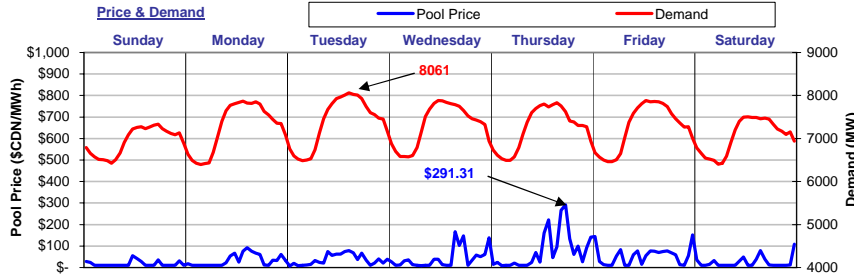


# The Market Monitor

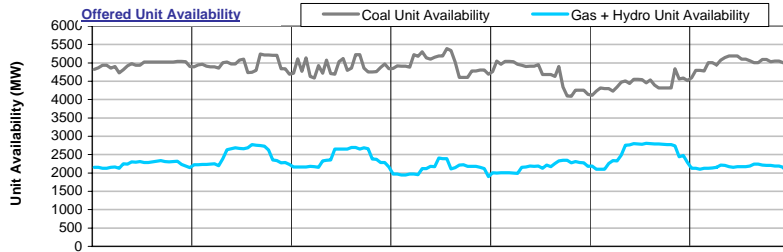
WATCHING THE MARKET : your fact source

Week Ending July 10, 2004

## Weekly Highlights

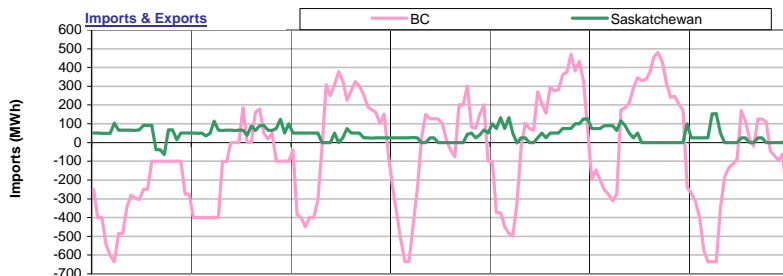


For the week ending July 10, 2004, Pool Price averaged \$41.61/MWh and ranged from a minimum of \$7.52/MWh in HE01 on Tuesday to a maximum of \$291.31/MWh in HE18 on Thursday. Demand reached a high of 8061 MW in HE15 on Tuesday and a low of 6398 MW in HE04 on Monday. Average demand for the week was 7210 MW. Pool Price and Demand were positively correlated last week with an R-squared value of 0.16.

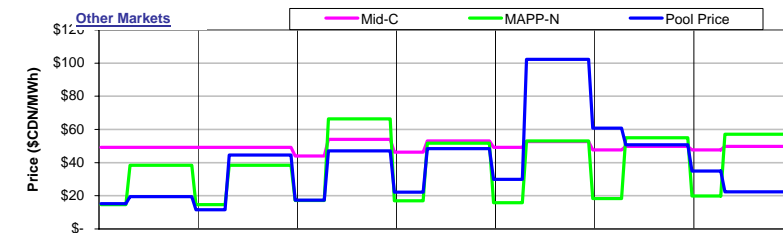


Coal Unit Availability averaged 4841 MW last week. This is an equivalent availability of 88% (based on MCR). Gas and Hydro Unit Availability averaged 2302MW last week, which is an equivalent of 41% (based on MCR).

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

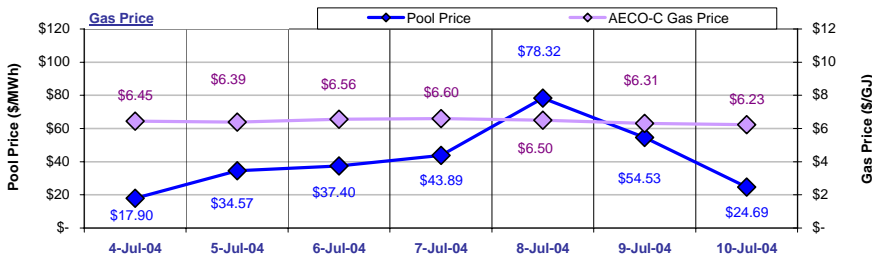


Alberta was a net exporter from BC last week with total exports equal to 9,612MWh. Alberta was a net importer from Saskatchewan last week with total imports equal to 7,306MWh. Overall, Alberta exported 2,306MWh of electricity last week.



