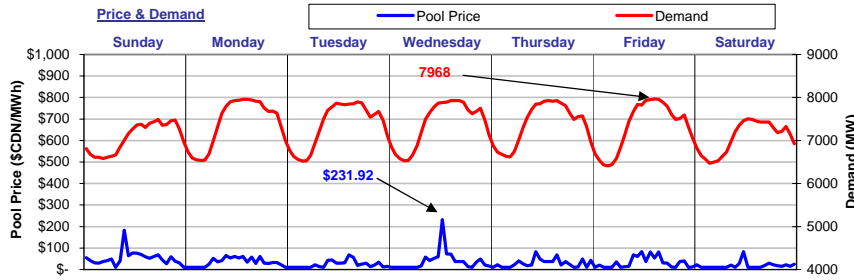


# The Market Monitor

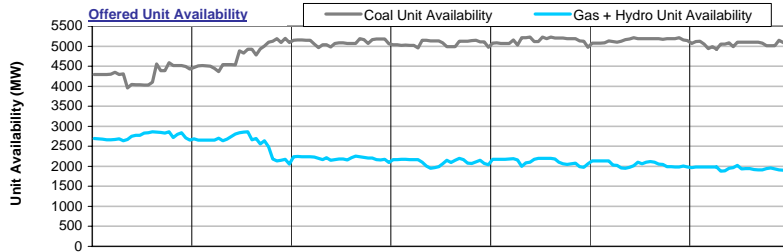
WATCHING THE MARKET : your fact source

Week Ending August 28, 2004

## Weekly Highlights

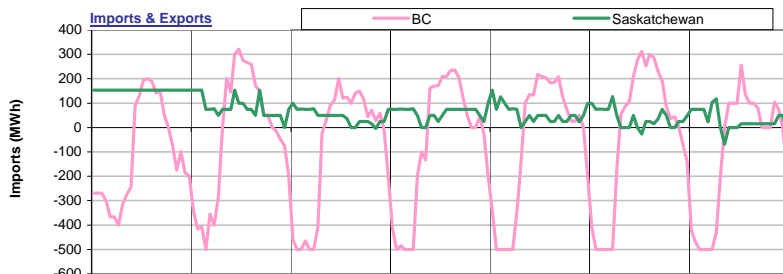


For the week ending August 28, 2004, **Pool Price** averaged \$33.24/MWh and ranged from a minimum of \$10.35/MWh in HE05 on Friday to a maximum of \$231.92/MWh in HE13 on Wednesday. **Demand** reached a high of 7968 MW in HE15 on Friday and a low of 6408 MW in HE04 on Friday. Average demand for the week was 6989MW. **Pool Price** and **Demand** were positively correlated last week with an R-squared value of 0.18.

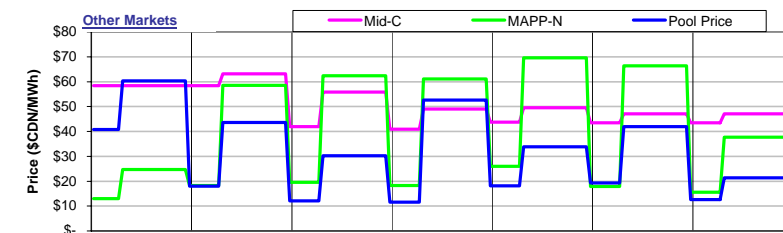


**Coal Unit Availability** averaged 4943 MW last week. This is an equivalent availability of 90% (based on MCR). **Gas and Hydro Unit Availability** averaged 2249MW last week, which is an equivalent of 40% (based on MCR).

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

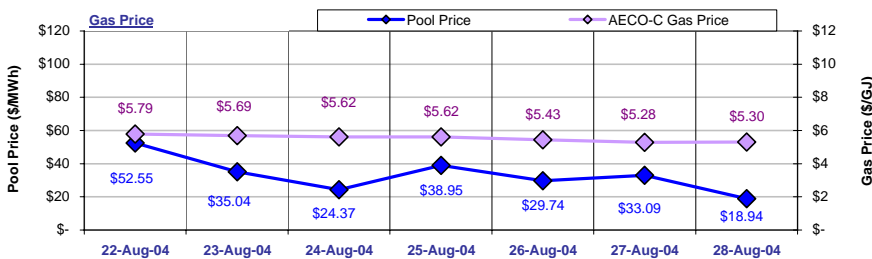


Alberta was a net exporter to **BC** last week with total exports equal to 14,098MWh. Alberta was a net importer from **Saskatchewan** last week with total imports equal to 17,384MWh. Overall, Alberta exported 31,482MWh of electricity last week.



