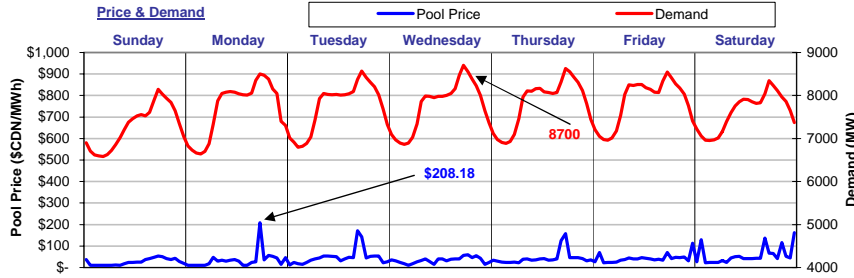


# The Market Monitor

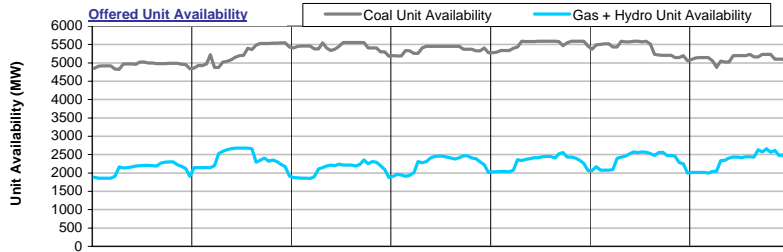
WATCHING THE MARKET : your fact source

Week Ending November 27, 2004

## Weekly Highlights

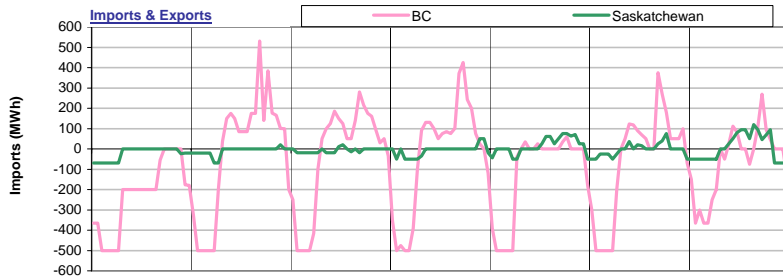


For the week ending November 27, 2004, **Pool Price** averaged \$40.95/MWh and ranged from a minimum of \$9.81/MWh in HE09 on Sunday to a maximum of \$208.18/MWh in HE18 on Monday. **Demand** reached a high of 8700 MW in HE18 on Wednesday and a low of 6584 MW in HE05 on Sunday. Average demand for the week was 7683MW. **Pool Price** and **Demand** were positively correlated last week with an R-squared value of 0.21.

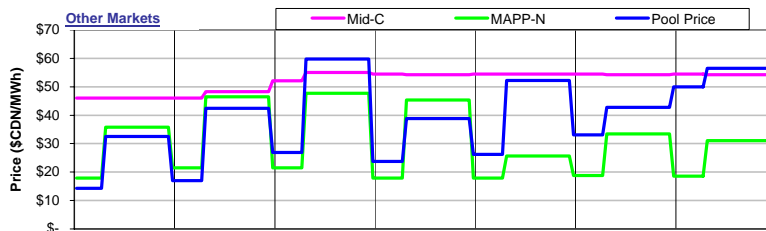


**Coal Unit Availability** averaged 5287 MW last week. This is an equivalent availability of 96% (based on MCR). **Gas and Hydro Unit Availability** averaged 2267MW last week, which is an equivalent of 40% (based on MCR).

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

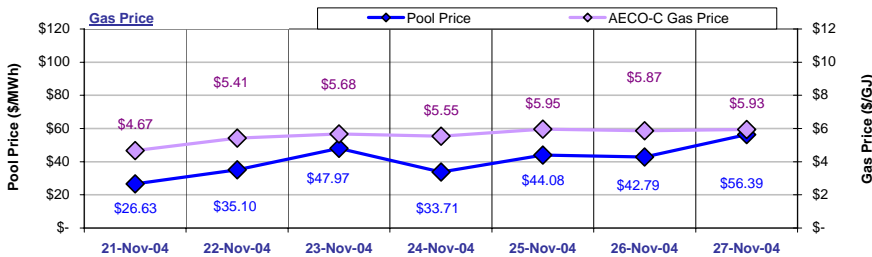


Alberta was a net exporter to **BC** last week with total exports equal to 13,509MWh. Alberta was a net exporter to **Saskatchewan** last week with total exports equal to 680MWh. Overall, Alberta exported 14,189MWh of electricity last week.



