversely, December 3rd saw the lowest daily average and on-peak price settles of \$89.54/MWh and \$88.93/MWh, respectively, whereas December 31st saw the daily lowest off-peak of \$63.05/MWh. On both these days, demand was lower than average, around 10,680 MW on December 3rd and 9,926 MW on December 31st. Renewable generation was higher than average on both days, as December 3rd saw the highest amount of solar generation for the month, with over 5 hours above 500 MW, while wind generation maintained above 1,500 MW for majority of the day. A healthy thermal fleet and the aforementioned market factors were able to sustain a healthy supply cushion, despite the constant exporting activity on both days.

Hours contributing to monthly average price



The top 10% of high-priced hours for December averaged \$856.12/MWh, contributing 28% to the monthly settle, while the bottom 90% of hours averaged \$250.41/MWh.

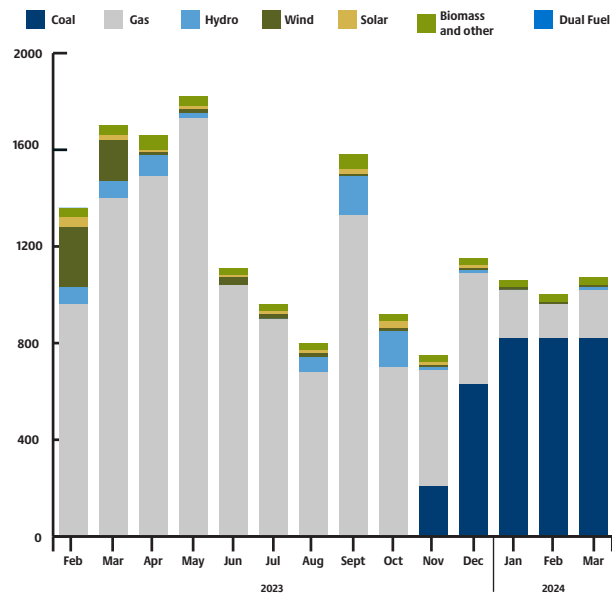
Average Alberta Internal Load (AIL) for the month was 10,750 MW, with hourly peak load hitting 12,193 MW on December 21st HE18. This represents a 0.8% increase from December 2021's average AIL of 10,670 MW and an 4.2% increase from its hourly peak load of 11,696 MW.

The weighted average temperature across the province for December was -15.20°C representing a 0.17°C increase from last December when the average was -15.38°C. December 2022 temperatures in Alberta ranged from a high of 9°C in Calgary on December 26th HE 17 to a low of -42°C seen in Grand Prairie on December 22nd HE 9-12.

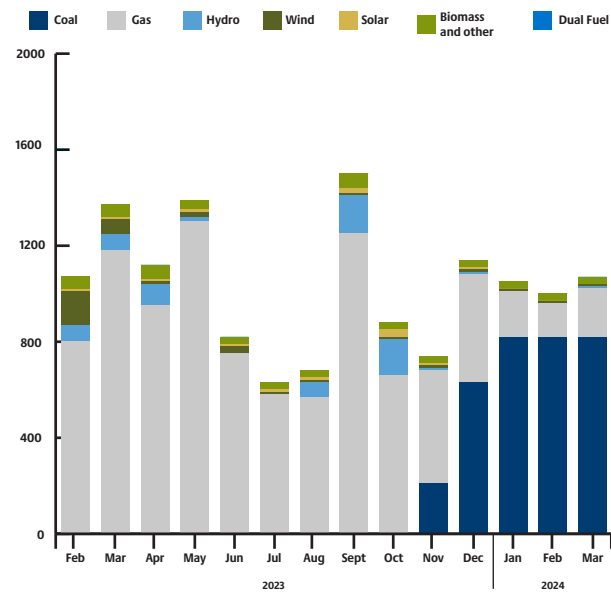
Monthly outages

Since last month's outage report, there has been noteworthy changes in gas and wind outages. Gas outages increased notably in 2023 from February to August, with amounts ranging from 110 MW in August to 540 MW in April. Wind outages increased by 110 MW in January and February 2023.

