



TC Energy Power Market update.

Forward prices table (indicative as of December 2nd, 2022)

	Flat 7x24 (\$/MWh)	AB - 7x16 On Peak (\$/MWh)	AB - 7x8 Off-Peak (\$/MWh)	AECO Gas (\$/GJ)	Heat Rate
BoM	\$223.00	\$265.73	\$137.55	\$5.65	39.46903
2023	\$151.73	\$187.79	\$79.62	\$4.33	35.04157
2024	\$88.11	\$115.16	\$34.00	\$4.10	21.49024
2025	\$80.75	\$104.25	\$33.75	\$4.07	19.84029

All prices are indicative as of December 2nd, 2022. 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 – November 2022

November 2022 settled at \$186.84/MWh, representing an 89% increase from November 2021's settle of \$99.07/MWh, and a 31% increase from last month's settle of \$142.34/MWh. The maximum pool price was \$999.99/MWh, compared to \$976.60/MWh in October. The average price between the on-peak and off-peak for November differed by \$73.88/MWh, resulting in on-peak and off-peak prices of \$211.64/MWh and \$137.76/MWh, respectively. November forwards traded between \$157.25 and \$205, 30 days preceding the month.

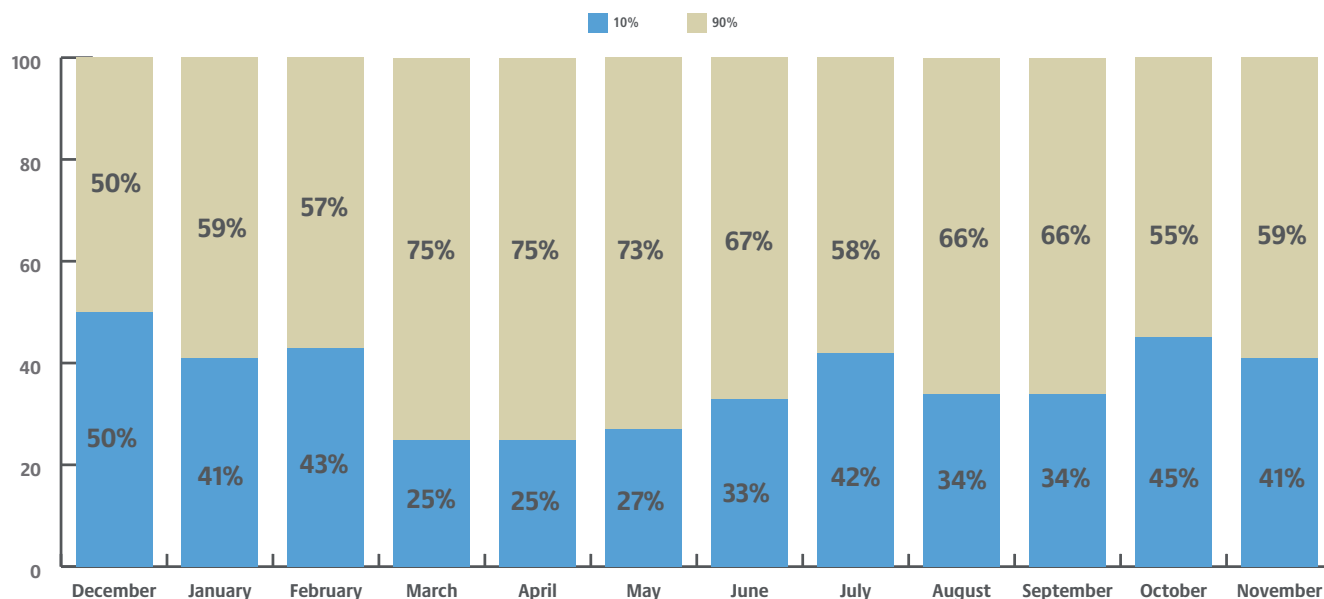
November 2022 had 23 triple digit daily settles, occurring on November 1st-3rd, 6th-18th, 23rd, and 25th-30th, ranging from a 'low' of \$100/MWh on November 11th to a 'high' of \$687.92/MWh on November 9th. The month saw 261 hours settles above \$100/MWh, with the SMP peaking on November 29th HE18-19, when it reached the market cap of \$999.99/MWh.

Most days in November settled above \$100/MWh, with one period extending for 13 consecutive days. Extreme cold weather in the province contributed to a higher-than-average load profile, which peaked at 11,642 MW or 508 MW higher than last November. The monthly load peak coincided with the maximum pool price of \$999.99/MWh and an Energy Emergency Alert declared for AIES (Alberta Interconnected Electric System), lasting

from HE 17-HE 19. The monthly wind capacity factor was about 31%, while solar capacity factor came in at 9%. Thermal availability was just under 80% for the month, due to large thermal planned and unplanned outages and derates. The province was net importer for the month, despite higher amounts of exports observed on the BC intertie, especially during off-peak hours.