**Pool Prices** were generally lower than prices in **Mid-C** and higher than prices in **MAPP-N** last week. **Mid-C** prices averaged \$53.40/MWh on-peak and \$51.68/MWh off-peak. **MAPP-N** prices averaged \$38.26/MWh on-peak and \$19.14/MWh off-peak.

Prices in \$/MWh at an exchange rate of 1.1925.

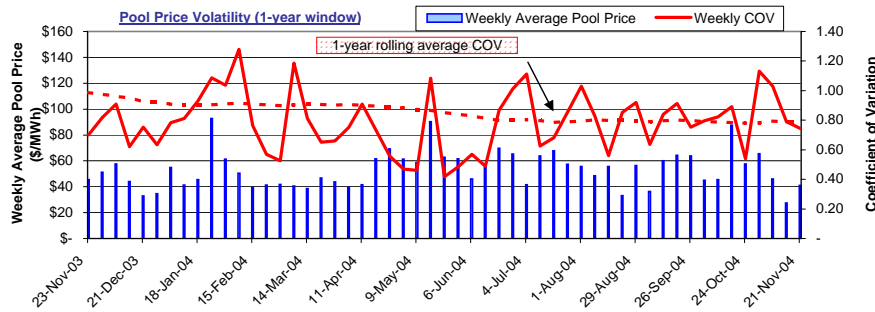
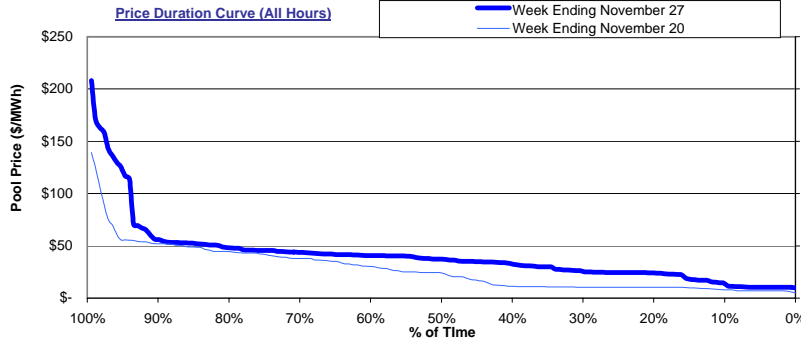
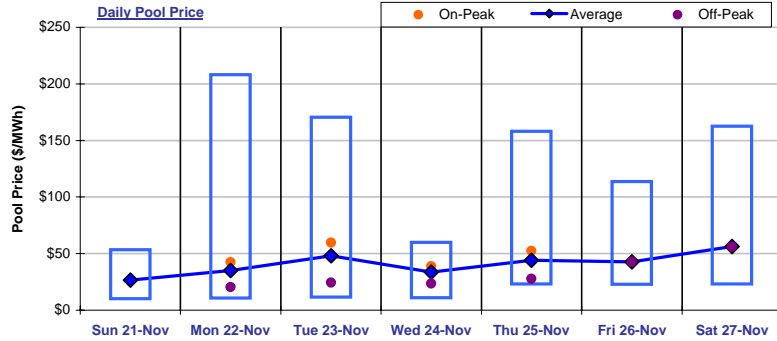


The average **AECO-C Gas Price** last week was \$5.58/GJ and ranged from a minimum of \$4.67/GJ to \$5.95/GJ. Prevailing gas prices resulted in market heat rates ranging from a low of 5.70GJ/MWh to a high of 9.50GJ/MWh. The average market heat rate for the week was 7.27GJ/MWh.