Pool Prices were generally lower than prices in Mid-C and higher than prices in MAPP-N last week. Mid-C prices averaged \$51.40/MWh on-peak and \$47.66/MWh off-peak. MAPP-N prices averaged \$53.60/MWh on-peak and \$16.77/MWh off-peak.

Prices in \$CDN at an exchange rate of 1.3261.

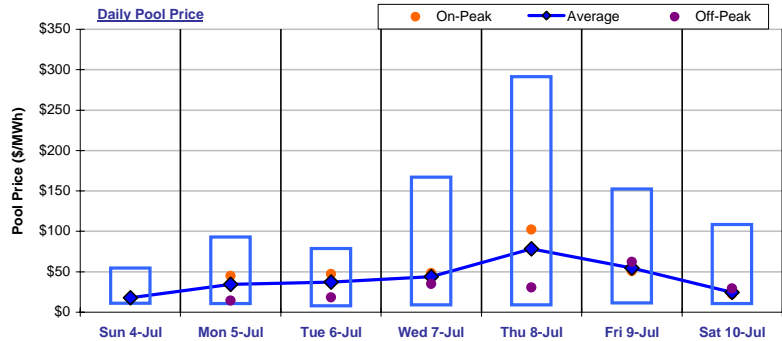


The average AECO-C Gas Price last week was \$6.43/GJ and ranged from a minimum of \$6.23/GJ to \$6.60/GJ. Prevailing gas prices resulted in market heat rates ranging from a low of 2.78GJ/MWh to a high of 12.05GJ/MWh. The average market heat rate for the week was 6.46GJ/MWh.

# Wholesale Market

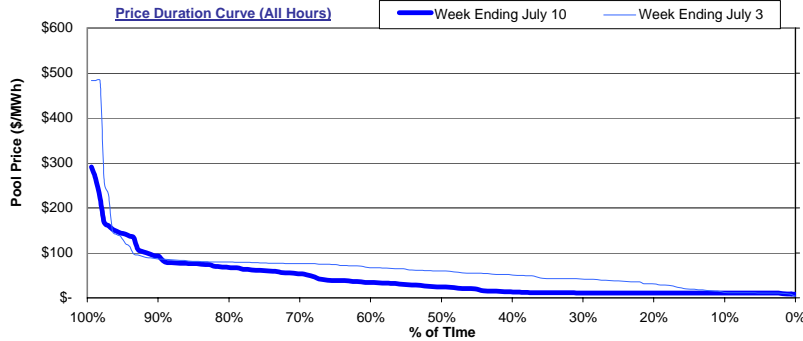
## Weekly Market Statistics

	Sunday 4-Jul	Monday 5-Jul	Tuesday 6-Jul	Wednesday 7-Jul	Thursday 8-Jul	Friday 9-Jul	Saturday 10-Jul	Average	Last Week	% Change	YTD
<b>Pool Price</b>											
Average	\$ 17.90	\$ 34.57	\$ 37.40	\$ 43.89	\$ 78.32	\$ 54.53	\$ 24.69	\$ 41.61	\$ 65.40	-36.4%	\$ 53.86
On-Peak	NA	\$ 44.64	\$ 47.09	\$ 48.47	\$ 102.28	\$ 50.78	\$ 22.33	\$ 52.60	\$ 79.33	-33.7%	\$ 62.43
Off-Peak	\$ 17.90	\$ 14.43	\$ 18.03	\$ 34.71	\$ 30.40	\$ 62.04	\$ 29.42	\$ 26.97	\$ 46.82	-42.4%	\$ 38.92
COV	0.69	0.78	0.65	1.08	1.08	0.73	1.00	0.86	0.58	47.2%	
<b>Demand</b>											
Average	6,942	7,275	7,381	7,314	7,246	7,262	7,051	7,210	7,405	-2.6%	7,353
Minimum	6,422	6,398	6,487	6,576	6,490	6,460	6,403	6,462	6,636	-2.6%	6,017
Maximum	7,331	7,872	8,061	7,885	7,831	7,881	7,504	7,766	7,963	-2.5%	8,967
<b>Coal Unit Availability</b>											
Average	4,950	4,968	4,883	4,974	4,686	4,419	5,011	4,841	4,471	6.7%	4,925
Utilization	90%	90%	88%	90%	85%	80%	91%	88%	81%	6.7%	89%
<b>Gas and Hydro Unit Availability</b>											
Average	2,240	2,463	2,402	2,122	2,167	2,553	2,166	2,302	2,629	-5.8%	2,255
Utilization	47%	52%	50%	45%	45%	54%	45%	41%	47%	-5.8%	40%



The Daily Pool Price graph plots the daily range in hourly Pool price (defined by the blue box) along with the daily average and daily on and off-peak prices. The on-peak Pool price for the week was \$52.60/MWh while the off-peak Pool price for the week was \$26.97/MWh.