**Pool Prices** were generally lower than prices in **Mid-C** and lower than prices in **MAPP-N** last week. **Mid-C** prices averaged \$51.95/MWh on-peak and \$47.18/MWh off-peak. **MAPP-N** prices averaged \$59.28/MWh on-peak and \$18.35/MWh off-peak.

Prices in \$/MWh at an exchange rate of 1.3005.

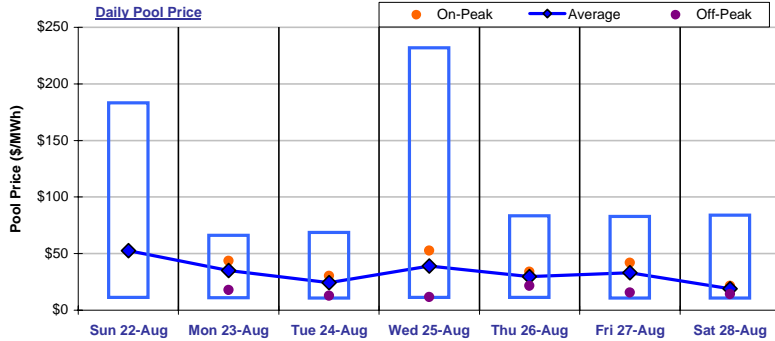


The average **AECO-C Gas Price** last week was \$5.53/GJ and ranged from a minimum of \$5.28/GJ to \$5.79/GJ. Prevailing gas prices resulted in market heat rates ranging from a low of 3.57GJ/MWh to a high of 9.08GJ/MWh. The average market heat rate for the week was 5.97GJ/MWh.

# Wholesale Market

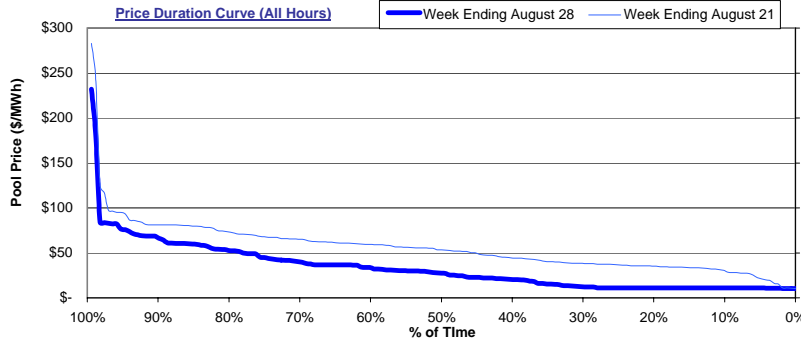
## Weekly Market Statistics

	Sunday 22-Aug	Monday 23-Aug	Tuesday 24-Aug	Wednesday 25-Aug	Thursday 26-Aug	Friday 27-Aug	Saturday 28-Aug	Average	Last Week	% Change	YTD
<b>Pool Price</b>											
Average	\$ 52.55	\$ 35.04	\$ 24.37	\$ 38.95	\$ 29.74	\$ 33.09	\$ 18.94	\$ 33.24	\$ 55.75	-40.4%	\$ 54.01
On-Peak	NA	\$ 43.60	\$ 30.22	\$ 52.62	\$ 33.83	\$ 41.89	\$ 21.37	\$ 37.26	\$ 65.83	-43.4%	\$ 62.67
Off-Peak	\$ 52.55	\$ 17.93	\$ 12.67	\$ 11.61	\$ 21.57	\$ 15.48	\$ 14.09	\$ 27.89	\$ 42.31	-34.1%	\$ 39.22
COV	0.63	0.54	0.65	1.18	0.64	0.77	0.80	0.75	0.42	77.8%	
<b>Demand</b>											
Average	7,074	7,413	7,374	7,396	7,394	7,331	7,072	7,294	7,519	-3.0%	7,381
Minimum	6,584	6,538	6,523	6,527	6,621	6,408	6,467	6,524	6,704	-2.7%	6,017
Maximum	7,489	7,961	7,896	7,928	7,926	7,968	7,507	7,811	8,144	-4.1%	8,967
<b>Coal Unit Availability</b>											
Average	4,293	4,772	5,102	5,071	5,146	5,155	5,058	4,943	4,691	4.6%	4,906
Utilization	78%	86%	92%	92%	93%	93%	92%	90%	85%	4.6%	89%
<b>Gas and Hydro Unit Availability</b>											
Average	2,748	2,575	2,198	2,106	2,123	2,048	1,944	2,249	2,554	-5.4%	2,297
Utilization	58%	54%	46%	44%	45%	43%	41%	40%	45%	-5.4%	41%



