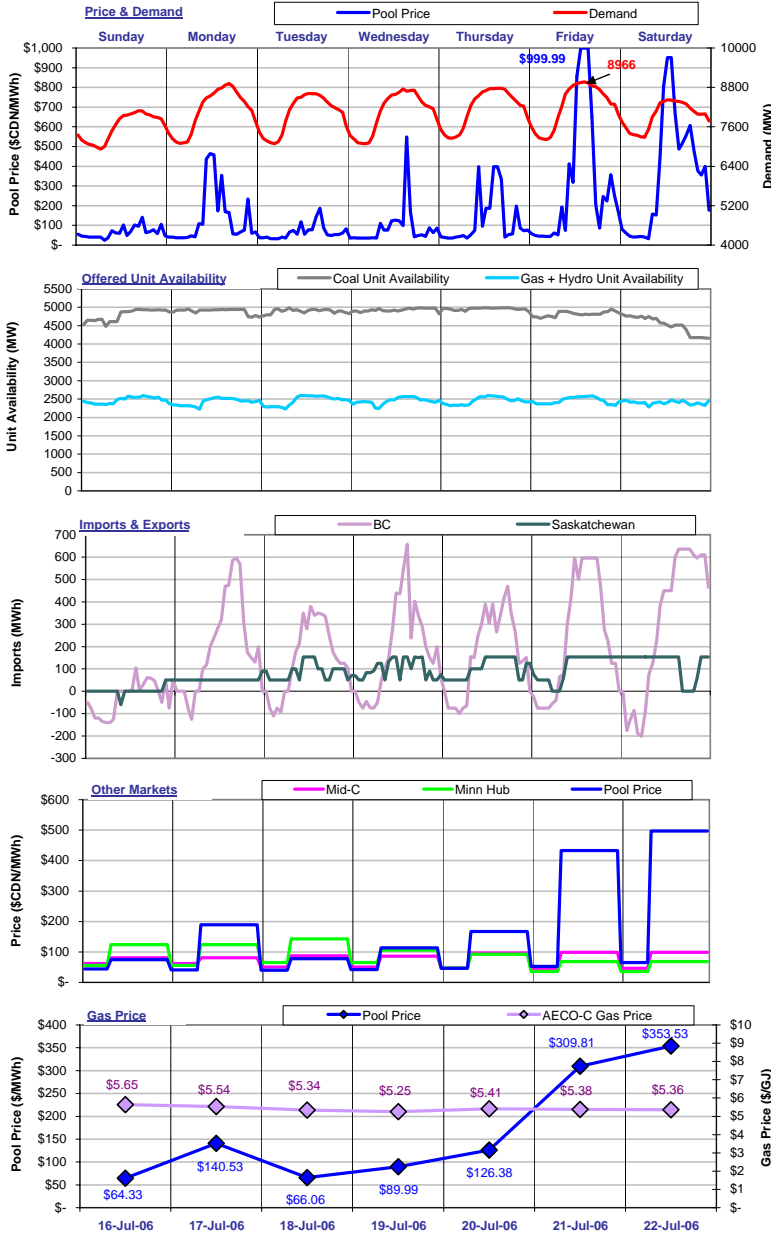


The Market Monitor

WATCHING THE MARKET : your fact source

Week Ending July 22, 2006

Weekly Highlights



For the week ending July 22, 2006, **Pool Price** averaged \$164.37/MWh and ranged from a minimum of \$25.07/MWh in HE08 on Sunday to a maximum of \$999.99/MWh in HE15 on Friday. **Demand** reached a high of 8966 MW in HE15 on Friday and a low of 6918 MW in HE07 on Sunday. Average demand for the week was 8005 MW. **Pool Price** and **Demand** were positively correlated last week with an R-squared value of 0.25.

Coal Unit Availability averaged 4828 MW last week. This is an equivalent availability of 83% (based on MCR). **Gas and Hydro Unit Availability** averaged 2445 MW last week, which is an equivalent of 51% (based on MCR).

Availability numbers are based on MW offered into the energy merit order.

Alberta was a net importer from BC last week with total imports equal to 28,852 MWh. Alberta was a net importer from Saskatchewan last week with total imports equal to 13,873 MWh. Overall, Alberta imported 42,725 MWh of electricity last week.

Pool Prices were generally higher than prices in **Mid-C** and higher than prices in **Minn Hub** last week. **Mid-C** prices averaged \$91.27/MWh on-peak and \$51.98/MWh off-peak. **Minn Hub** prices averaged \$100.23/MWh on-peak and \$51.55/MWh off-peak.

Prices in \$CDN at an exchange rate of 1.1290.

