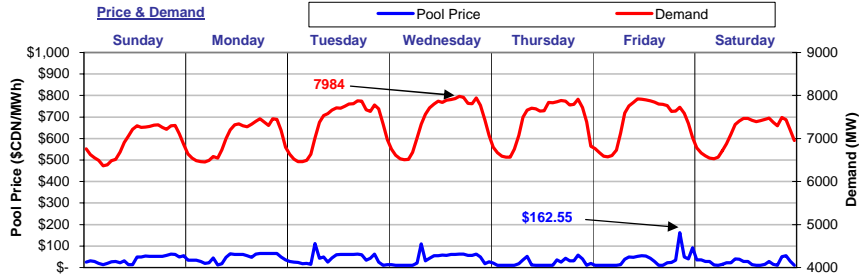


# The Market Monitor

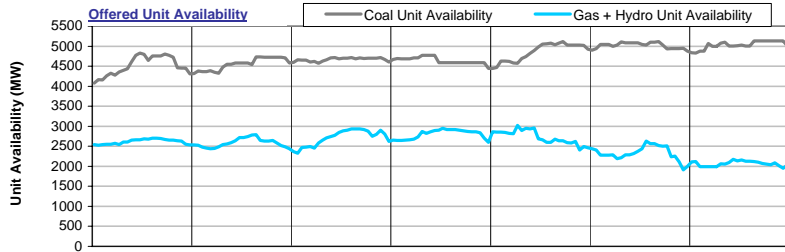
WATCHING THE MARKET : your fact source

Week Ending September 11, 2004

## Weekly Highlights

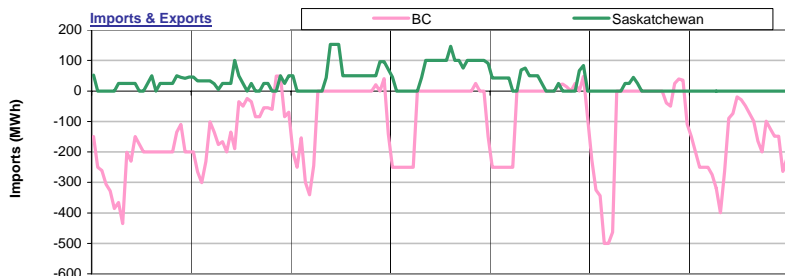


For the week ending September 11, 2004, Pool Price averaged \$36.34/MWh and ranged from a minimum of \$9.81/MWh in HE5 on Wednesday to a maximum of \$162.55/MWh in HE21 on Friday. Demand reached a high of 7984 MW in HE17 on Wednesday and a low of 6367 MW in HE5 on Sunday. Average demand for the week was 7236MW. Pool Price and Demand were positively correlated last week with an R-squared value of 0.20.

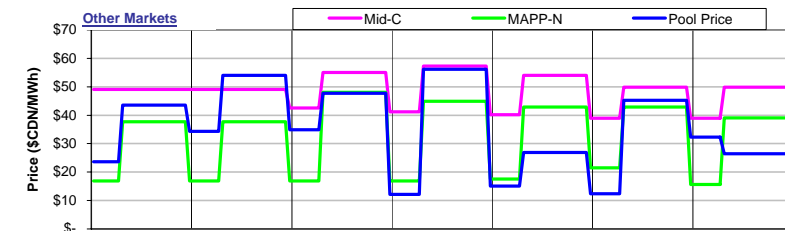


Coal Unit Availability averaged 4755 MW last week. This is an equivalent availability of 86% (based on MCR). Gas and Hydro Unit Availability averaged 2549MW last week, which is an equivalent of 45% (based on MCR).

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

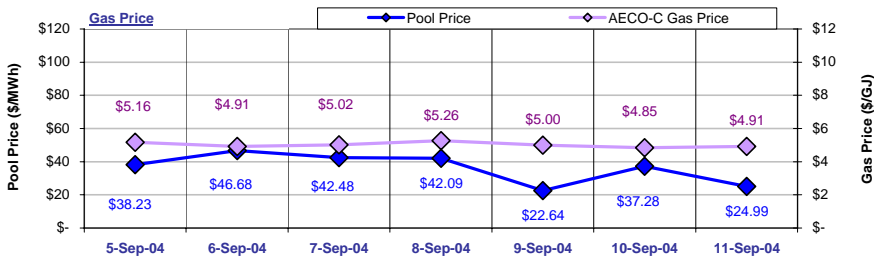


Alberta was a net exporter to BC last week with total exports equal to 19,399MWh. Alberta was a net importer from Saskatchewan last week with total imports equal to 4,983MWh. Overall, Alberta exported 14,416MWh of electricity last week.