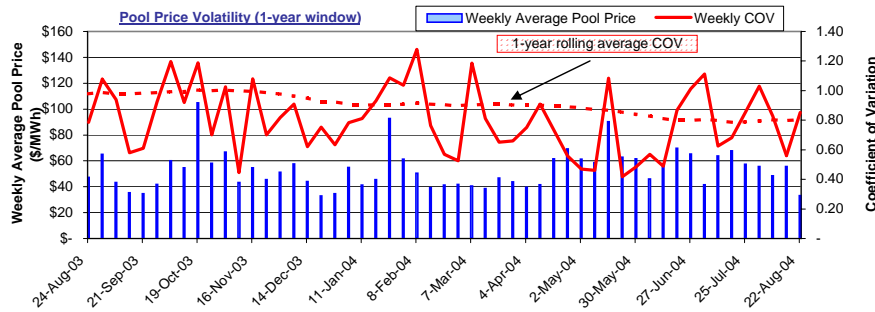
The Daily Pool Price graph plots the daily range in hourly Pool price (defined by the blue box) along with the daily average and daily on and off-peak prices. The on-peak Pool price for the week was \$37.26/MWh while the off-peak Pool price for the week was \$27.89/MWh.

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 August 28, prices were at or below:  
 \$20/MWh 39% of the time  
 \$50/MWh 78% of the time  
 \$100/MWh 98% of the time  
 \$250/MWh 100% of the time  
 \$500/MWh 100% of the time



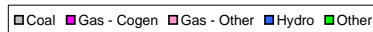
The chart plots average weekly Pool Price and the Coefficient of Variation (COV) of hourly Pool prices for the week. The COV is a standard statistical measure of volatility.

Pool price volatility increased for the week ending August 28 from the previous week.

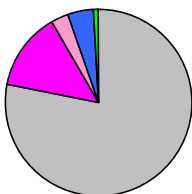
Pool price volatility also moved above the 1-year rolling average COV value.

## Market Share Statistics

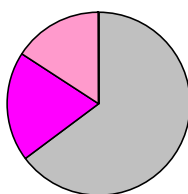
By Fuel Type:



Weekly Generation by Fuel Type



Weekly Price Setting by Fuel Type



By Submitting Customer:

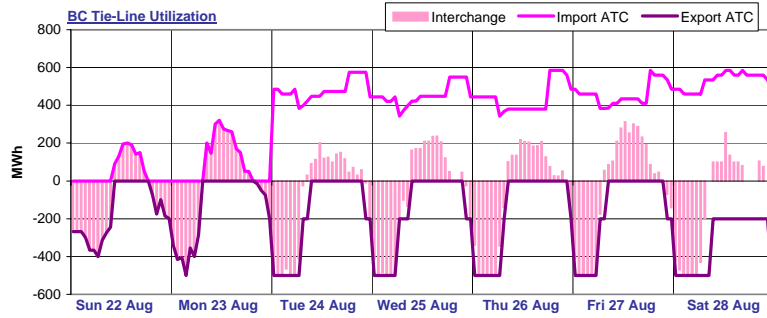
Weekly Price Setting by Submitting Customer



Last week, coal units were responsible for 78.1% of the generation in the province and set price 64.7% of the time. Gas-cogen units accounted for 13.5% of the generation and set price 19.4% of the time last week while other gas units made up 3.1% of generation and set price 15.9% of the time.

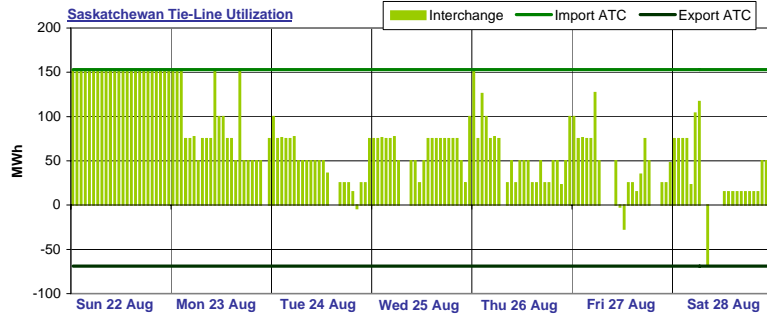
A total of 9 market participants set price last week. One market participants set price more than 20% of the time last week. The top price setter set price 45.4% of the time and the top five price setters set price a total of 81.2% of the time.

