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MSA REPORT

Quarterly Report

July - September, 2009

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MARKET SURVEILLANCE
ADMINISTRATOR

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1 WHOLESALE MARKET

1.1 Wholesale Market Fundamentals

Pool Price

Q3/09 electricity prices in Alberta reversed the downward trend started at the onset of 2009 and averaged \$49.49/MWh. This is 53% higher than Q2/09 (\$32.30/MWh) and 38% lower than Q3/08 (\$80.21/MWh).

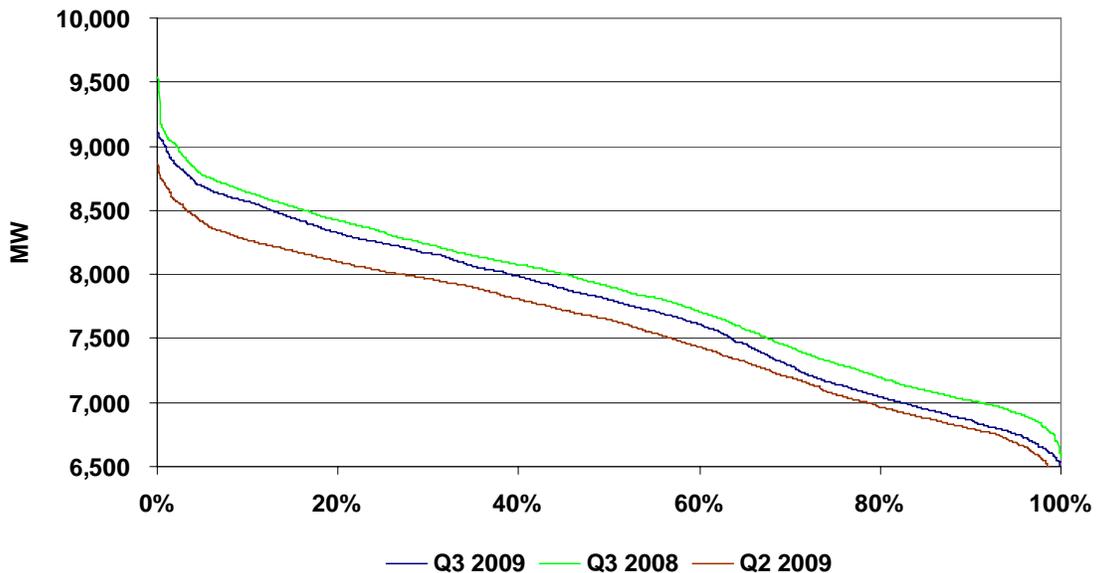
Natural Gas

AECO natural gas prices continued to slide and averaged \$2.82/GJ in Q3/09. This is 14% lower than Q2/09 (\$3.27/GJ) and 62% lower than Q3/08 (\$7.35/GJ). Significantly lower year-over-year natural gas prices made it possible for gas-fired units to offer at more competitive prices relative to other generators.

Load

Load in Q3/09 averaged 7738MW, a 2% increase over Q2/09 but a 1.5% reduction from Q3/08. The year-over-year reduction is a reflection of the slowing down of the economy observable to all Albertans. Figure i shows the load duration curves for the three quarters in question. What is most evident is the lack of any extremely high load events in Q3/09 compared to Q3/08. Extremely high summer peak loads require several hot days in a row – something that did not occur much this summer.

Figure i: Load Duration Curves



Supply

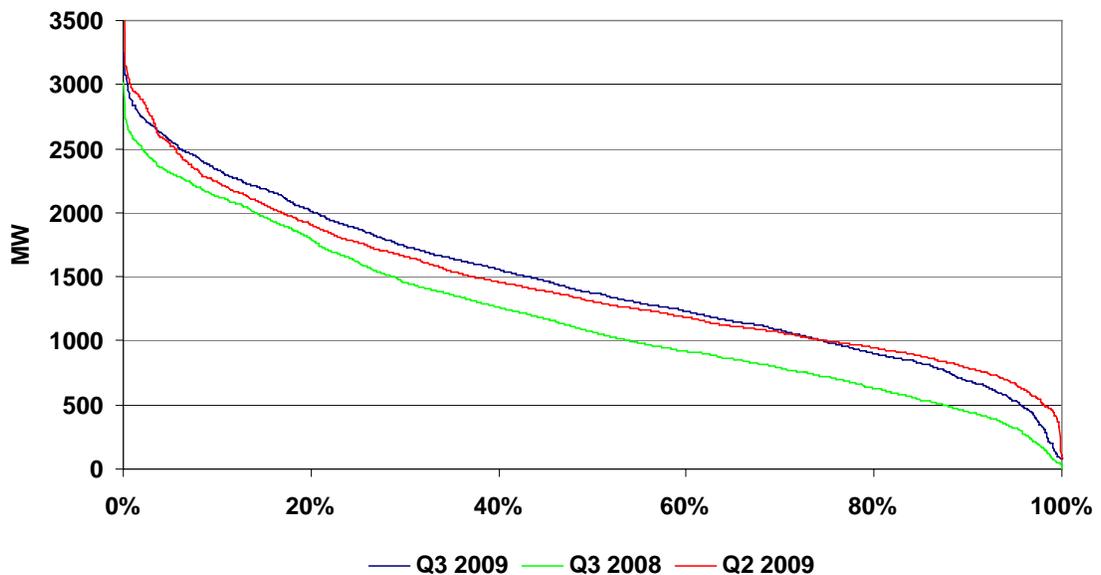
In Q3/09, the 94MW gas-fired Christina Lake and the 66MW Blue Trail wind projects were added to the province's generating fleet.

Table 2 in Appendix B shows statistics on plant availability and generation. Despite the new additions, total plant availability was down slightly year-over-year. Essentially the coal units had lower availability and generation from them was replaced by gas-fired generation (Table 2 in Appendix B).

Market Tightness and Discussion

The supply cushions for Q3/09, Q2/09 and Q3/08 are shown in Figure ii. Previous analysis has shown that high Pool prices in Alberta occur when the supply cushion is low and the market is ‘tight’. Of the three quarters shown, Q3/08 experienced the most frequent tightness and Q2/09 the least. Q3/09 was less tight than Q3/08.

Figure ii: Supply Cushion Duration Curves



Implied market heat rate (HR) duration curves are presented in Figure 6 of Appendix A. The HR for Q3/09 was higher than both Q2/09 and Q3/08 suggesting a greater degree of market tightness in Q3/09. However, as noted in Figure ii, Q3/09 was not more tight than Q3/08. Hence the higher HR with a less tight market condition sends a contradictory signal.