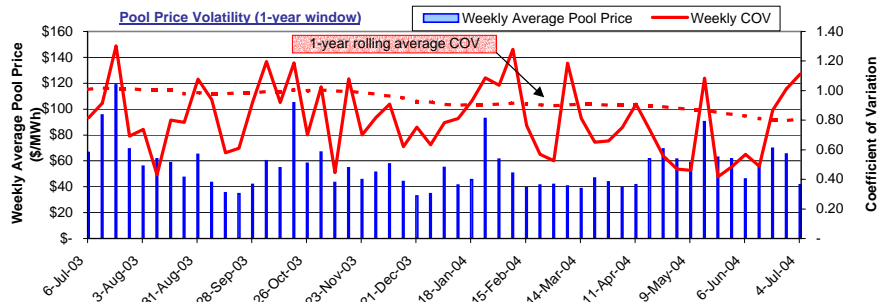
Note: Sundays and most statutory holidays are defined as off-peak.



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 10, prices were at or below:

- \$20/MWh 45% of the time
- \$50/MWh 68% of the time
- \$100/MWh 91% of the time
- \$250/MWh 98% of the time
- \$500/MWh 100% of the time



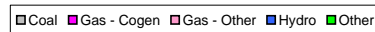
The chart plots average weekly Pool Price and the Coefficient of Variation (COV) of hourly Pool prices for the week. The COV is a standard statistical measure of volatility.

Pool price volatility increased for the week ending July 10 from the previous week.

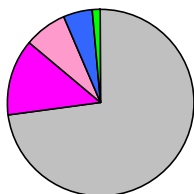
Pool price volatility also moved above the 1-year rolling average COV value.

### Market Share Statistics

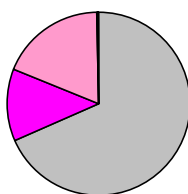
By Fuel Type:



Weekly Generation by Fuel Type

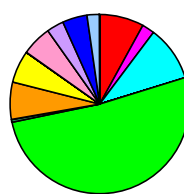


Weekly Price Setting by Fuel Type



By Submitting Customer:

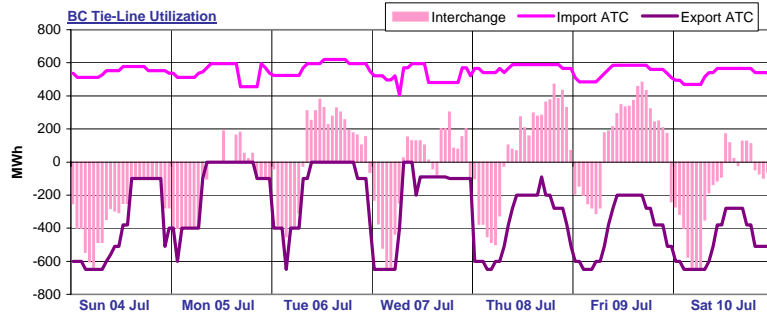
Weekly Price Setting by Submitting Customer



Last week, coal units were responsible for 72.8% of the generation in the province and set price 68.3% of the time. Gas-cogen units accounted for 13.4% of the generation and set price 12.7% of the time last week while other gas units made up 7.5% of generation and set price 18.8% of the time.

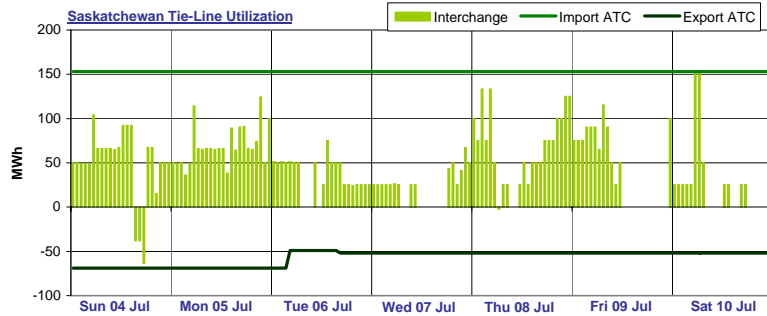
A total of 11 market participants set price last week. One market participant set price more than 20% of the time last week. The top price setter set price 51.3% of the time and the top five price setters set price a total of 82.1% of the time.

