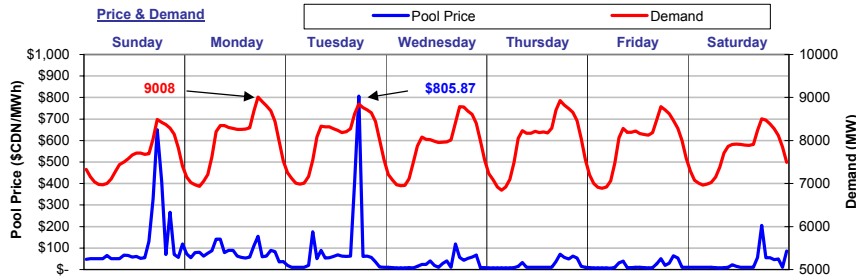


# The Market Monitor

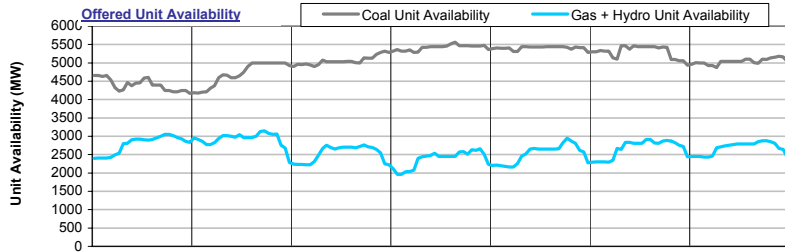
WATCHING THE MARKET : your fact source

Week Ending December 18, 2004

## Weekly Highlights

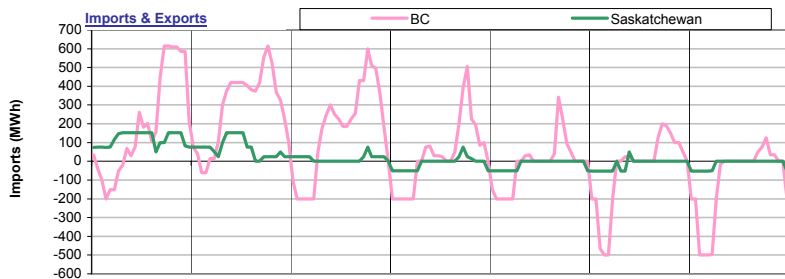


For the week ending December 18, 2004, **Pool Price** averaged \$56.70/MWh and ranged from a minimum of \$5.42/MWh in HE06 on Friday to a maximum of \$805.87/MWh in HE18 on Tuesday. **Demand** reached a high of 9008 MW in HE18 on Monday and a low of 6846 MW in HE04 on Thursday. Average demand for the week was 7873 MW. **Pool Price** and **Demand** were positively correlated last week with an R-squared value of 0.10.

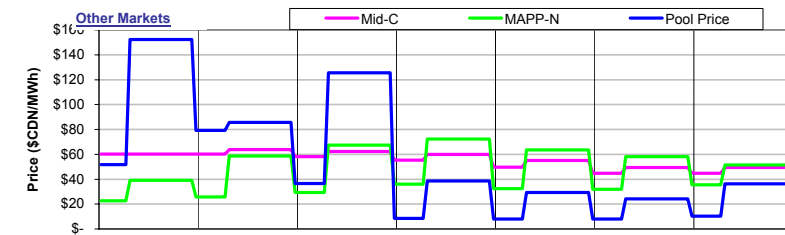


**Coal Unit Availability** averaged 5048 MW last week. This is an equivalent availability of 85% (based on MCR). **Gas and Hydro Unit Availability** averaged 2641 MW last week, which is an equivalent of 47% (based on MCR).