Natural gas prices have come down a lot since last year and partially explain the lower Q3/09 Pool prices. However, the higher HR for Q3/09 versus Q3/08 was also caused by some coal fired generation being priced above gas fired units.

Figure iii depicts the change in the volume weighted offer price of the coal fired units in Q3/09 versus Q3/08. The offer prices in Figure iii are grouped by portfolio (“A” through “G”). While some participants offered lower prices from their coal units and positioned themselves more competitively, others increased their offer prices. Pricing up coal fired generation in a low gas price and reduced demand environment increased the probability of being out of merit and not running.

Figure iii: Change in Volume Weighted Offer Price of Coal Fired Units

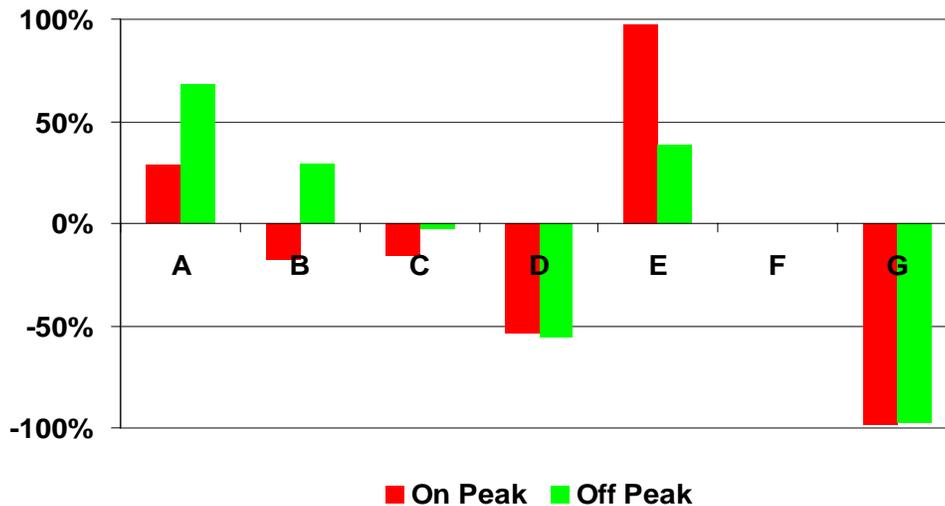


Table 2 of Appendix B shows generation by fuel type for Q3/09, Q2/09 and Q3/08. Looking at the generation totals for each fuel, it can be deduced that whilst availability of coal plant was on average 114MW less in Q3/09 compared with Q3/08 (5008MW vs. 5122MW), actual generation went down more. Generation from coal reduced from 10,678GWh to 10,241GWh, a difference equivalent to an average of 200MW.

By the time that the MSA is preparing its next quarterly report the AESO will be publishing price-quantity pairs together with the associated asset ID. This will enable a more detailed discussion on what is occurring in the real-time market.

1.2 Energy Emergency Alert

On September 23, 2009 Alberta was in a supply shortfall condition in which there was insufficient energy offered into the energy market in order to meet AIES load. The province entered Operating Policies and Procedures (OPP) 801¹ and issued an Energy Emergency Alert 1 at 13:07, which occurs when all available resources in the energy market have been dispatched. Energy Emergency Alert 2 was declared at 13:40 and the system controller was using operating reserves to supply energy. Figure iv illustrates the total net generation in Alberta, along with the AIES demand and corresponding Pool price.

Prior to the Energy Emergency Alert 1, two coal units, SD5 and GN2 were offline and SD2 was derated. In HE13, GN3 tripped offline, and SD4, SD6 and KH2 all became derated. This was a total loss in coal availability of 659MW. This sudden loss ultimately led to the supply shortfall condition. Figure v shows the volume of coal outages and derates and also the volume being imported on the BC intertie. System Marginal Price (SMP)

¹ http://www.aeso.ca/downloads/OPP_801.pdf

increased to the price cap, of \$999.99 at 13:04 and remained at the cap for 204 minutes.

Figure iv: September 23, 2009 – Hourly Pool price, AEIS Demand and Total Net Generation