# Interties



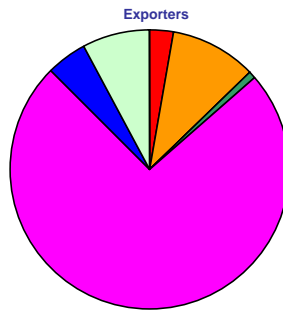
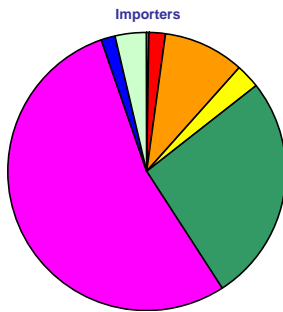
BC import capacity was 16% utilized last week while BC export capacity was 42% utilized. Energy was being imported into Alberta over the BC tie-line 45% of the time and exported out of Alberta over the BC tie-line 54% of the time last week. There was no activity on the BC tie-line 2% of the time last 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 29% utilized last week while Saskatchewan export capacity was 1% utilized. Energy was being imported into Alberta over the Saskatchewan tie-line 76% of the time and exported out of Alberta over the Saskatchewan tie-line 2% of the time last week. There was no activity on the Saskatchewan tie-line 22% of the time last week.

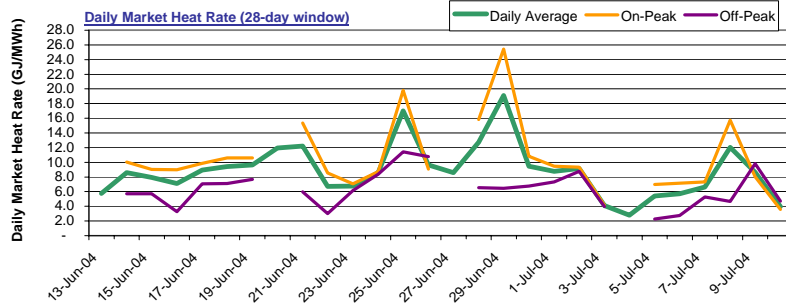
## Tie-Line Market Shares



Last week, there were a total of 8 importers. The most active importer had a market share of 53.8% while the second most active importer had a market share of 26.3%. There were a total of 6 exporters last week. The most active exporter had a market share of 73.8% while the next largest exporter had a market share of 10.1%.

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

# Market Heat Rates



Over the past 28 days, the daily Market Heat Rate averaged 8.8 GJ/MWh and ranged from a low of 2.8 GJ/MWh to a high of 19.1 GJ/MWh.

The daily On-Peak Market Heat Rate for the last 28 days averaged 10.5 GJ/MWh while the daily Off-Peak Market Heat Rate averaged 6.3 GJ/MWh.

## Sparksreads

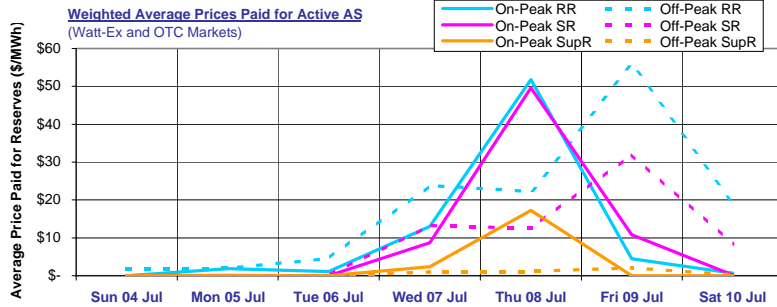
Date	AECO-C Gas Price (\$/GJ)	Daily Average			On-Peak			Off-Peak		
		Pool Price (\$/MWh)	Sparksread (\$/MWh) HR=7.5	Sparksread (\$/MWh) HR=10.0	Pool Price (\$/MWh)	Sparksread (\$/MWh) HR=7.5	Sparksread (\$/MWh) HR=10.0	Pool Price (\$/MWh)	Sparksread (\$/MWh) HR=7.5	Sparksread (\$/MWh) HR=10.0
Sun 04 Jul	\$ 6.45	\$ 17.90	(30.44)	(46.56)	NA	NA	NA	\$ 17.90	(30.44)	(46.56)
Mon 05 Jul	\$ 6.39	\$ 34.57	(13.34)	(29.32)	\$ 44.64	(3.28)	(19.25)	\$ 14.43	(33.48)	(49.45)
Tue 06 Jul	\$ 6.56	\$ 37.40	(11.83)	(28.24)	\$ 47.09	(2.14)	(18.56)	\$ 18.03	(31.21)	(47.62)
Wed 07 Jul	\$ 6.60	\$ 43.89	(5.63)	(22.13)	\$ 48.47	(1.04)	(17.54)	\$ 34.71	(14.80)	(31.30)
Thu 08 Jul	\$ 6.50	\$ 78.32	29.57	13.32	\$ 102.28	53.53	37.28	\$ 30.40	(18.35)	(34.60)
Fri 09 Jul	\$ 6.31	\$ 54.53	7.19	(8.60)	\$ 50.78	3.43	(12.35)	\$ 62.04	14.70	(1.09)
Sat 10 Jul	\$ 6.23	\$ 24.69	(22.00)	(37.56)	\$ 22.33	(24.36)	(39.93)	\$ 29.42	(17.27)	(32.84)