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

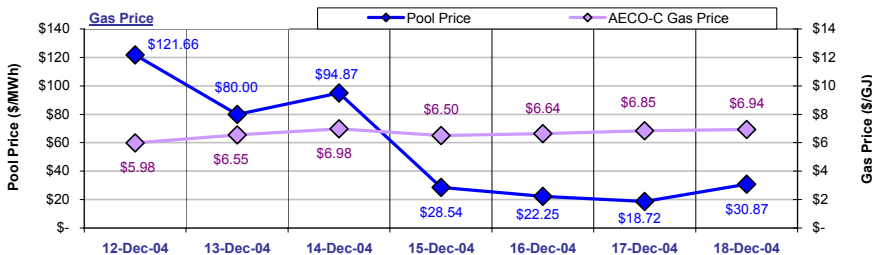


Alberta was a net importer from **BC** last week with total imports equal to 12,313 MWh. Alberta was a net importer from **Saskatchewan** last week with total imports equal to 3,486 MWh. Overall, Alberta imported 15,799 MWh of electricity last week.



**Pool Prices** were generally higher than prices in **Mid-C** and higher than prices in **MAPP-N** last week. **Mid-C** prices averaged \$56.66/MWh on-peak and \$53.31/MWh off-peak. **MAPP-N** prices averaged \$61.88/MWh on-peak and \$30.50/MWh off-peak.

Prices in \$/MWh at an exchange rate of 1.2233.



The average **AECO-C Gas Price** last week was \$6.64/GJ and ranged from a minimum of \$5.98/GJ to \$6.98/GJ. Prevailing gas prices resulted in market heat rates ranging from a low of 2.73 GJ/MWh to a high of 20.35 GJ/MWh. The average market heat rate for the week was 8.72 GJ/MWh.

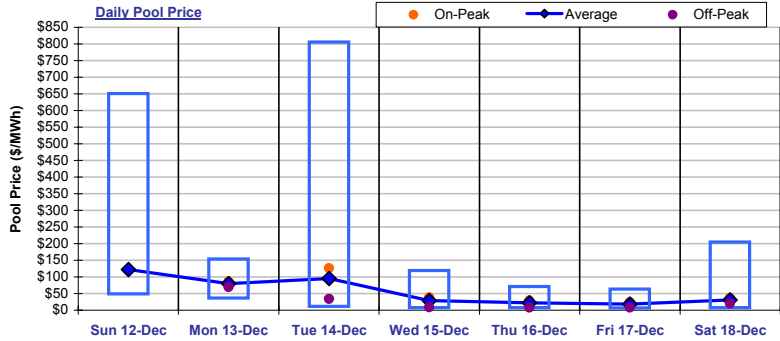


Alberta's Market Surveillance Administrator is in place to monitor the fair, efficient and openly competitive operation of all electricity markets within the province. The Market Monitor is a weekly publication by the MSA intended to educate industry participants and the public on market activities for 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](http://www.albertamsa.ca)