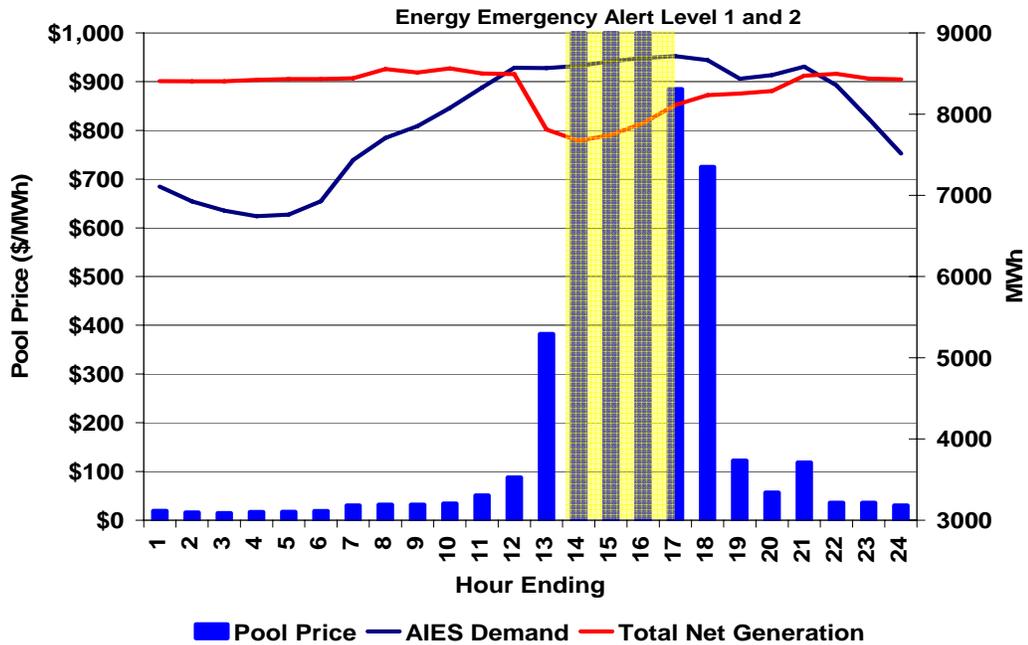


Figure v: September 23, 2009 – Coal Outages and Derates

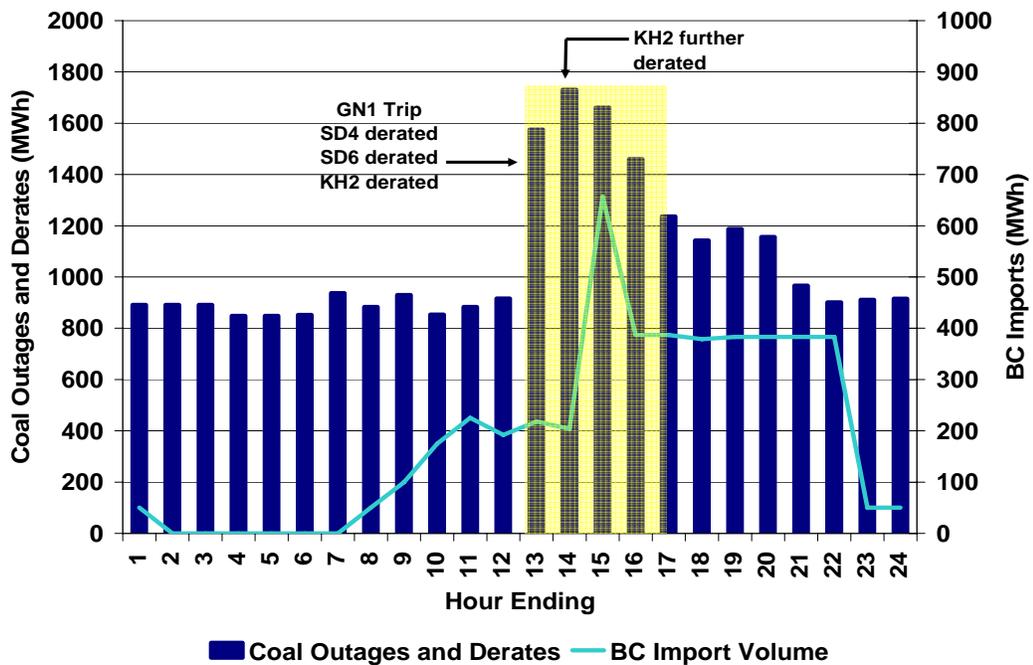
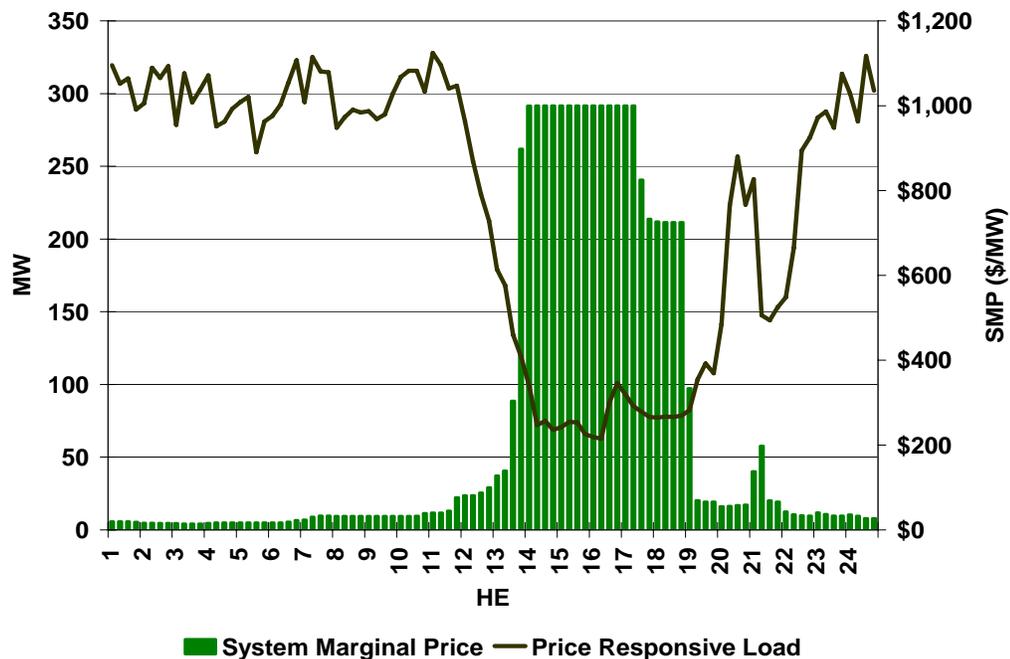


Figure vi shows the decrease in demand from price responsive load (PRL), as SMP increased in response to market tightness. PRL reduced about 240MW from HE11 to HE15. Imports on the BC intertie also

increased from 192MWh in HE12 to 657MWh in HE15 (Figure v). Available Transfer Capability (ATC) on the BC intertie was 400MWh. However, upon reaching step 30 of OPP 801 at 14:45, the system controller requested emergency energy from BCTC. The SK intertie was fully loaded, as import volumes were up to ATC in all hours of the day.² By 15:52 GN3 returned and the remaining three derated coal units were also returning to full capability. The recovery of coal generation and increase in imports, along with the decrease in demand from PRL, led the province out of supply shortfall. By 16:30 an Energy Emergency Alert Level 0 was issued (Termination of the previous Energy Emergency Alerts: Energy supply is sufficient to meet AIES load and reserve requirements).

Figure vi: September 23, 2009 – Price Responsive Load and System Marginal Price



This is the third time the province has entered OPP 801 this year. The first two occasions occurred on January 21 and January 23.³ For comparison, there were 14 recorded OPP 801 instances in 2008. Generally, high levels of coal outages and derates are a primary precursor to an OPP 801 condition. The sudden loss then of a baseload unit is often the final straw leading to an Energy Emergency Alert. A significant drop off in baseload capacity often leads to a price spike and, on some occasions, leads to the issue of an Energy Emergency Alert.

1.3 Transmission Events

Over the month of September, the Langdon Static VAR Compensator (SVC) was out of service. As per AESO OPP510, when this SVC is out of

² Import ATC on the SK intertie was 153MWh on September 23, 2009.

³ http://www.albertamsa.ca/files/Q1_2009_Report_042909.pdf

service, Enmax Calgary Energy Centre (CEC) must be on line if it is available. If the CEC is not on line from energy dispatch at the time of SVC out of service, a TMR dispatch will be issued to CEC. The SVC out of service led to a surge in the volume of TMR and in turn caused more MWs of Dispatch Down Service to be utilized in September (Figure 21 and Figure 22 in Appendix D).