# Wholesale Market

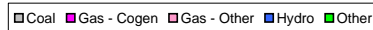
## Weekly Market Statistics

	Sunday 21-Nov	Monday 22-Nov	Tuesday 23-Nov	Wednesday 24-Nov	Thursday 25-Nov	Friday 26-Nov	Saturday 27-Nov	Average	Last Week	% Change	YTD
<b>Pool Price</b>											
Average	\$ 26.63	\$ 35.10	\$ 47.97	\$ 33.71	\$ 44.08	\$ 42.79	\$ 56.39	\$ <b>40.95</b>	\$ <b>27.48</b>	<b>49.0%</b>	\$ <b>53.90</b>
On-Peak	NA	\$ 42.41	\$ 59.76	\$ 38.87	\$ 52.19	\$ 42.82	\$ 56.53	\$ <b>48.76</b>	\$ <b>36.23</b>	<b>34.6%</b>	\$ <b>63.27</b>
Off-Peak	\$ 26.63	\$ 20.46	\$ 24.38	\$ 23.40	\$ 27.86	\$ 42.74	\$ 56.11	\$ <b>30.54</b>	\$ <b>15.82</b>	<b>93.0%</b>	\$ <b>38.35</b>
COV	0.56	1.13	0.76	0.40	0.71	0.45	0.69	<b>0.67</b>	<b>0.68</b>	<b>-1.7%</b>	
<b>Demand</b>											
Average	7,283	7,696	7,750	7,766	7,823	7,848	7,618	<b>7,683</b>	<b>7,518</b>	<b>2.2%</b>	<b>7,396</b>
Minimum	6,584	6,644	6,801	6,864	6,887	6,959	6,957	<b>6,814</b>	<b>6,666</b>	<b>2.2%</b>	<b>6,017</b>
Maximum	8,144	8,500	8,567	8,700	8,626	8,545	8,344	<b>8,489</b>	<b>8,332</b>	<b>1.9%</b>	<b>8,967</b>
<b>Coal Unit Availability</b>											
Average	4,946	5,242	5,435	5,361	5,506	5,395	5,127	<b>5,287</b>	<b>5,294</b>	<b>-0.1%</b>	<b>4,873</b>
Utilization	90%	95%	98%	97%	100%	98%	93%	<b>96%</b>	<b>96%</b>	<b>-0.1%</b>	<b>88%</b>
<b>Gas and Hydro Unit Availability</b>											
Average	2,110	2,378	2,114	2,259	2,305	2,362	2,337	<b>2,267</b>	<b>2,132</b>	<b>2.4%</b>	<b>2,328</b>
Utilization	44%	50%	44%	47%	48%	50%	49%	<b>40%</b>	<b>38%</b>	<b>2.4%</b>	<b>41%</b>

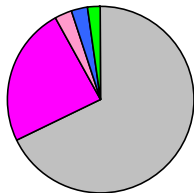


### Market Share Statistics

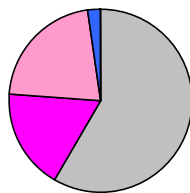
By Fuel Type:



Weekly Generation by Fuel Type



Weekly Price Setting by Fuel Type



By Submitting Customer:

Weekly Price Setting by Submitting Customer



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 \$48.76/MWh while the off-peak Pool price for the week was \$30.54/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 **November 27**, prices were at or below:

- \$20/MWh 15% of the time
- \$50/MWh 81% of the time
- \$100/MWh 93% 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.

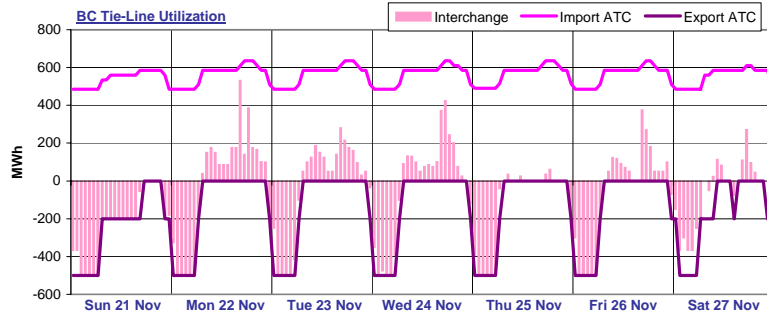
Pool price volatility decreased for the week ending **November 27** from the previous week.

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

Last week, coal units were responsible for 67.8% of the generation in the province and set price 58.3% of the time. Gas-cogen units accounted for 24.3% of the generation and set price 17.7% of the time last week while other gas units made up 3.0% of generation and set price 21.8% of the time.

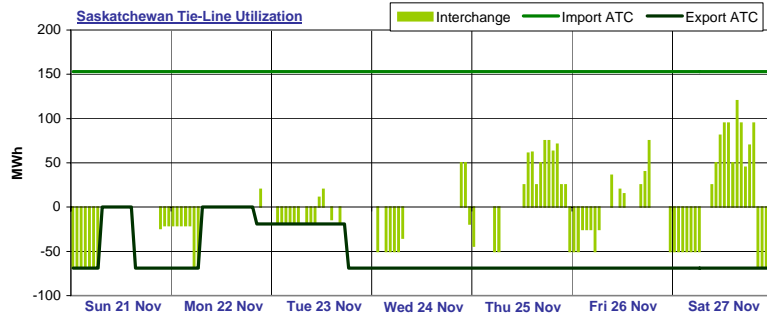
A total of 11 market participants set price last week. Two market participants set price more than 20% of the time last week. The top price setter set price 32.5% of the time and the top five price setters set price a total of 82.0% of the time.