Pool Prices were generally lower than prices in Mid-C and higher than prices in MAPP-N last week. Mid-C prices averaged \$52.52/MWh on-peak and \$42.83/MWh off-peak. MAPP-N prices averaged \$42.58/MWh on-peak and \$17.46/MWh off-peak.

Prices in \$/MWh at an exchange rate of 1.3001.

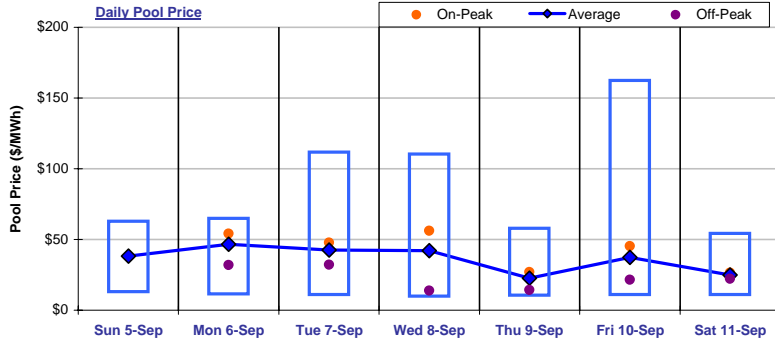


The average AECO-C Gas Price last week was \$5.02/GJ and ranged from a minimum of \$4.85/GJ to \$5.26/GJ. Prevailing gas prices resulted in market heat rates ranging from a low of 4.53GJ/MWh to a high of 9.50GJ/MWh. The average market heat rate for the week was 7.24GJ/MWh.

# Wholesale Market

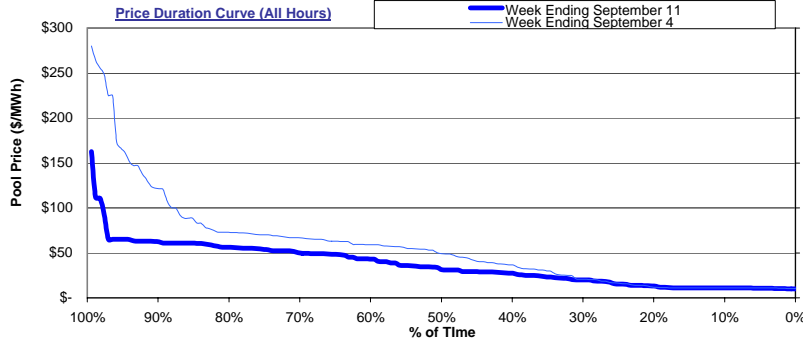
## Weekly Market Statistics

	Sunday 5-Sep	Monday 6-Sep	Tuesday 7-Sep	Wednesday 8-Sep	Thursday 9-Sep	Friday 10-Sep	Saturday 11-Sep	Average	Last Week	% Change	YTD
<b>Pool Price</b>											
Average	\$ 38.23	\$ 46.68	\$ 42.48	\$ 42.09	\$ 22.64	\$ 37.28	\$ 24.99	\$ <b>36.34</b>	\$ <b>56.50</b>	<b>-35.7%</b>	\$ <b>53.59</b>
On-Peak	NA	\$ 54.03	\$ 47.68	\$ 56.20	\$ 26.86	\$ 45.21	\$ 26.44	\$ <b>42.74</b>	\$ <b>80.00</b>	<b>-46.6%</b>	\$ <b>62.60</b>
Off-Peak	\$ 38.23	\$ 31.99	\$ 32.07	\$ 13.86	\$ 14.22	\$ 21.43	\$ 22.10	\$ <b>27.81</b>	\$ <b>25.16</b>	<b>10.5%</b>	\$ <b>38.41</b>
COV	0.44	0.38	0.55	0.61	0.65	0.91	0.52	<b>0.58</b>	<b>0.71</b>	<b>-18.5%</b>	
<b>Demand</b>											
Average	6,951	7,006	7,332	7,426	7,398	7,418	7,123	<b>7,236</b>	<b>7,317</b>	<b>-1.1%</b>	<b>7,376</b>
Minimum	6,367	6,455	6,462	6,504	6,566	6,571	6,532	<b>6,494</b>	<b>6,530</b>	<b>-0.6%</b>	<b>6,017</b>
Maximum	7,319	7,461	7,875	7,984	7,910	7,923	7,490	<b>7,709</b>	<b>7,836</b>	<b>-1.6%</b>	<b>8,967</b>
<b>Coal Unit Availability</b>											
Average	4,514	4,554	4,669	4,642	4,856	5,019	5,034	4,755	4,691	1.2%	4,896
Utilization	82%	83%	85%	84%	88%	91%	91%	86%	85%	1.2%	89%
<b>Gas and Hydro Unit Availability</b>											
Average	2,618	2,585	2,716	2,801	2,727	2,329	2,066	2,549	2,458	1.6%	2,308
Utilization	55%	54%	57%	59%	57%	49%	43%	45%	43%	1.6%	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 **\$42.74/MWh** while the **off-peak Pool price** for the week was **\$27.81/MWh**.