Transmission maintenance in Q3/09 also caused more MW to be constrained off in the month of September (Figure 22 in Appendix D).

2 THE OPERATING RESERVES (OR) MARKET

The AESO procures operating reserves through two procurement platforms: Alberta Watt Exchange Limited (Watt-Ex) and the Over-the-Counter (OTC) market. OR products are categorized as Active and Standby, based on the required operational or delivery status. Within these two categories are the OR products Regulating, Spinning and Supplemental. Over the five days prior to the delivery day, each type of OR is procured. Bid and offer prices are at a discount or premium to Pool price and are accepted starting with the lowest priced offer. The AESO submits a bid price and forecasted demand for each product, and accepts offers until the demand for the day has been reached or until no offers remain at or below the bid price. The midpoint between the highest priced offer to be accepted and AESO's bid price is the trade price for the OR product on a specific trading day. Once trades have occurred on all five days of procurement, the volume weighted average trade price is used to determine the trade index.⁴

2.1 The Fluctuation of On-Peak Regulating Reserve Trade Index

In Q3/09 the MSA has noted fluctuations in the trade index for on peak active regulating reserve product. The volatility is apparent in Figure vii, which is the trade volume weighted average price (Watt-Ex trade index) for on peak products. The dips in the on peak regulating reserve were examined and appear to be the result of an increase in the number of sellers whose offers were at a large discount to Pool price. The MSA believes that these market participants are not intending to depress the trade price, but rather are attempting to sell volume and act as price takers. On days when sufficient volume is offered at a large discount to fill AESO's demand forecast, a low offer will unintentionally clear the market, which leads to a dip in the trade price. In addition, since the supply curve for active on peak regulating reserve is rather thin, a slight shift in offer volumes can lead to a large dip or spike in the trade price and, in turn, the trade index.

⁴ For further information regarding Alberta Operating Reserves please reference: [http://www.albertamsa.ca/files/Operating_Reserves_Procurement_Report_091609\(1\).pdf](http://www.albertamsa.ca/files/Operating_Reserves_Procurement_Report_091609(1).pdf)

The strategy for some sellers of selling volume and not focusing on setting the market clearing price is typical in the OR market. This is similar to a price taking strategy in the energy market by offering at a low price.

Figure vii: Q3/09 Weighted Average Active Reserve Trade Index for On Peak Products

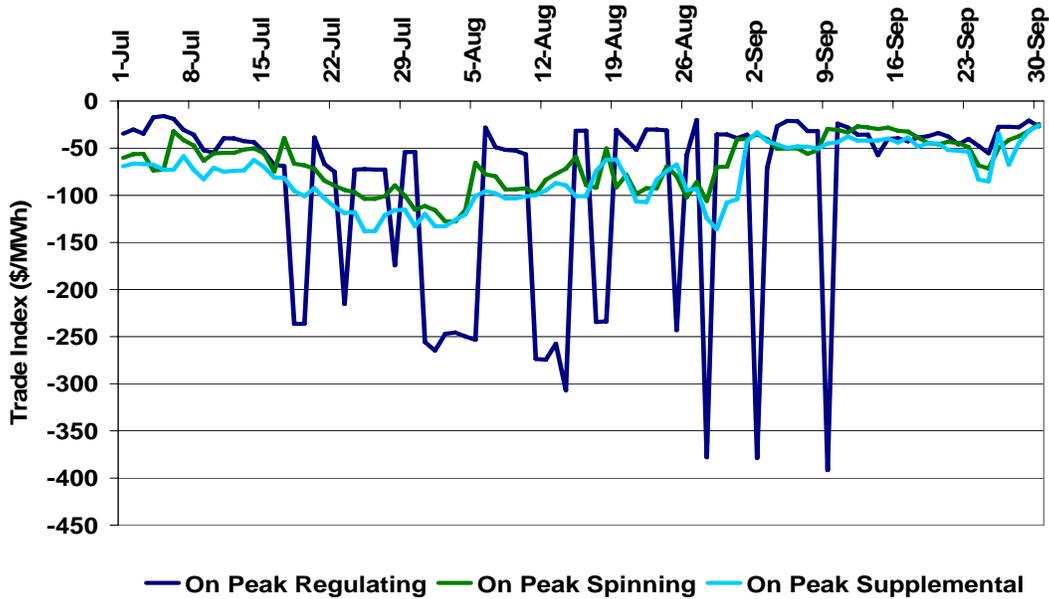
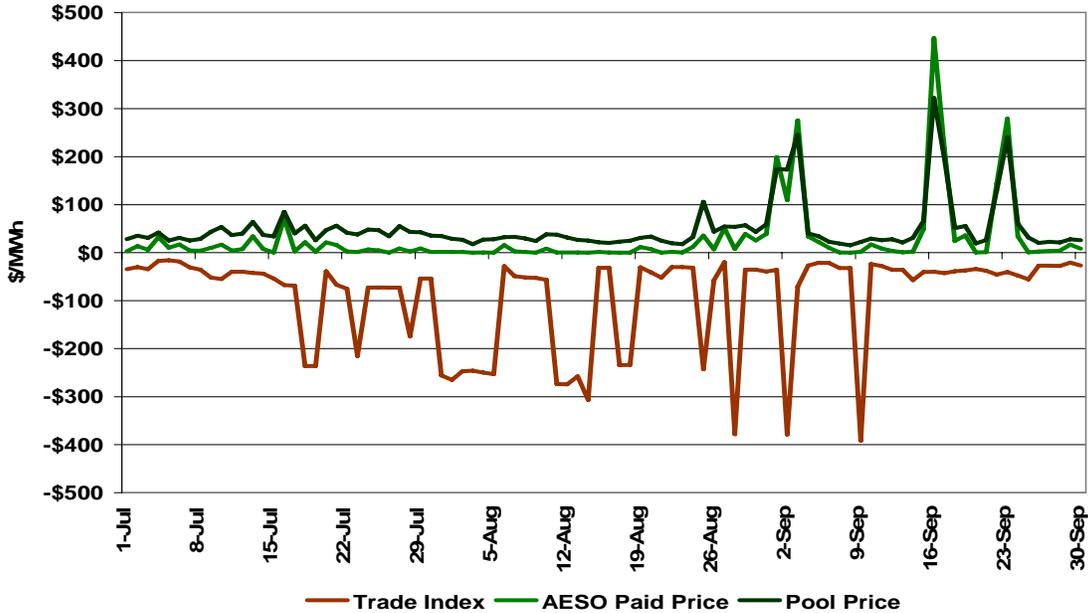


Figure viii: Active On Peak Regulating Reserve AESO Paid Price, Trade Index, and Pool Price



Prices paid to the sellers do not follow the swings in the trade index. Normally, prices paid to sellers tend to follow the trends in Pool price.