Daily average sparksreads last week were mostly negative for a heat rate of 7.5 GJ/MWh and mostly negative for a heat rate of 10.0 GJ/MWh.

On-peak sparksreads last week were mostly negative for a heat rate of 7.5 GJ/MWh and mostly negative for a heat rate of 10.0 GJ/MWh.

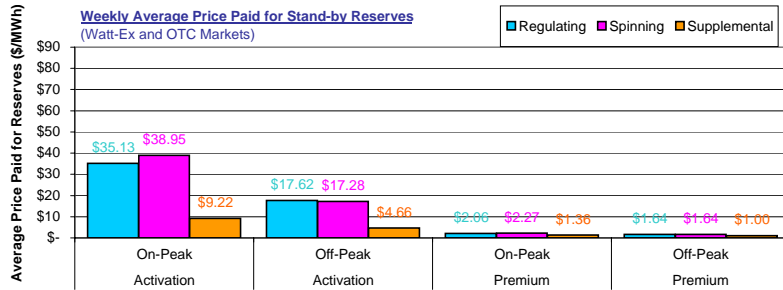
Off-peak sparksreads last week were mostly negative for a heat rate of 7.5 GJ/MWh and all negative for a heat rate of 10.0 GJ/MWh.

# Ancillary Services Market



Average on-peak prices paid for active ancillary services last week were **\$10.38/MWh**, **\$9.88/MWh** and **\$2.81/MWh** respectively for active **regulating**, **spinning** and **supplemental** reserves.

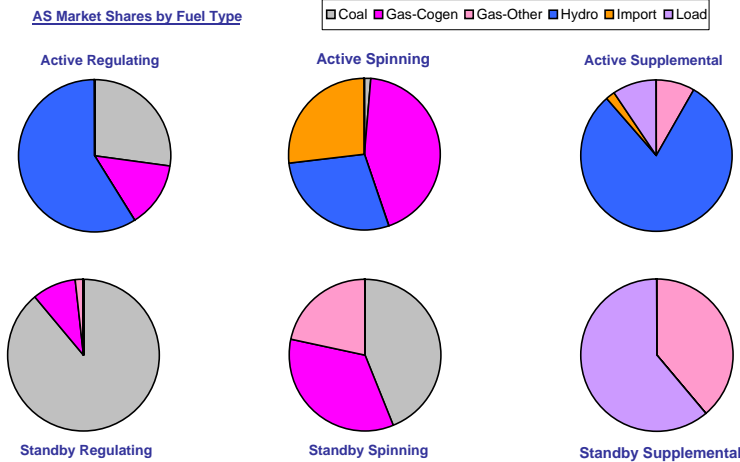
Active average off-peak prices were somewhat **higher** and averaged **\$18.53/MWh**, **\$9.52/MWh** and **\$0.66/MWh** for active **regulating**, **spinning** and **supplemental** reserves respectively.



Weekly average activation prices for stand-by reserves ranged from **\$4.66/MWh** for **off-peak supplemental** reserves to **\$38.95/MWh** for **on-peak spinning** reserves.

Weekly average premium prices ranged from **\$1.00/MWh** for **off-peak supplemental** reserves up to **\$2.27/MWh** for **on-peak spinning** reserves.

**AS Market Shares by Fuel Type**



Last week **hydro** units had the largest market share in the **active regulating** reserve market with **58.8%**. In the **active spinning** reserve market, **gas-cogen** units had the leading market share with **43.3%** while in the **active supplemental** reserve market, **hydro** units dominated with a **80.1%** market share.

Coal units dominated the **standby regulating** reserve market with a **88.9%** market share. Leading market share in the **standby spinning** market was held by coal units with a **43.9%** market share. In the **standby supplemental** reserve market, **load** units had the leading market share with **61.1%**,

## 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 MAPP-N: 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 MAPP-N: 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.
- Sparks spread** Sparks spreads 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.