# Interties



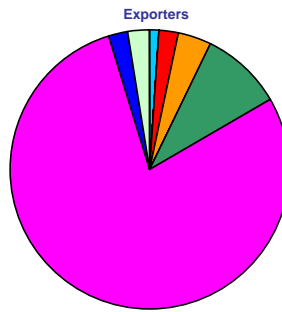
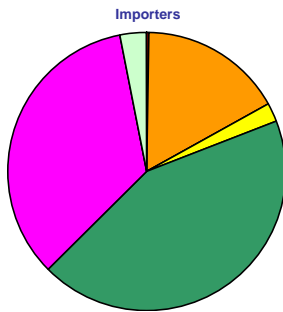
BC import capacity was 28% utilized last week while BC export capacity was 73% utilized. Energy was being imported into Alberta over the BC tie-line 50% of the time and exported out of Alberta over the BC tie-line 44% of the time last week. There was no activity on the BC tie-line 6% of the time last 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 48% utilized last week while Saskatchewan export capacity was 0% utilized. Energy was being imported into Alberta over the Saskatchewan tie-line 88% of the time and exported out of Alberta over the Saskatchewan tie-line 3% of the time last week. There was no activity on the Saskatchewan tie-line 9% of the time last week.

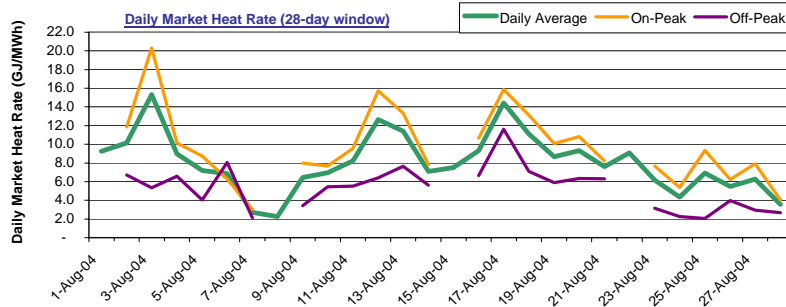
## Tie-Line Market Shares



Last week, there were a total of 7 importers. The most active importer had a market share of 43.3% while the second most active importer had a market share of 34.4%. There were a total of 7 exporters last week. The most active exporter had a market share of 78.5% while the next largest exporter had a market share of 9.4%.

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 8.0 GJ/MWh and ranged from a low of 2.3 GJ/MWh to a high of 15.3 GJ/MWh.

The daily On-Peak Market Heat Rate for the last 28 days averaged 9.7 GJ/MWh while the daily Off-Peak Market Heat Rate averaged 5.3 GJ/MWh.

## Sparksreads

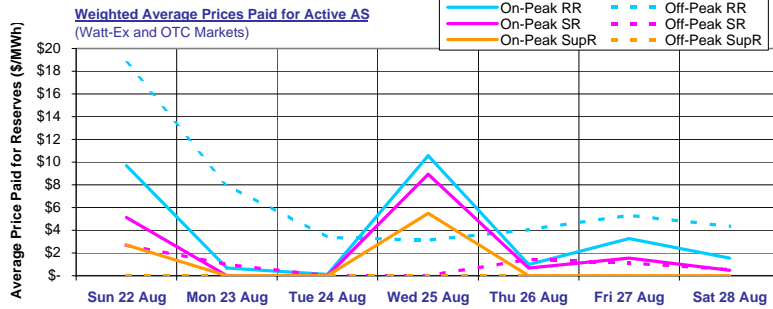
Date	AECO-C Gas Price (\$/GJ)	Daily Average			On-Peak			Off-Peak				
		Pool Price (\$/MWh)	Sparksread (\$/MWh)	HR=7.5	HR=10.0	Pool Price (\$/MWh)	Sparksread (\$/MWh)	HR=7.5	HR=10.0	Pool Price (\$/MWh)	Sparksread (\$/MWh)	HR=7.5
Sun 22 Aug	\$ 5.79	\$ 52.55	9.15	(5.31)	NA	NA	NA	NA	\$ 52.55	9.15	(5.31)	(5.31)
Mon 23 Aug	\$ 5.69	\$ 35.04	(7.60)	(21.81)	\$ 43.60	0.96	(13.25)	(38.92)	\$ 17.93	(24.71)	(38.92)	(38.92)
Tue 24 Aug	\$ 5.62	\$ 24.37	(17.77)	(31.81)	\$ 30.22	(11.92)	(25.96)	(43.51)	\$ 12.67	(29.47)	(43.51)	(43.51)
Wed 25 Aug	\$ 5.62	\$ 38.95	(3.21)	(17.26)	\$ 52.62	10.46	(3.59)	(44.60)	\$ 11.61	(30.55)	(44.60)	(44.60)
Thu 26 Aug	\$ 5.43	\$ 29.74	(11.01)	(24.60)	\$ 33.83	(6.93)	(20.51)	(32.77)	\$ 21.57	(19.19)	(32.77)	(32.77)
Fri 27 Aug	\$ 5.28	\$ 33.09	(6.52)	(19.72)	\$ 41.89	2.29	(10.92)	(37.33)	\$ 15.48	(24.13)	(37.33)	(37.33)
Sat 28 Aug	\$ 5.30	\$ 18.94	(20.83)	(34.09)	\$ 21.37	(18.40)	(31.66)	(38.94)	\$ 14.09	(25.68)	(38.94)	(38.94)