Hourly payment is based on Pool price less the discount, and, when this results in a negative price, payment is set to zero. Since Pool prices were rather low in Q3/09, the fluctuations in AESO paid price are much less than in the index. Figure viii shows the AESO paid price for active on peak regulating reserve along with the trade index and Pool price.

The MSA does not believe the trade index for active on peak regulating reserve has been manipulated. This belief is based in part on the fact that more than one participant was involved to create the anomaly. This type of event resulted from a few market participants competing for volume by offering large discounts. The MSA does not believe this type of behaviour is sustainable for any sellers whose opportunity cost of providing OR is higher than zero. It is also of relevance to note that as of late (early in Q4-09) the price index for on peak regulating reserve has had fewer dips compared with Q3/09.

2.2 High Standby-By Activation Price

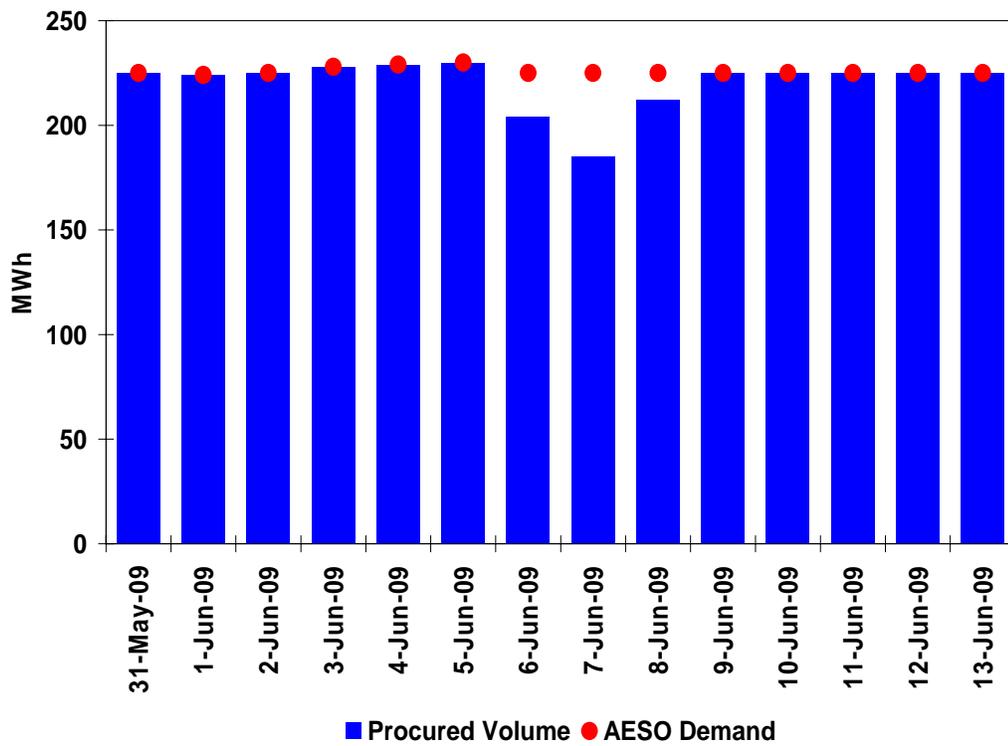
Figure 12 in Appendix C shows the average standby on peak activation prices in Q3/09. The increase in the September average price is notable. Activation prices are driven by the sellers' expectations of what Pool prices might be in the event that they are called from Standby to Active reserve status. When a unit is called from Standby to Active in the reserves market, it has to withdraw from the energy market and forgo energy revenue.

The BC intertie was on an outage for scheduled maintenance from September 1 through to September 14 and this was known to the market. Typically, Alberta on-peak Pool prices are higher when the BC intertie is on outage since Alberta is frequently importing during those hours. Market participants anticipated higher Pool prices during the BC intertie outage and therefore increased their offered activation prices for standby reserve. For the second half of September, higher activation prices persisted in response to higher energy market prices.

2.3 Unfilled OR Demand for On-Peak Spinning Reserves

In Q3/09, the MSA looked into incidents of unfilled demand on Watt-EX that occurred in late Q2/09. For two delivery dates, June 6 and 7, 2009, AESO's demand for active on-peak spinning reserve was unfilled on the trading day of June 5 (D-1) through Watt-Ex. The AESO's demand for those days was 225MW and the volume purchased through Watt-Ex was 204MW and 185MW, respectively. The remaining volume was purchased from the Over-the-Counter (OTC) market. Figure ix shows the active on peak spinning reserve procured volume on Watt-Ex and AESO's corresponding demand.

Figure ix : Active On Peak Spinning Reserve Demand and Procured Volume via Watt-Ex



In procuring operating reserve volume, the AESO accepts offers up to the point that demand is filled or until no offers remain at, or below the AESO bid price. The AESO bid price essentially acts as a price cap. In response to unfilled bids, the AESO increased its bid price for active on peak spinning reserve on subsequent days. The AESO has not been faced with unfilled demand on Watt-Ex since the event.

In regards to AESO's proposed operating reserve redesign, all reserve products will be procured through Watt-Ex. Market participants will no longer have two platforms to sell operating reserves, and the AESO will not have to post a bid price.⁵

The AESO also had to turn to OTC to procure volume for active on peak spinning reserve for delivery on June 8. This unfilled bid volume is apparent in Figure ix. The 13 MWh shortfall was caused by a market participant having to cancel its offer after the market had closed. This event did not have any relation to the previous two delivery days, but was rather a trading error. The MSA does not believe this event has cause for concern, unless such events become recurrent.