# Interties



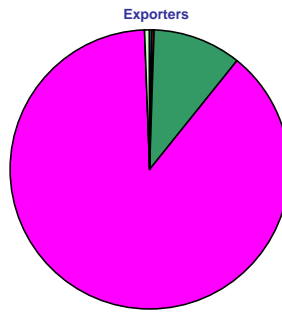
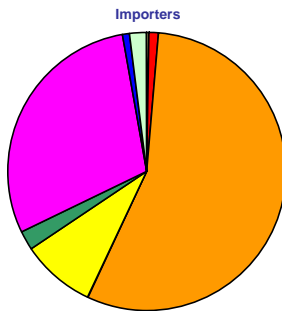
BC import capacity was 9% utilized last week while BC export capacity was 80% utilized. Energy was being imported into Alberta over the BC tie-line 42% of the time and exported out of Alberta over the BC tie-line 41% of the time last week. There was no activity on the BC tie-line 17% of the time last 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 7% utilized last week while Saskatchewan export capacity was 29% utilized. Energy was being imported into Alberta over the Saskatchewan tie-line 20% of the time and exported out of Alberta over the Saskatchewan tie-line 35% of the time last week. There was no activity on the Saskatchewan tie-line 46% of the time last week.

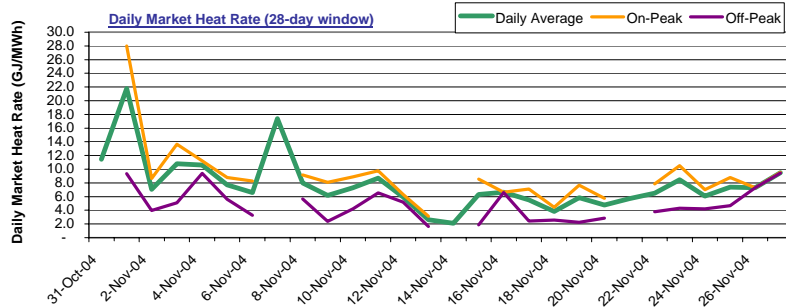
## Tie-Line Market Shares



Last week, there were a total of 8 importers. The most active importer had a market share of 55.5% while the second most active importer had a market share of 29.2%. There were a total of 6 exporters last week. The most active exporter had a market share of 88.5% while the next largest exporter had a market share of 10.4%.

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 7.8 GJ/MWh and ranged from a low of 2.1 GJ/MWh to a high of 21.8 GJ/MWh.

The daily On-Peak Market Heat Rate for the last 28 days averaged 9.0 GJ/MWh while the daily Off-Peak Market Heat Rate averaged 4.8 GJ/MWh.

## Sparksreads

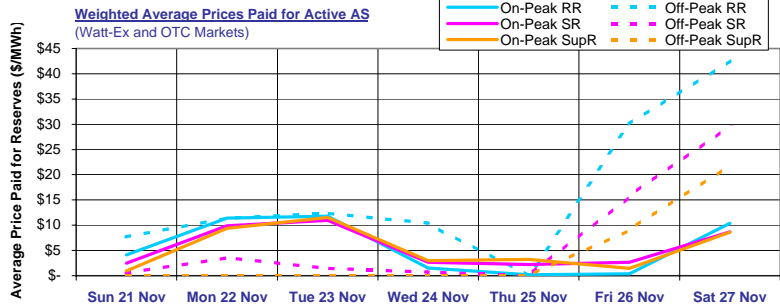
Date	AECO-C Gas Price (\$/GJ)	Daily Average			On-Peak			Off-Peak		
		Pool Price (\$/MWh)	Sparksread (\$/MWh)	HR=10.0	Pool Price (\$/MWh)	Sparksread (\$/MWh)	HR=10.0	Pool Price (\$/MWh)	Sparksread (\$/MWh)	HR=10.0
Sun 21 Nov	\$ 4.67	\$ 26.63	(8.40)	(20.08)	NA	NA	NA	\$ 26.63	(8.40)	(20.08)
Mon 22 Nov	\$ 5.41	\$ 35.10	(5.50)	(19.03)	\$ 42.41	1.82	(11.71)	\$ 20.46	(20.13)	(33.66)
Tue 23 Nov	\$ 5.68	\$ 47.97	5.39	(8.80)	\$ 59.76	17.19	2.99	\$ 24.38	(18.20)	(32.39)
Wed 24 Nov	\$ 5.55	\$ 33.71	(7.89)	(21.75)	\$ 38.87	(2.73)	(16.60)	\$ 23.40	(18.20)	(32.06)
Thu 25 Nov	\$ 5.95	\$ 44.08	(0.58)	(15.47)	\$ 52.19	7.53	(7.36)	\$ 27.86	(16.80)	(31.69)
Fri 26 Nov	\$ 5.87	\$ 42.79	(1.20)	(15.86)	\$ 42.82	(1.18)	(15.84)	\$ 42.74	(1.25)	(15.91)
Sat 27 Nov	\$ 5.93	\$ 56.39	11.89	(2.94)	\$ 56.53	12.03	(2.80)	\$ 56.11	11.62	(3.22)