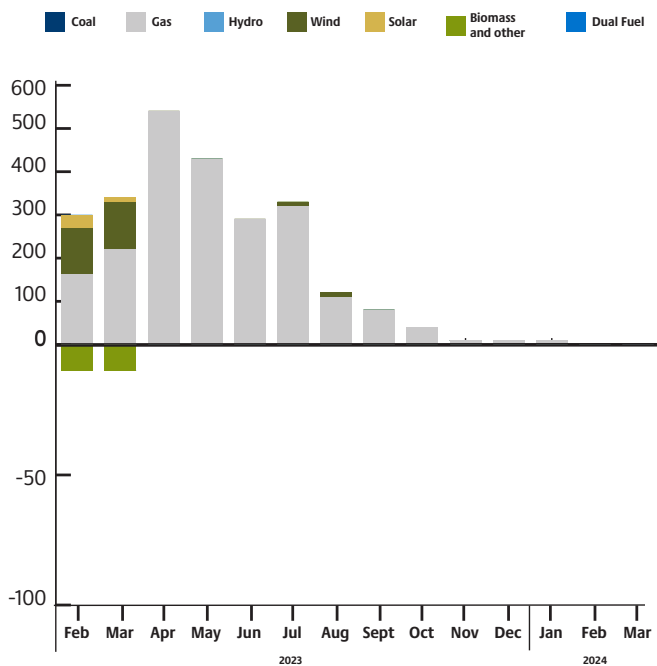
AESO monthly outages (as of January 2023)



AESO monthly outages (December 2022)



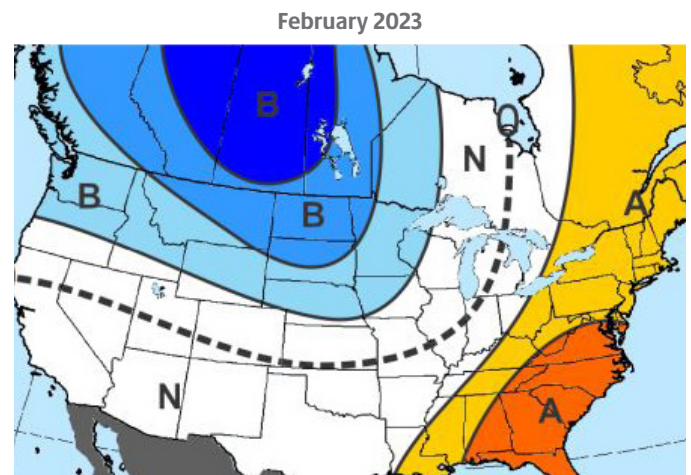
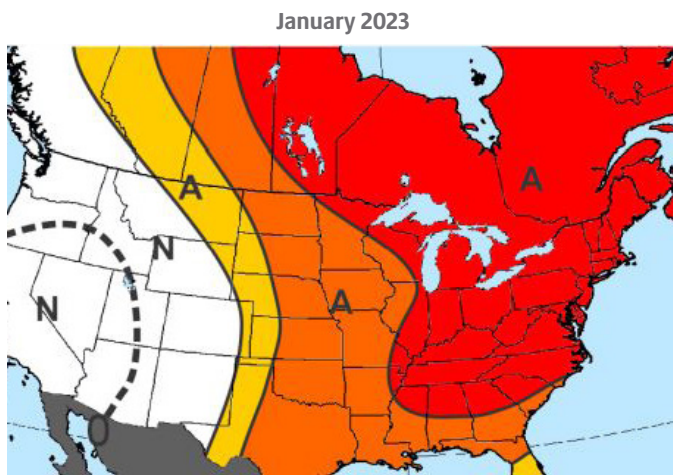
Month-over-month change in outages (January 2023 over December 2022)



Maxar's 30-60 day outlook

Maxar's final 30-Day Outlook for January undergoes major warm changes with widespread aboves across the eastern half including +3's for areas of the Midwest and East. These changes are driven by a very warm start to the month—our current 15-Day forecast which extends to Jan 11 ranks 5th-warmest since 1950 for Jan 1-11 GWHDDs (Gas-Weighted Heating Degree Days). The expectation is for conditions to remain on the warm side of normal for the northern tier heading into the latter part of the month, given consideration to global sea surface temperatures, warm weeklies models, and CPC (Climate Prediction Centre) analogs. Colder risk comes from the MJO (Madden-Julian Oscillation), which could move into its Western Hemisphere phases and allow for a colder response late.

February remains unchanged with aboves across the Eastern Third and belows from the Northwest to North-Central. This remains based on global sea surface temperature indicators. The forecast resembles a compromise between the monthly models, with the ECMWF (European Centre for Medium-Range Weather Forecasts) from earlier this month having aboves for most of the US while the CFS (Climate Forecast System) has aboves more restricted to the south while showing belows in the Northwest and Upper Midwest. Warmer risk is possible in Texas per the models. Confidence is limited due to wide variance in outcomes for La Niña in February—the last five La Niña Feb 1-28 GWHDDs were 778 (2022), 874 (2021), 695 (2018), 689 (2012), and 803 (2011).



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