⁵ AESO Consultation Summary: Operating Reserve Market Redesign Concepts – for Discussion, July 30, 2008.

http://www.aeso.ca/downloads/AESO_Consultation_Summary_OR_Market_Redesign.pdf

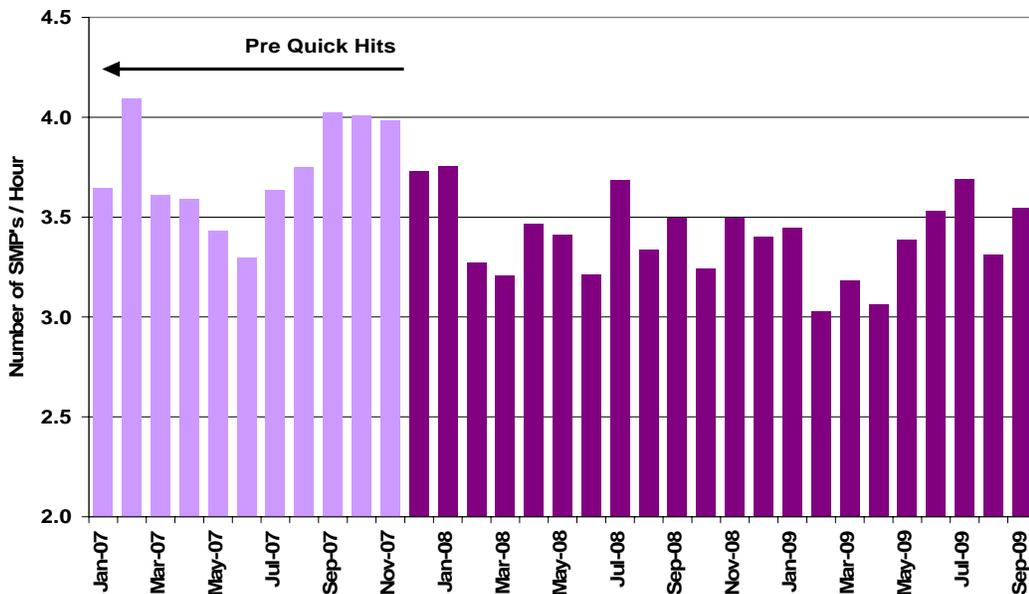
3 QUICK HITS METRICS

The “Quick Hits” set of ISO market rule changes was implemented in December 2007 and is the most significant change to market design for many years. Accordingly, the MSA maintains a keen interest in monitoring the effects of these important rules changes.

The AESO posted a Quick Hits review paper on July 3, 2009, in relation to the implementation of Quick Hits in December of 2007.⁶ The review was essentially an evaluation of the market after six months of operating under the new Quick Hits rules. Amongst the areas under review was the category of merit order stabilizers, which consisted of various new ISO rules aimed at creating stability in the energy market merit order. Merit order stabilizers were intended to create a limitation on restatements and ultimately, a decrease in the volatility of dispatch was anticipated.

In its six month review paper, the AESO included an analysis of System Marginal Price (SMP). The AESO concluded a decrease in the average number of SMPs per hour, under the new Quick Hits rules. This is an intended outcome of Quick Hits, as fewer SMP changes denote a less volatile dispatch hour. Figure x shows the average number of SMPs per hour up until September 2009. This confirms the decrease in the average number of SMPs, since the implementation of Quick Hits.⁷

Figure x: Average Number of System Marginal Prices per Hour each Month



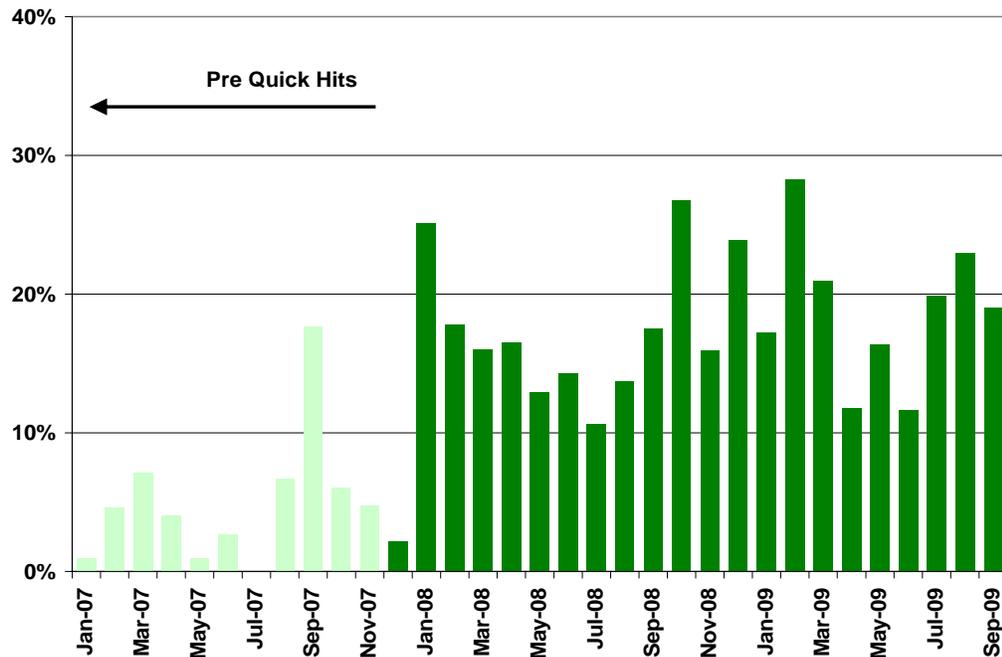
Dispatch Down Service (DDS) was a market design change in the Quick Hits rules package. DDS is used to correct the Alberta real-time price for

⁶ http://www.aeso.ca/downloads/Quick_Hits_Review_Paper.pdf

⁷ Pre Quick Hits the average number of SMPs per hour was 3.7. Post Quick Hits the average number of SMPs per hour was 3.4.

the effects of Transmission Must Run (TMR). This price correction ceases when price goes above the reference price. The MSA has previously mentioned the “price stickiness” close to reference price. Pool price tends to settle close to reference price as many offers are generally tucked slightly below reference price, creating a “shelf” in the energy market merit order. This is combined with the “imaginary” shelf at the reference price of size equal to the volume of MW providing DDS. With this in mind, it can be hypothesized that the decrease in the average number of SMPs per hour might be caused by this “price stickiness”. Figure xi is the percentage of hours in which SMP was within a dollar of the reference price for some portion of the hour. The difference is notable, as SMP settled close to reference price more frequently since Quick Hits were implemented. Note the reference price for 2007 was implied using the same methodology used to calculate the current reference price.⁸

Figure xi: Percentage of Hour Endings in which SMP was Influenced by Reference Price (+ / - \$1.00)



Noting the matter of “price stickiness”, the MSA analyzed the average number of SMPs per hour and eliminated the hours in which SMP was within a dollar of reference price. In doing so, the hours that were influenced by reference price would be removed and we would be able to see whether the decrease in the average number of SMPs per hour after Quick Hits could be attributed to the introduction of reference price. Figure xii shows the average number of SMPs per hour and also the average number of SMPs per hour with the reference price range hours excluded.