# Wholesale Market

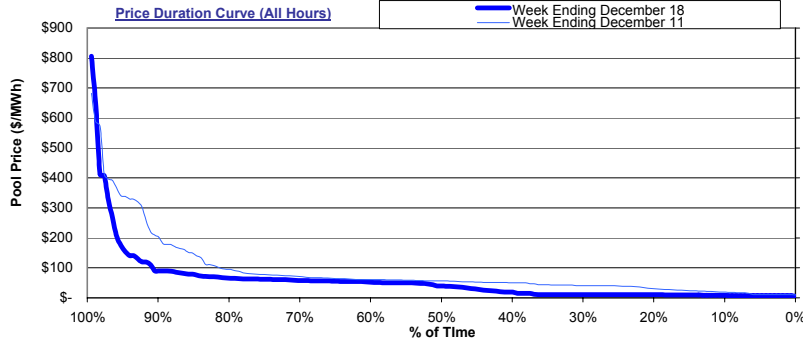
## Weekly Market Statistics

	Sunday 12-Dec	Monday 13-Dec	Tuesday 14-Dec	Wednesday 15-Dec	Thursday 16-Dec	Friday 17-Dec	Saturday 18-Dec	Average	Last Week	% Change	YTD
<b>Pool Price</b>											
Average	\$ 121.66	\$ 80.00	\$ 94.87	\$ 28.54	\$ 22.25	\$ 18.72	\$ 30.87	\$ <b>56.70</b>	\$ <b>88.23</b>	<b>-35.7%</b>	\$ <b>54.92</b>
On-Peak	NA	\$ 85.56	\$ 125.65	\$ 38.65	\$ 29.30	\$ 24.12	\$ 36.39	\$ <b>56.61</b>	\$ <b>108.58</b>	<b>-47.9%</b>	\$ <b>64.55</b>
Off-Peak	\$ 121.66	\$ 68.89	\$ 33.32	\$ 8.33	\$ 8.16	\$ 7.91	\$ 19.82	\$ <b>56.82</b>	\$ <b>61.10</b>	<b>-7.0%</b>	\$ <b>38.76</b>
COV	1.21	0.39	1.82	0.96	0.94	0.91	1.39	<b>1.09</b>	<b>0.98</b>	<b>10.4%</b>	
<b>Demand</b>											
Average	7,618	8,025	7,997	7,869	7,966	7,916	7,717	<b>7,873</b>	<b>8,016</b>	<b>-1.8%</b>	<b>7,424</b>
Minimum	6,975	6,936	6,985	6,952	6,846	6,893	6,965	<b>6,936</b>	<b>7,142</b>	<b>-2.9%</b>	<b>6,017</b>
Maximum	8,493	9,008	8,850	8,790	8,930	8,787	8,504	<b>8,766</b>	<b>8,880</b>	<b>-1.3%</b>	<b>9,133</b>
<b>Coal Unit Availability</b>											
Average	4,402	4,701	5,060	5,419	5,410	5,305	5,042	<b>5,048</b>	<b>5,035</b>	<b>0.2%</b>	<b>4,885</b>
Utilization	80%	85%	92%	98%	98%	96%	91%	<b>91%</b>	<b>91%</b>	<b>0.2%</b>	<b>88%</b>
<b>Gas and Hydro Unit Availability</b>											
Average	2,783	2,924	2,532	2,377	2,521	2,669	2,679	<b>2,641</b>	<b>2,751</b>	<b>-2.0%</b>	<b>2,344</b>
Utilization	58%	61%	53%	50%	53%	56%	56%	<b>47%</b>	<b>49%</b>	<b>-2.0%</b>	<b>41%</b>



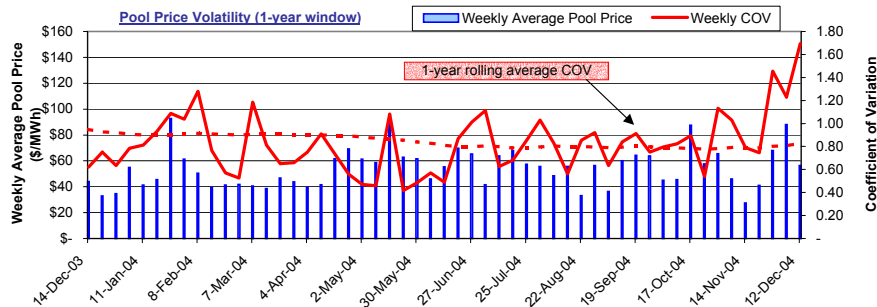
The Daily Pool Price graph plots the daily range in hourly Pool price (defined by the blue box) along with the daily average and daily on and off-peak prices. The **on-peak Pool price** for the week was **\$56.61/MWh** while the **off-peak Pool price** for the week was **\$56.82/MWh**.

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 **December 18**, prices were at or below:

- \$20/MWh **42%** of the time
- \$50/MWh **58%** of the time
- \$100/MWh **90%** of the time
- \$250/MWh **96%** of the time
- \$500/MWh **98%** of the time



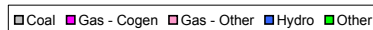
The chart plots average weekly Pool Price and the Coefficient of Variation (COV) of hourly Pool prices for the week. The COV is a standard statistical measure of volatility.