The average **AECO-C Gas Price** last week was \$5.42/GJ and ranged from a minimum of \$5.25/GJ to \$5.65/GJ. Prevailing gas prices resulted in market heat rates ranging from a low of 11.39 GJ/MWh to a high of 65.96 GJ/MWh. The average market heat rate for the week was 30.44 GJ/MWh.

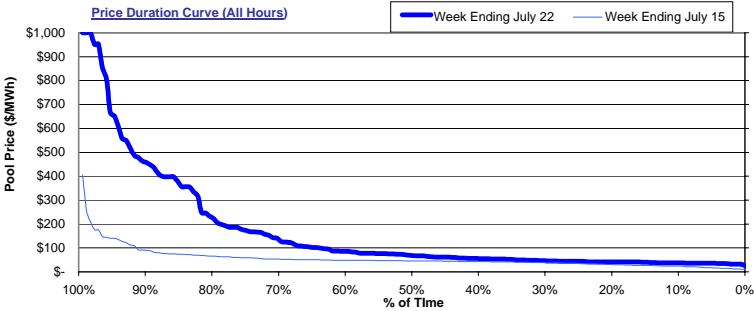


Alberta's Market Surveillance Administrator is in place to monitor the fair, efficient and openly competitive operation of all electricity markets within the province. The Market Monitor is a weekly publication by the MSA intended to educate industry participants and the public on market activities for the [previous](#) week. Any questions regarding the material in this publication should be directed to MSA staff. Our contact information is available on the MSA website: www.albertamsa.ca

Wholesale Market

Weekly Market Statistics

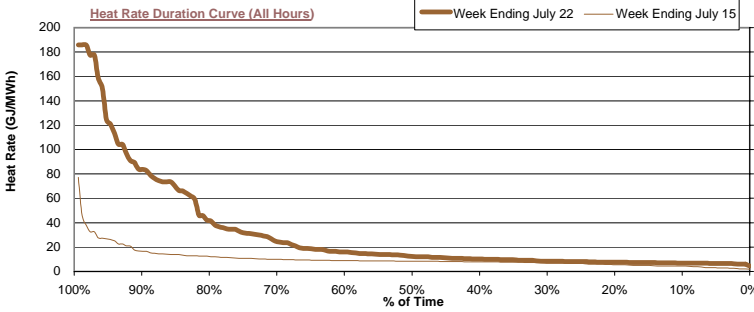
| | Sunday 16-Jul | Monday 17-Jul | Tuesday 18-Jul | Wednesday 19-Jul | Thursday 20-Jul | Friday 21-Jul | Saturday 22-Jul | Average | Last Week | % Change | YTD |
|--|------------------|------------------|-------------------|---------------------|--------------------|------------------|--------------------|-----------|--------------|----------|----------|
| Pool Price | | | | | | | | | | | |
| Average | \$ 64.33 | \$ 140.53 | \$ 66.06 | \$ 89.99 | \$ 126.38 | \$ 309.81 | \$ 353.53 | \$ 164.37 | \$ 55.02 | 198.7% | \$ 59.71 |
| On-Peak | NA | \$ 189.11 | \$ 78.03 | \$ 113.96 | \$ 166.83 | \$ 432.62 | \$ 496.85 | \$ 246.23 | \$ 68.85 | 257.6% | \$ 78.70 |
| Off-Peak | \$ 64.33 | \$ 43.37 | \$ 42.11 | \$ 42.06 | \$ 45.48 | \$ 64.19 | \$ 66.88 | \$ 55.23 | \$ 36.58 | 51.0% | \$ 32.55 |
| COV | 0.43 | 1.02 | 0.57 | 1.17 | 1.00 | 1.08 | 0.84 | 0.87 | 0.69 | 26.8% | |
| Heat Rate | | | | | | | | | | | |
| Average | 11.39 | 25.36 | 12.36 | 17.13 | 23.37 | 57.53 | 65.96 | 30.44 | 10.61 | 186.9% | 9.53 |
| On-Peak | NA | 34.13 | 14.60 | 21.69 | 30.85 | 80.34 | 92.71 | 45.72 | 13.00 | 251.6% | 12.55 |
| Off-Peak | 11.39 | 7.83 | 7.88 | 8.00 | 8.41 | 11.92 | 12.48 | 10.08 | 7.42 | 35.8% | 5.19 |
| Demand | | | | | | | | | | | |
| Average | 7,593 | 8,088 | 7,991 | 8,037 | 8,160 | 8,233 | 7,935 | 8,005 | 7,830 | 2.2% | 7,824 |
| Minimum | 6,918 | 7,093 | 7,085 | 7,090 | 7,257 | 7,212 | 7,295 | 7,136 | 6,940 | 2.8% | 6,351 |
| Maximum | 8,089 | 8,921 | 8,618 | 8,755 | 8,777 | 8,966 | 8,426 | 8,650 | 8,498 | 1.8% | 9,306 |
| Coal Unit Availability | | | | | | | | | | | |
| Average | 4,788 | 4,895 | 4,895 | 4,928 | 4,957 | 4,818 | 4,520 | 4,828 | 4,976 | | 5,375 |
| Utilization | 82% | 84% | 84% | 84% | 85% | 82% | 77% | 83% | 85% | -2.5% | 92% |
| Gas and Hydro Unit Availability | | | | | | | | | | | |
| Average | 2,470 | 2,426 | 2,455 | 2,450 | 2,455 | 2,459 | 2,403 | 2,445 | 2,346 | | 2,009 |
| Utilization | 52% | 51% | 52% | 51% | 52% | 52% | 50% | 51% | 49% | 2.1% | 42% |