⁸ Please refer to ISO Rule 3.10 Reference Price for further detail.

Figure xii: Average Number of System Marginal Prices per Hour in all Hours and with Reference Price Range Hours Removed

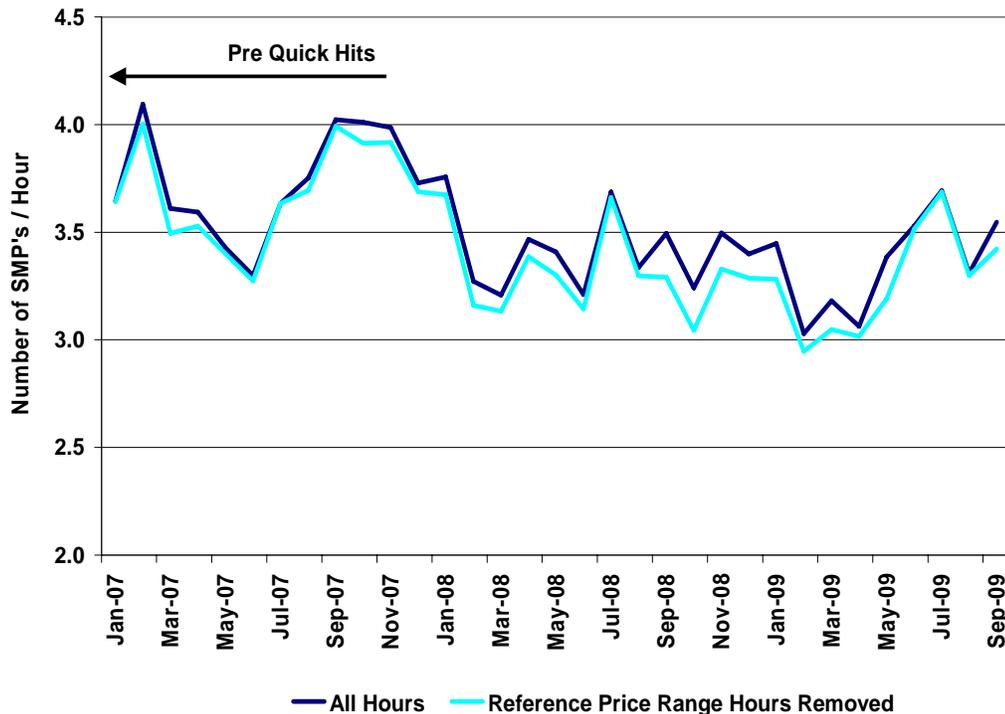


Figure xii implies that the reference price did not have a dramatic effect on the average number of SMPs per hour. When the reference price range hours are removed from the analysis, a slight decrease is noted in the average number of SMPs per hour both before and after the advent of Quick Hits.

This SMP analysis confirms that the average number of SMPs per hour has decreased since the implementation of Quick Hits. It also shows that price stickiness near the reference price was not the source of the reduction.

4 REVISED INTERTIE METRICS

A regular feature of the MSA quarterly reports has been an appendix on intertie performance and utilization with standardized figures and a table. This quarter, the MSA has undertaken to revise the standardized figures, to enhance the effectiveness and appearance of the appendix going forward. Should you have any comments, please feel free to call Mike Nozdryn-Plotnicki at 403-705-8503 or email him at mike.nozdryn-plotnicki@albertamsa.ca.

4.1 Intertie Utilization

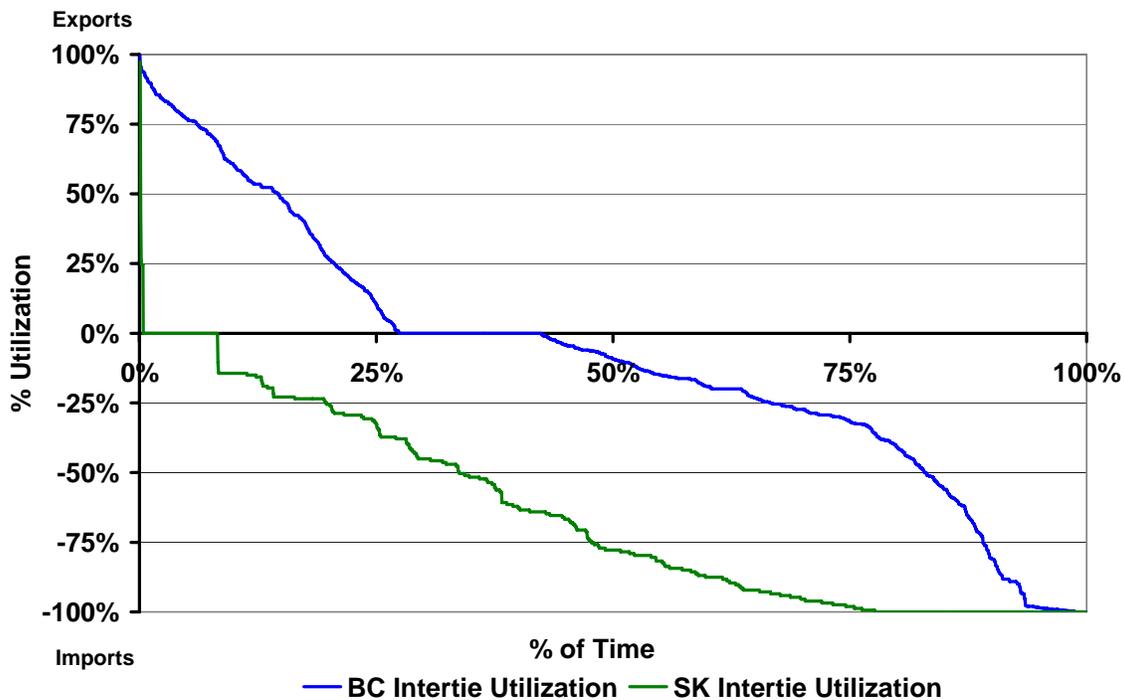
The intertie utilization figure (Figure xiii) has been revised slightly to present the imports and exports on a net basis, relative to Available Transfer Capacity (ATC). Accordingly there is now one curve for each

intertie, with Net Import Utilization below the horizontal axis, and Net Export Utilization above. Note that the curves should not be interpreted as showing the relative magnitude of scheduled imports or exports between the SK and BC interties, nor the relative magnitude between import and exports. The Utilization curves account for energy and, in the case of BC, reserves that are supplied over the interties.