Pool price volatility **increased** for the week ending **December 18** from the previous week.

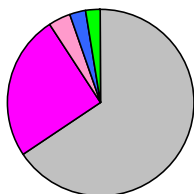
Pool price volatility also moved **above** the 1-year rolling average COV value.

### Market Share Statistics

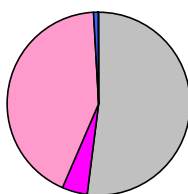
By Fuel Type:



Weekly Generation by Fuel Type

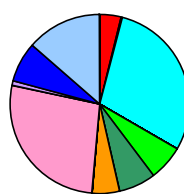


Weekly Price Setting by Fuel Type



By Submitting Customer:

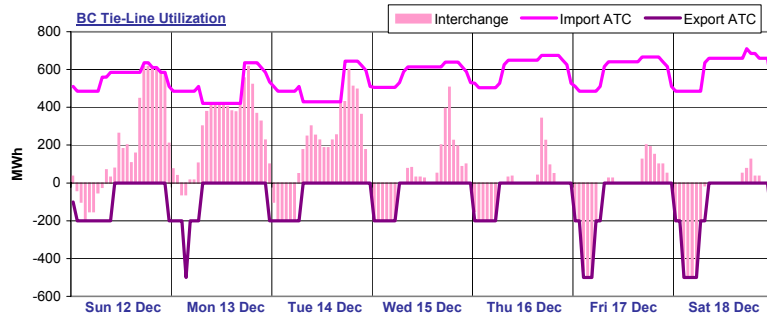
Weekly Price Setting by Submitting Customer



Last week, coal units were responsible for **65.4%** of the generation in the province and set price **52.1%** of the time. **Gas-cogen** units accounted for **25.3%** of the generation and set price **4.2%** of the time last week while **other gas** units made up **4.1%** of generation and set price **43.0%** of the time.

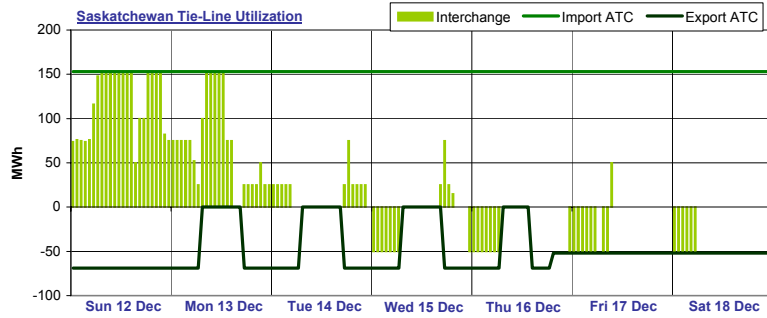
A total of **11** market participants set price last week. **Two** market participants set price more than 20% of the time last week. The top price setter set price **29.3%** of the time and the top five price setters set price a total of **83.5%** of the time.

# Interties



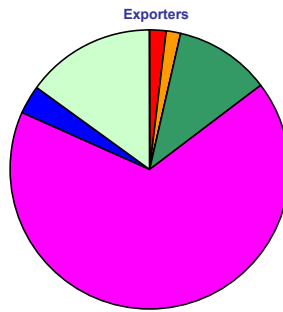
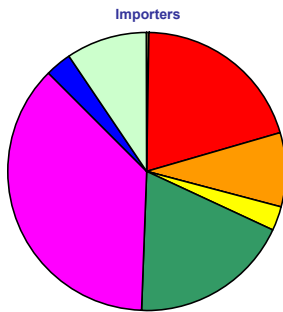
BC import capacity was 23% utilized last week while BC export capacity was 65% utilized. Energy was being imported into Alberta over the BC tie-line 54% of the time and exported out of Alberta over the BC tie-line 25% of the time last week. There was no activity on the BC tie-line 21% of the time last 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 20% utilized last week while Saskatchewan export capacity was 20% utilized. Energy was being imported into Alberta over the Saskatchewan tie-line 37% of the time and exported out of Alberta over the Saskatchewan tie-line 18% of the time last week. There was no activity on the Saskatchewan tie-line 45% of the time last week.