November 9th saw the highest daily average, on-peak, and off-peak price settles of \$687.92/MWh, \$772.27/MWh, and \$519.23/MWh, respectively. On this day, average wind capacity factor was at 2%, AIL peaked at 11,257 MW, and hourly ATC import flow from all three interties averaged at 690 MW. Conversely, November 5th saw the lowest average and on-peak price settles of \$64/MWh and \$56.60/MWh, respectively, whereas November 4th saw the lowest off-peak price settle of \$61.57/MWh. On both these days, wind generation capacity factor was 47%. Warmer temperatures and a softer load profile put further downward pressure on prices.

Hours contributing to monthly average price



The top 10% of high-priced hours for November averaged \$760.43/MWh, contributing 41% to the monthly settle, while the bottom 90% of hours averaged \$123.21/MWh.

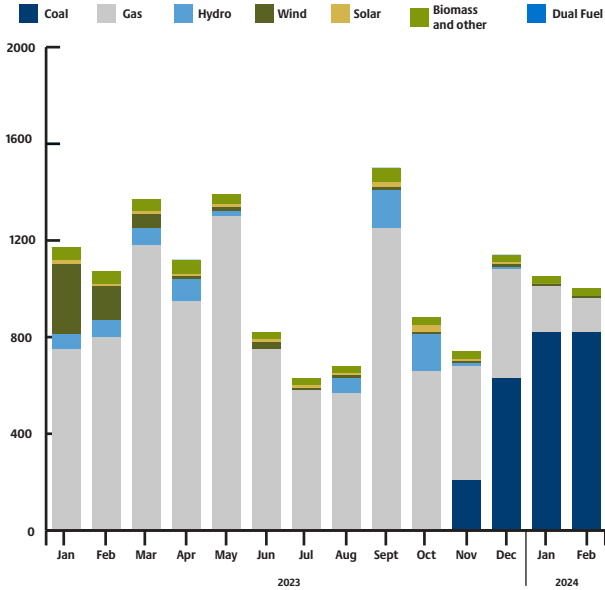
Average Alberta Internal Load (AIL) for the month was 10,336 MW, with hourly peak load hitting 11,642 MW on November 30th HE18. This represents a 2.8% increase from November 2021's average AIL of 10,056 MW and an 4.8% increase from its hourly peak load of 11,108 MW.

The weighted average temperature across the province for November was -6.50°C representing a 5.56°C decrease from last November when the average was -0.94°C. November 2022 temperatures in Alberta ranged from a high of 14°C in Lethbridge on November 25th HE 15 to a low of -29°C seen in Lethbridge on November 9th HE 6, HE 9 and HE 10.

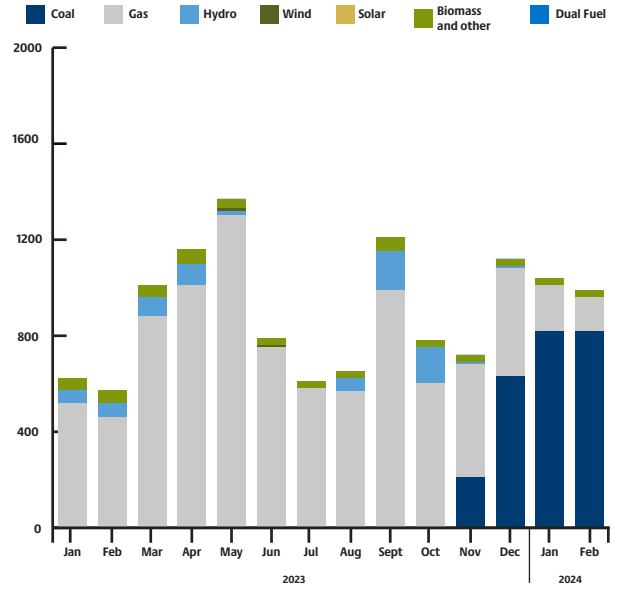
Monthly outages

Since last month's outage report, there has been noteworthy changes in gas and wind outages. Gas outages increased by 230 MW in January 2023, 340 MW in February 2023, 300 MW in March 2023, and 260 MW in September 2023. Wind outages increased by 290 MW and 140 MW in January 2023 and February 2023, respectively.