The price duration curves show the % of time that prices were at or below a certain value during the week.

For the week ending **July 22**, prices were at or below:

- \$20/MWh 0% of the time
- \$50/MWh 34% of the time
- \$100/MWh 64% of the time
- \$250/MWh 82% of the time
- \$500/MWh 92% of the time



The heat rate duration curves show the % of time that the implied market heat rate was at or below a certain value during the week. For the week ending **July 22** implied market heat rates were at or below:

- 5.0 GJ/MWh 1% of the time
- 10.0 GJ/MWh 39% of the time
- 15.0 GJ/MWh 58% of the time
- 20.0 GJ/MWh 67% of the time

Market Share Statistics

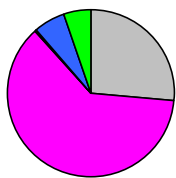
By Fuel Type:

Legend: Coal (Grey), Gas - Cogen (Pink), Gas - Other (Light Blue), Hydro (Dark Blue), Other (Green)

Weekly Generation by Fuel Type

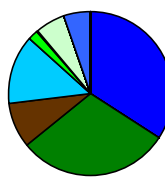


Weekly Price Setting by Fuel Type



By Submitting Customer:

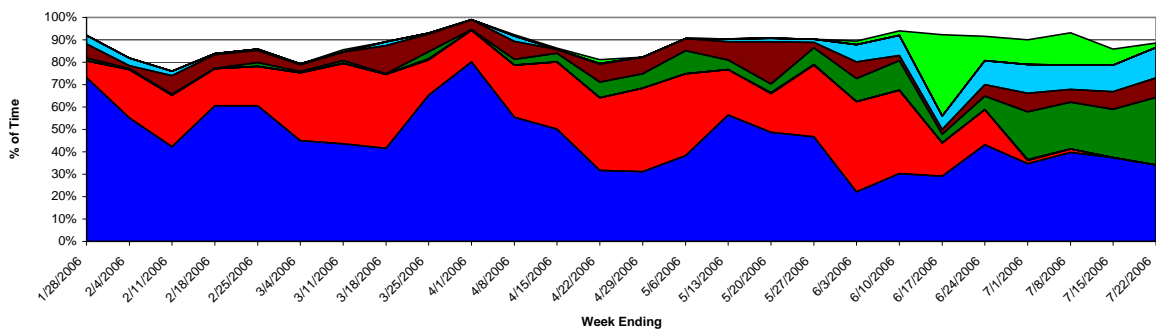
Weekly Price Setting by Submitting Customer



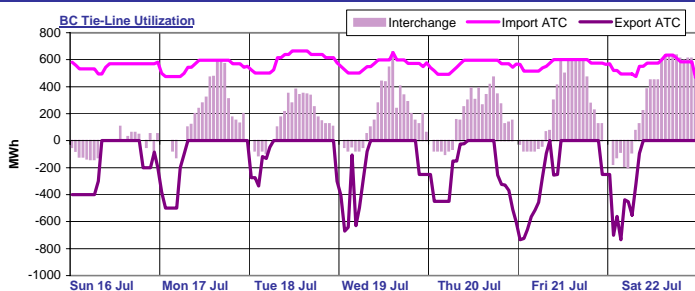
Last week, coal units were responsible for 61.8% of the generation in the province and set price 26.5% of the time. **Gas-cogen** units accounted for 27.4% of the generation and set price 61.8% of the time last week while **other gas** units made up 5.6% of generation and set price 0.2% of the time.

A total of 8 market participants set price last week. Two market participants set price more than 20% of the time last week. The top price setter set price 34.1% of the time and the top five price setters set price a total of 92.6% of the time.