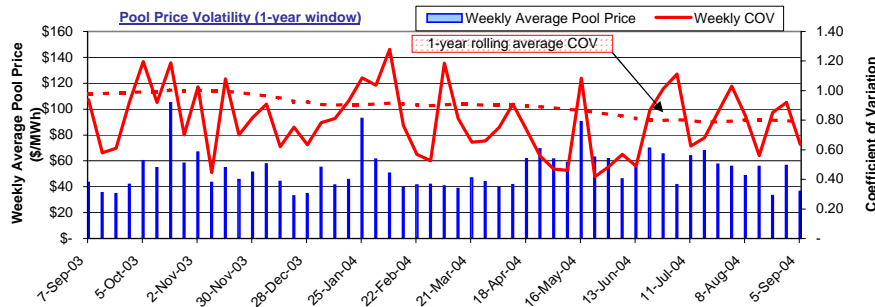
Note: Sundays and most statutory holidays are defined as off-peak.



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

For the week ending **September 11**, prices were at or below:

\$20/MWh	30% of the time
\$50/MWh	70% of the time
\$100/MWh	98% of the time
\$250/MWh	100% of the time
\$500/MWh	100% of the time



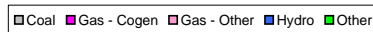
The chart plots average weekly **Pool Price** and the **Coefficient of Variation (COV)** of hourly Pool prices for the week. The COV is a standard statistical measure of volatility.

Pool price volatility **decreased** for the week ending **September 11** from the previous week.

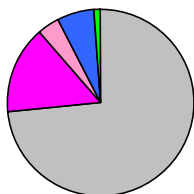
Pool price volatility also moved **below** the 1-year rolling average COV value.

### Market Share Statistics

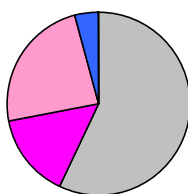
By Fuel Type:



Weekly Generation by Fuel Type

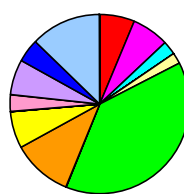


Weekly Price Setting by Fuel Type



By Submitting Customer:

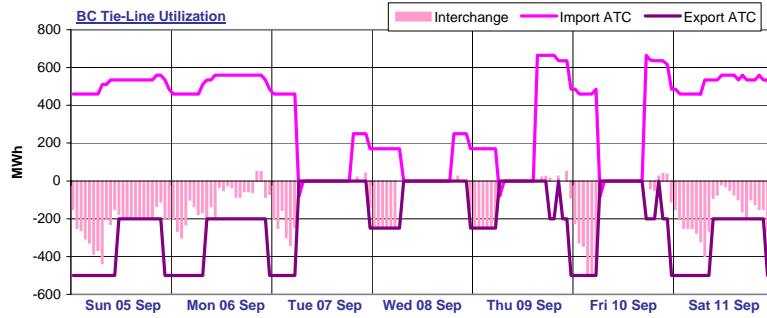
Weekly Price Setting by Submitting Customer



Last week, coal units were responsible for **73.3%** of the generation in the province and set price **56.8%** of the time. **Gas-cogen** units accounted for **15.4%** of the generation and set price **15.3%** of the time last week while **other gas** units made up **3.7%** of generation and set price **23.7%** of the time.