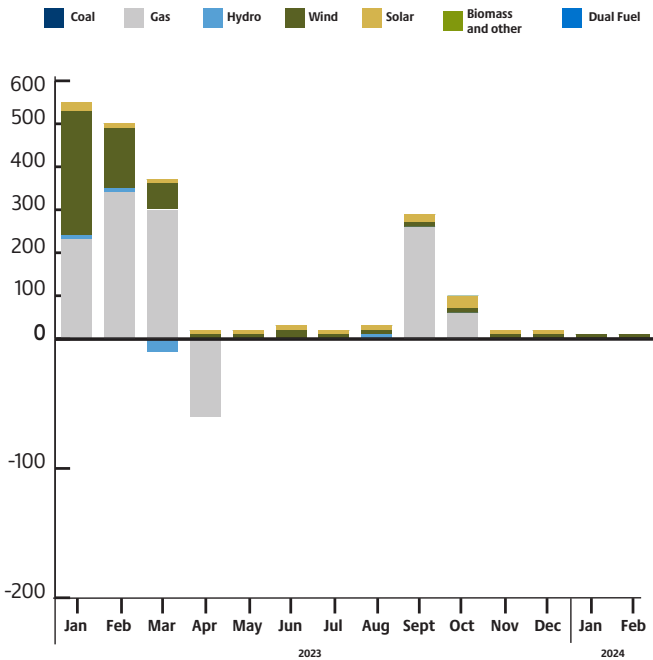
AESO monthly outages (as of December 2022)



AESO monthly outages (November 2022)



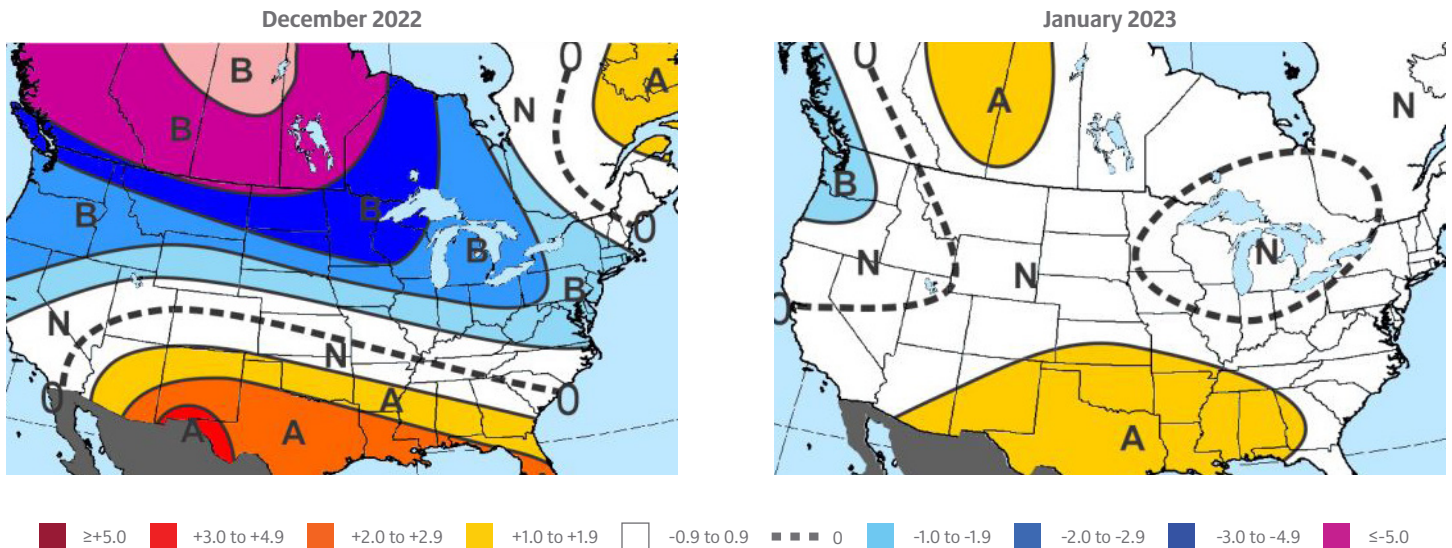
Month-over-month change in outages (December 2022 over November 2022)



Maxar's 30-60 day outlook

Maxar's final December outlook continues to trend colder with widespread below normal temperatures spanning the northern tier, coldest from western Canada to the northern Plains, while aboves remain from the southern Four Corners to Texas and the Gulf Coast. These changes are in response to a cold first half of the month as a pattern featuring Arctic blocking (-AO/-NAO) allows cold air to press into the Midwest and East. An even colder response is precluded by a less favorable Pacific pattern, with the -PNA (Pacific/North American) being the expected pattern as opposed to the more favorable -EPO (Eastern Pacific Oscillation). That said, risks may be additionally colder for the eastern half given the -AO/-NAO block in place.

January remains unchanged with aboves across the South/Texas while belows remain in the Northwest. Near normal temperatures are projected for the Midwest and East. The forecast remains based on sea surface temperature indicators including La Niña, -PDO (Pacific Decadal Oscillation), +AMO (Atlantic Multidecadal Oscillation), and warm west-tropical Pacific waters. Looking at a composite of the 20 most recent CFS (Climate Forecast Model) model runs, the model shows the December Arctic blocking pattern reversing in January, with a more +AO/NAO look that supports an additionally warmer. This also has support from global sea surface temperatures as well as the ECMWF (European Centre for Medium-Range Weather Forecasts) monthly model.



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