Weekly Price Setting by Submitting Customer

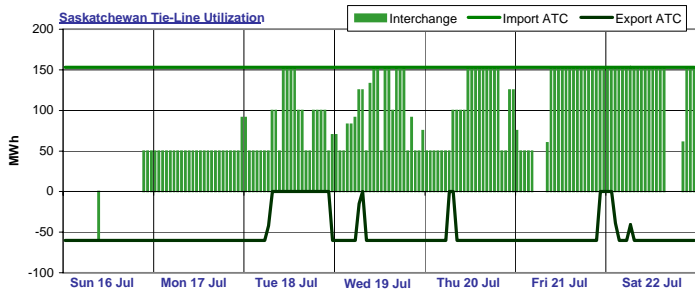


Interties

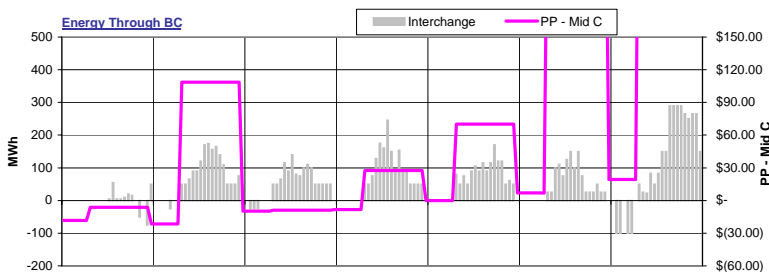


BC import capacity was 33% utilized last week while BC export capacity was 14% utilized. Energy was being imported into Alberta over the BC tie-line 64% of the time and exported out of Alberta over the BC tie-line 24% of the time last week. There was no activity on the BC tie-line 12% of the time last week.

Note: External reserve contract volumes have been subtracted from the BC import ATC as this capacity is not available to import energy into Alberta.



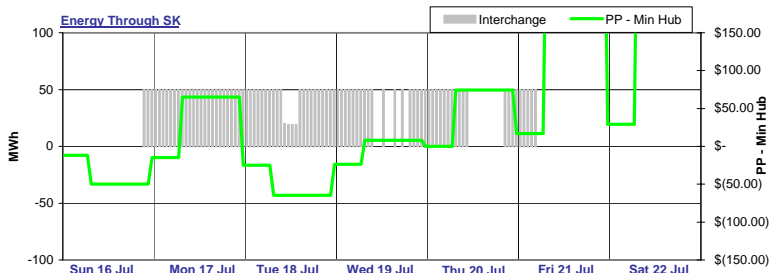
Saskatchewan import capacity was 54% utilized last week while Saskatchewan export capacity was 1% utilized. Energy was being imported into Alberta over the Saskatchewan tie-line 83% of the time and exported out of Alberta over the Saskatchewan tie-line 1% of the time last week. There was no activity on the Saskatchewan tie-line 16% of the time last week.



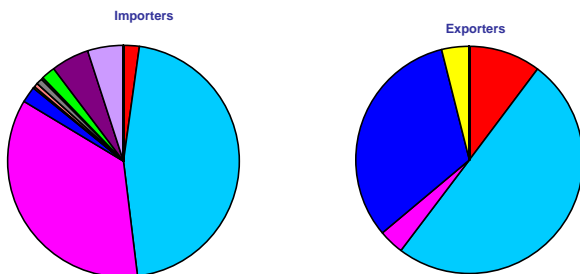
Last week, Alberta spot prices were mostly higher relative to prices in the Pacific Northwest as represented by Mid-C index prices, supporting import activity across the Alberta - BC interconnection.

Alberta prices were generally higher than prices in MAPP as represented by spot prices at the Minnesota Hub, which generally supported import activity across the Alberta - Saskatchewan interconnection.

Note: Platt's day-ahead strip prices used in energy through BC and SK graphs.



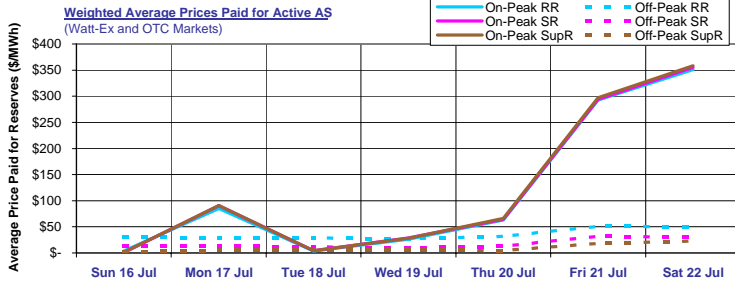
Tie-Line Market Shares



Last week, there were a total of 12 importers. The most active importer had a market share of 46.0% while the second most active importer had a market share of 35.5%. There were a total of 5 exporters last week. The most active exporter had a market share of 50.2% while the next largest exporter had a market share of 32.4%.