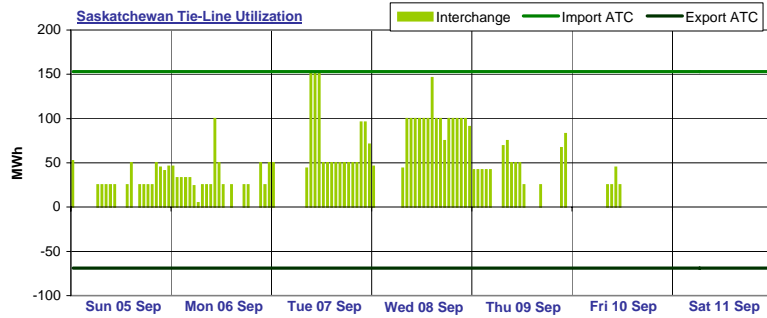
A total of **12** market participants set price last week. One market participants set price more than **20%** of the time last week. The top price setter set price **38.6%** of the time and the top five price setters set price a total of **75.6%** of the time.

# Interties



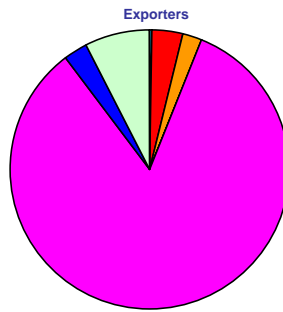
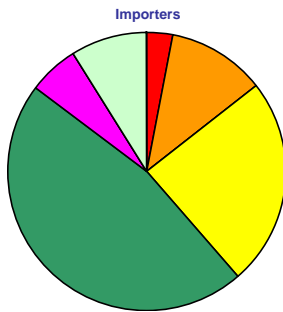
BC import capacity was 1% utilized last week while BC export capacity was 54% utilized. Energy was being imported into Alberta over the BC tie-line 8% of the time and exported out of Alberta over the BC tie-line 60% of the time last week. There was no activity on the BC tie-line 33% of the time last 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 19% utilized last week while Saskatchewan export capacity was 0% utilized. Energy was being imported into Alberta over the Saskatchewan tie-line 52% of the time and exported out of Alberta over the Saskatchewan tie-line 0% of the time last week. There was no activity on the Saskatchewan tie-line 48% of the time last week.

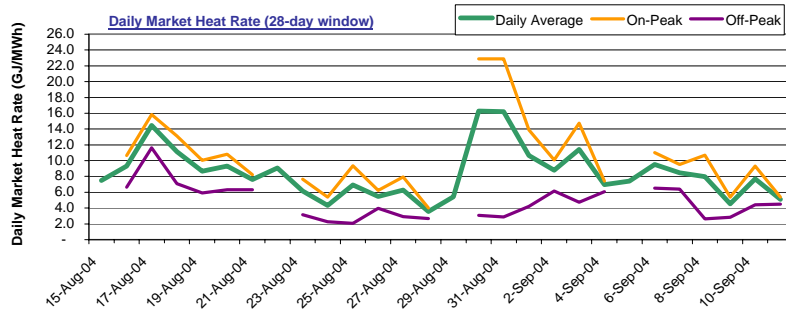
### Tie-Line Market Shares



Last week, there were a total of 6 importers. The most active importer had a market share of 46.5% while the second most active importer had a market share of 24.3%. There were a total of 6 exporters last week. The most active exporter had a market share of 83.7% while the next largest exporter had a market share of 7.6%.

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 8.4 GJ/MWh and ranged from a low of 3.6 GJ/MWh to a high of 16.3 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 4.8 GJ/MWh.

### Sparksreads

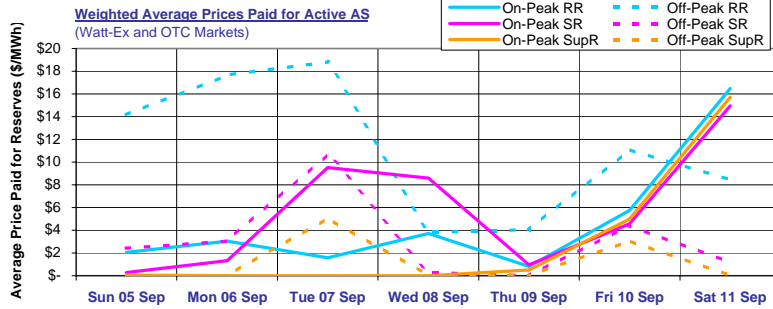
Date	AECO-C Gas Price (\$/GJ)	Daily Average			On-Peak			Off-Peak				
		Pool Price (\$/MWh)	Sparksread (\$/MWh)	HR=7.5	HR=10.0	Pool Price (\$/MWh)	Sparksread (\$/MWh)	HR=7.5	HR=10.0	Pool Price (\$/MWh)	Sparksread (\$/MWh)	HR=7.5
Sun 05 Sep	\$ 5.16	\$ 38.23	(0.49)	(13.40)	NA	NA	NA	\$ 38.23	(0.49)	(13.40)		
Mon 06 Sep	\$ 4.91	\$ 46.68	9.84	(2.44)	\$ 54.03	17.19	4.91	\$ 31.99	(4.85)	(17.13)		
Tue 07 Sep	\$ 5.02	\$ 42.48	4.85	(7.69)	\$ 47.68	10.05	(2.49)	\$ 32.07	(5.56)	(18.10)		
Wed 08 Sep	\$ 5.26	\$ 42.09	2.60	(10.56)	\$ 56.20	16.72	3.55	\$ 13.86	(25.63)	(38.79)		
Thu 09 Sep	\$ 5.00	\$ 22.64	(14.87)	(27.37)	\$ 26.86	(10.65)	(23.16)	\$ 14.22	(33.30)	(35.80)		
Fri 10 Sep	\$ 4.85	\$ 37.28	0.92	(11.20)	\$ 45.21	8.85	(3.27)	\$ 21.43	(14.93)	(27.05)		
Sat 11 Sep	\$ 4.91	\$ 24.99	(11.85)	(24.13)	\$ 26.44	(10.41)	(22.69)	\$ 22.10	(14.75)	(27.03)		