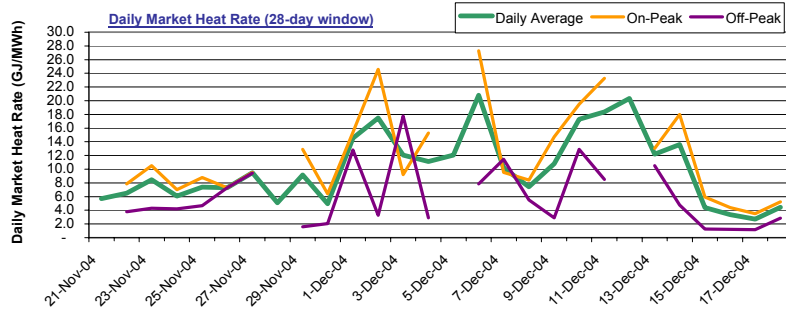
### Tie-Line Market Shares



Last week, there were a total of 8 importers. The most active importer had a market share of 36.9% while the second most active importer had a market share of 20.4%. There were a total of 6 exporters last week. The most active exporter had a market share of 67.1% while the next largest exporter had a market share of 15.0%.

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 10.1 GJ/MWh and ranged from a low of 2.7 GJ/MWh to a high of 20.8 GJ/MWh.

The daily On-Peak Market Heat Rate for the last 28 days averaged 12.0 GJ/MWh while the daily Off-Peak Market Heat Rate averaged 6.0 GJ/MWh.

### Sparksreads

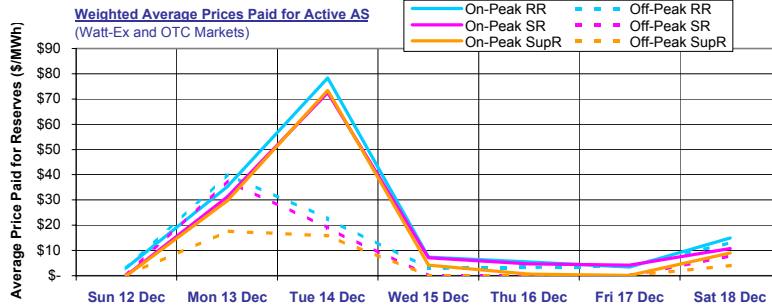
Date	AECO-C Gas Price (\$/GJ)	Daily Average			On-Peak			Off-Peak		
		Pool Price (\$/MWh)	Sparksread (\$/MWh) HR=7.5	Sparksread (\$/MWh) HR=10.0	Pool Price (\$/MWh)	Sparksread (\$/MWh) HR=7.5	Sparksread (\$/MWh) HR=10.0	Pool Price (\$/MWh)	Sparksread (\$/MWh) HR=7.5	Sparksread (\$/MWh) HR=10.0
Sun 12 Dec	\$ 5.98	\$ 121.66	76.81	61.86	NA	NA	NA	\$ 121.66	76.81	61.86
Mon 13 Dec	\$ 6.55	\$ 80.00	30.87	14.49	\$ 85.56	36.43	20.05	\$ 68.89	19.76	3.38
Tue 14 Dec	\$ 6.98	\$ 94.87	42.51	25.05	\$ 125.65	73.28	55.83	\$ 33.32	(19.05)	(36.51)
Wed 15 Dec	\$ 6.50	\$ 28.54	(20.24)	(36.50)	\$ 38.65	(10.13)	(26.39)	\$ 8.33	(40.45)	(56.71)
Thu 16 Dec	\$ 6.64	\$ 22.25	(27.56)	(44.17)	\$ 29.30	(20.51)	(37.12)	\$ 8.16	(41.66)	(58.27)
Fri 17 Dec	\$ 6.85	\$ 18.72	(32.64)	(49.76)	\$ 24.12	(27.24)	(44.36)	\$ 7.91	(43.45)	(60.57)
Sat 18 Dec	\$ 6.94	\$ 30.87	(21.20)	(38.56)	\$ 36.39	(15.68)	(33.04)	\$ 19.82	(32.25)	(49.61)

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.