Daily average 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.

On-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.

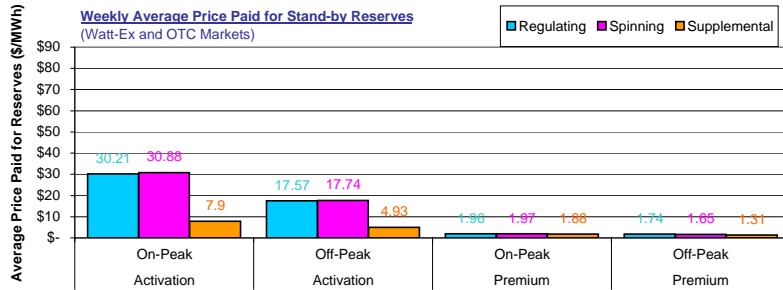
Off-peak sparksreads last week were mostly negative for a heat rate of 7.5 GJ/MWh and all negative for a heat rate of 10.0 GJ/MWh.

# Ancillary Services Market



Average on-peak prices paid for active ancillary services last week were **\$3.87/MWh**, **\$2.36/MWh** and **\$1.15/MWh** respectively for active **regulating**, **spinning** and **supplemental** reserves.

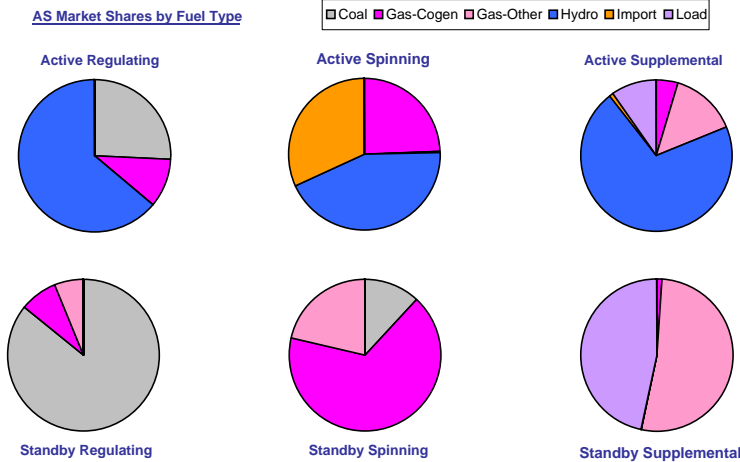
Active average off-peak prices were somewhat **higher** and averaged **\$7.69/MWh**, **\$1.20/MWh** and **\$0.00/MWh** for active **regulating**, **spinning** and **supplemental** reserves respectively.



Weekly average activation prices for stand-by reserves ranged from **\$4.83/MWh** for **off-peak supplemental** reserves to **\$30.88/MWh** for **on-peak spinning** reserves.

Weekly average premium prices ranged from **\$1.28/MWh** for **off-peak supplemental** reserves up to **\$1.97/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 **63.9%**. In the **active spinning** reserve market, **hydro** units had the leading market share with **43.2%** while in the **active supplemental** reserve market, **hydro** units dominated with a **70.6%** market share.

Coal units dominated the **standby regulating** reserve market with a **85.9%** market share. Leading market share in the **standby spinning** market was held by **gas-cogen** units with a **66.8%** market share. In the **standby supplemental** reserve market, **gas-other** units had the leading market share with **52.2%**.

## 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.