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

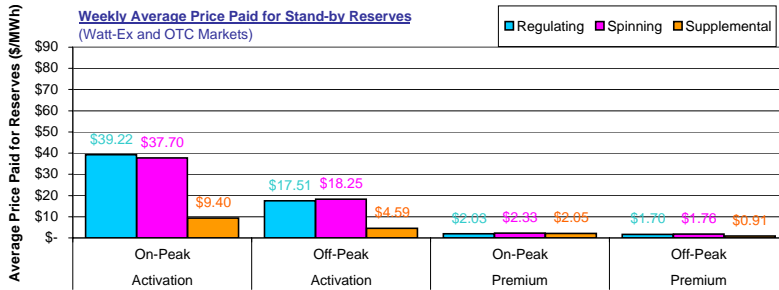
Off-peak sparksreads last week were all negative for a heat rate of 7.5 GJ/MWh and all negative for a heat rate of 10.0 GJ/MWh.

# Ancillary Services Market



Average on-peak prices paid for active ancillary services last week were \$3.25/MWh, \$4.33/MWh and \$1.47/MWh respectively for active **regulating**, **spinning** and **supplemental** reserves.

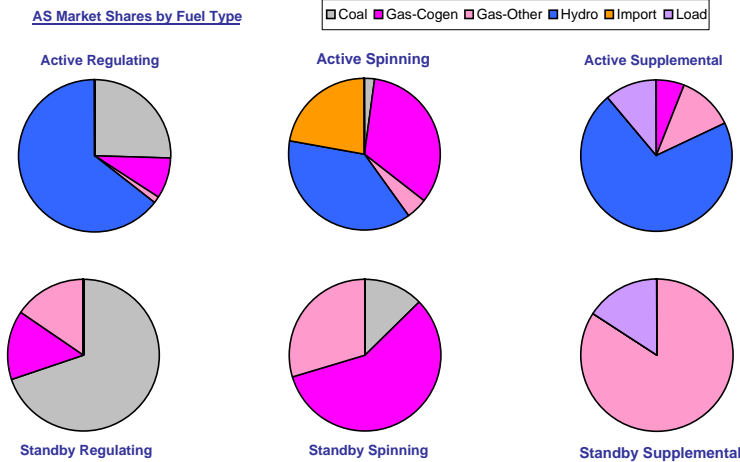
Active average off-peak prices were somewhat higher and averaged \$11.59/MWh, \$3.65/MWh and \$1.61/MWh for active **regulating**, **spinning** and **supplemental** reserves respectively.



Weekly average activation prices for stand-by reserves ranged from \$4.59/MWh for **off-peak supplemental** reserves to \$39.22/MWh for **on-peak regulating** reserves.

Weekly average premium prices ranged from \$0.91/MWh for **off-peak supplemental** reserves up to \$2.33/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 64.4%. In the **active spinning** reserve market, **hydro** units had the leading market share with 37.8% while in the **active supplemental** reserve market, **hydro** units dominated with a 70.9% market share.

Coal units dominated the **standby regulating** reserve market with a 69.6% market share. Leading market share in the **standby spinning** market was held by **gas-cogen** units with a 57.6% market share. In the **standby supplemental** reserve market, **gas-other** units had the leading market share with 84.2%.

## 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.