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 positive for a heat rate of 7.5 GJ/MWh and mostly negative for a heat rate of 10.0 GJ/MWh.

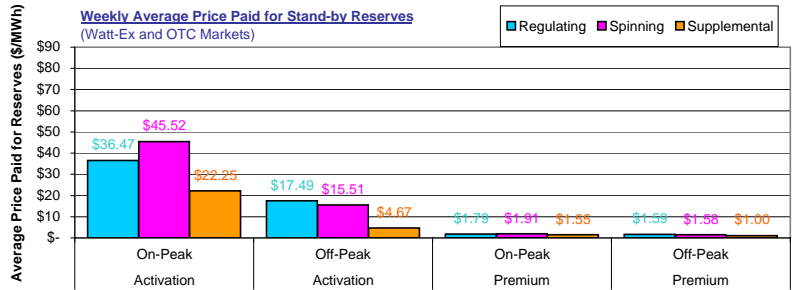
Off-peak sparksreads last week were mostly negative for a heat rate of 7.5 GJ/MWh and all negative for a heat rate of 10.0 GJ/MWh.

# Ancillary Services Market



Average on-peak prices paid for active ancillary services last week were \$7.18/MWh, \$6.82/MWh and \$6.69/MWh respectively for active **regulating**, **spinning** and **supplemental** reserves.

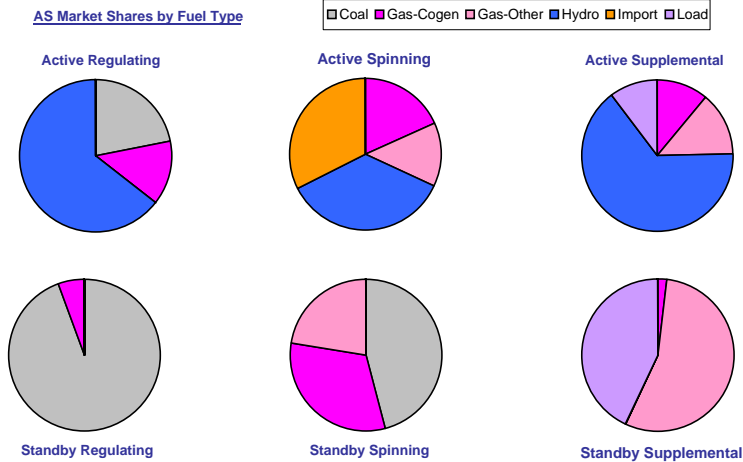
Active average off-peak prices were somewhat higher and averaged \$18.56/MWh, \$7.62/MWh and \$4.45/MWh for active **regulating**, **spinning** and **supplemental** reserves respectively.



Weekly average activation prices for stand-by reserves ranged from \$4.67/MWh for **off-peak supplemental** reserves to \$45.52/MWh for **on-peak spinning** reserves.

Weekly average premium prices ranged from \$1.00/MWh for **off-peak supplemental** reserves up to \$1.91/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 35.6% while in the **active supplemental** reserve market, **hydro** units dominated with a 64.8% market share.

Coal units dominated the **standby regulating** reserve market with a 94.4% market share. Leading market share in the **standby spinning** market was held by **gas** units with a 45.9% market share. In the **standby supplemental** reserve market, **gas** units had the leading market share with 55.1%.

## 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.