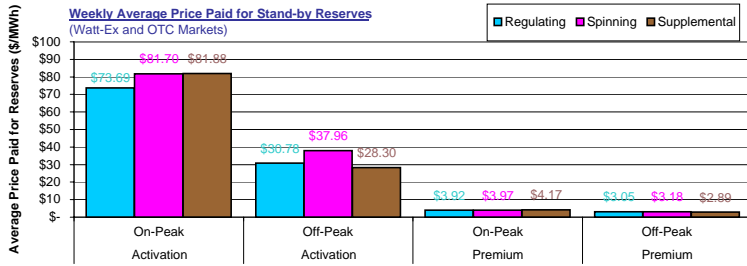
Note: Market shares are based on the combined activity on both interties.

Ancillary Services Market



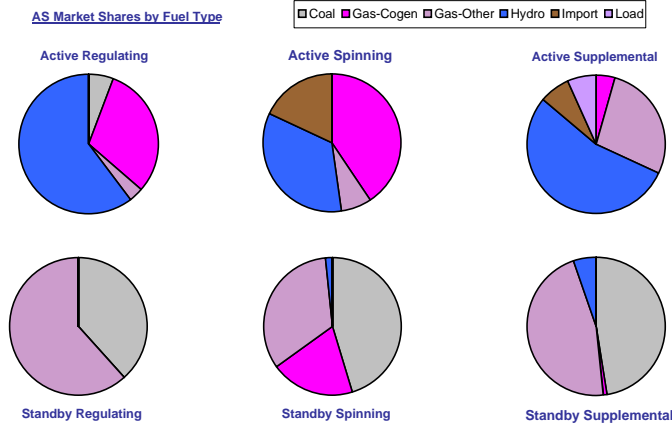
Average on-peak prices paid for active ancillary services last week were \$119.22/MWh, \$118.90/MWh and \$119.98/MWh respectively for active **regulating**, **spinning** and **supplemental** reserves.

Active average off-peak prices were somewhat higher and averaged \$35.26/MWh, \$17.63/MWh and \$8.92/MWh for active **regulating**, **spinning** and **supplemental** reserves respectively.



Weekly average activation prices for stand-by reserves ranged from \$28.30/MWh for **off-peak supplemental** reserves to \$81.88/MWh for **on-peak regulating** reserves.

Weekly average premium prices ranged from \$2.89/MWh for **off-peak supplemental** reserves up to \$4.17/MWh for **on-peak regulating** reserves.



Last week **hydro** units had the largest market share in the **active regulating** reserve market with 60.4%. In the **active spinning** reserve market, **gas-cogen** units had the leading market share with 40.7% while in the **active supplemental** reserve market, **hydro** units dominated with a 54.3% market share.

gas units dominated the **standby regulating** reserve market with a 61.6% market share. Leading market share in the **standby spinning** market was held by **coal** units with a 45.4% market share. In the **standby supplemental** reserve market, **coal** units had the leading market share with 47.4%.

Glossary

| | |
|-------------------------|---|
| HE | Hour Ending |
| On-Peak Hours | In Alberta: HE08 through HE23, Monday through Saturday (prevailing Mountain time) In Mid-C: HE07 through HE22, Monday through Saturday (prevailing Pacific time) In Minn Hub: HE08 through HE23, Monday through Sunday (prevailing Central time) |
| Off-Peak Hours | In Alberta: HE01 through HE07 + HE24 (of the same day), Monday through Saturday + HE01 through HE24 Sundays + holidays (prevailing Mountain time) In Mid-C: HE24 (of the previous day) through HE07 (of the day in question), Monday through Saturday + HE01 through HE24 Sundays + holidays (prevailing Pacific time) In Minn Hub: HE24 (of the previous day) through HE07 (of the day in question), Monday through Sunday (prevailing Central time) |
| COV | Coefficient of Variation The standard deviation of a series of numbers divided by the mean of the same series of numbers. Used as a measure of volatility. |
| ATC | Available Transfer Capacity A measure of the maximum energy flow possible in one direction across an intertie. |
| Market Heat Rate | The prevailing Pool price divided by the prevailing gas price. |
| Sparksread | Sparksreads give an indication of the revenue available to cover costs after fuel costs have been paid. A positive spread indicates it is more economical to buy gas and generate electricity while a negative spread indicates it is more economical to buy electricity from the grid. |