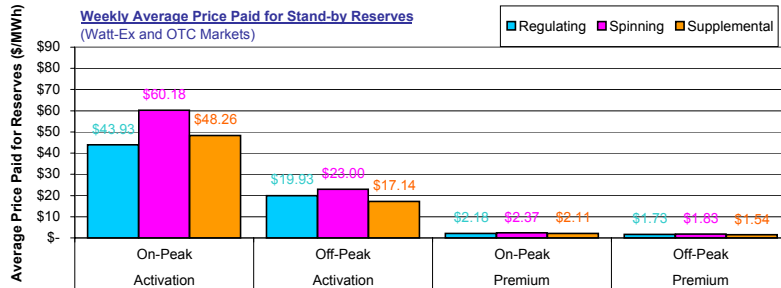
Off-peak sparksreads last week were mostly negative for a heat rate of 7.5 GJ/MWh and mostly negative for a heat rate of 10.0 GJ/MWh.

# Ancillary Services Market



Average on-peak prices paid for active ancillary services last week were **\$36.06/MWh**, **\$32.64/MWh** and **\$30.24/MWh** respectively for active **regulating**, **spinning** and **supplemental** reserves.

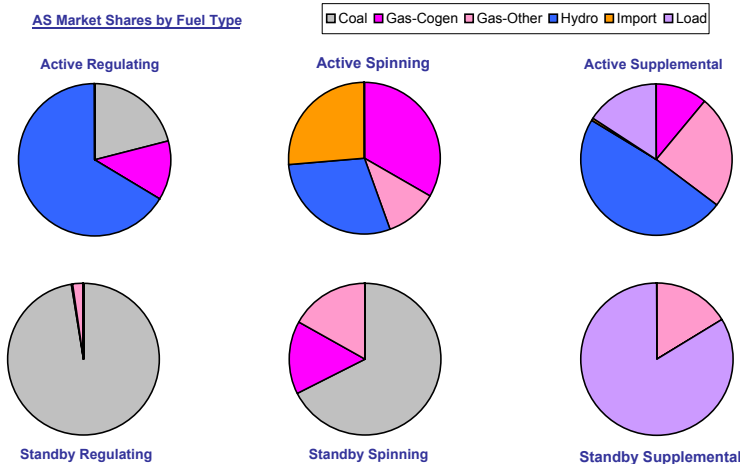
Active average off-peak prices were somewhat lower and averaged **\$17.61/MWh**, **\$13.47/MWh** and **\$6.88/MWh** for active **regulating**, **spinning** and **supplemental** reserves respectively.



Weekly average activation prices for stand-by reserves ranged from **\$17.87/MWh** for **off-peak supplemental** reserves to **\$60.15/MWh** for **on-peak spinning** reserves.

Weekly average premium prices ranged from **\$1.55/MWh** for **off-peak supplemental** reserves up to **\$2.38/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 **66.5%**. In the **active spinning** reserve market, **gas-cogen** units had the leading market share with **33.3%** while in the **active supplemental** reserve market, **hydro** units dominated with a **48.4%** market share.

**Coal** units dominated the **standby regulating** reserve market with a **97.5%** market share. Leading market share in the **standby spinning** market was held by **coal** units with a **67.6%** market share. In the **standby supplemental** reserve market, **load** units had the leading market share with **83.6%**,

## Glossary

<b>HE</b>	Hour Ending
<b>On-Peak Hours</b>	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)
<b>Off-Peak Hours</b>	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)
<b>COV</b>	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.
<b>ATC</b>	Available Transfer Capacity A measure of the maximum energy flow possible in one direction across an intertie.
<b>Market Heat Rate</b>	The prevailing Pool price divided by the prevailing gas price.
<b>Sparks spread</b>	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.