From the left of the figure, net exports flowed across the BC intertie approximately 28% of the hours in Q3/09, and were very rarely at 100% of Export ATC. Approximately 14% of the time, there was no net flow on the BC intertie, as evidenced by the flat portion of the curve along the horizontal axis. Finally, net imports flowed in the remaining 58% of Q3/09, and approximately 10% of those imports were at or near BC Import ATC.

The salient features of the SK curve are that net exports flowed in very few hours in Q3/09, while imports flowed at or near capacity in about 22% of the hours. There was no net flow in 7% of the hours.

Figure xiii: Intertie Utilization



4.2 Average Prices in Other Markets

Figures xiv and xv show the monthly average on-peak and off-peak prices in Alberta and neighbouring markets, Mid-C and Minnesota Hub (Minn Hub) in MISO. All prices in the figure are in \$CDN, and currency conversions are based on a daily exchange rate. The data presented is

unchanged from previous Quarterly Reports but the style has been updated from a vertical bar graph to a line graph.

Figure xiv: On-Peak Pool Prices Relative to Neighbouring Markets

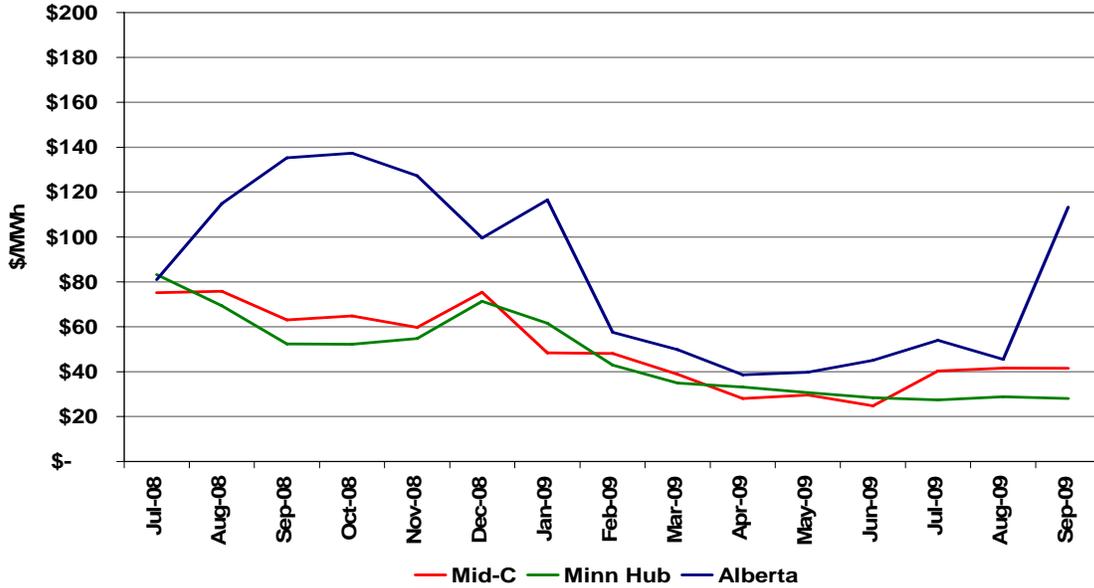
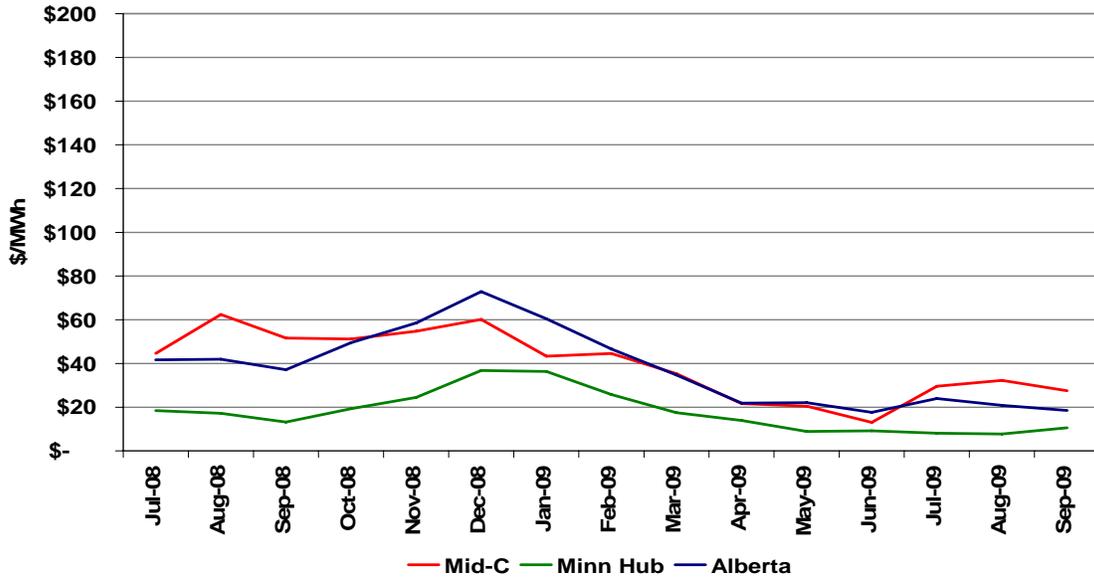


Figure xv: Off-Peak Pool Prices Relative to Neighbouring Markets



Monthly Average On-Peak Pool price has been consistently above Mid-C and Minn Hub throughout 2009, although the spread has diminished since the second half of 2008. However, September has brought about the

return of high on-peak prices relative to neighbouring markets. The fact that our on-peak Pool prices are persistently higher than those in neighbouring markets is troublesome. It stems from a combination of two factors:

- Intertie usable capacity is low; and,
- Seams Issues (including our [T-2] gate closure and the inability of interties to price into the market).

The AESO is attempting to address some of these issues which have been quite long standing.

Off-Peak prices have spent much of 2009 at or near Mid-C price levels, but still above Minn Hub. In Q3/09, monthly average off-peak pool prices dipped below Mid-C, repeating a trend observed in the Q3/08.

4.3 Price Differentials and Net Intertie Flows

Figures xvi and xvii are new to the MSA's quarterly reports, although a similar analysis was presented in the MSA's Q1/05 report.⁹

Figure xvi presents a scatter plot of hourly net import/export volumes over the BC intertie and the estimated corresponding price differential.

Net imports and net exports are plotted along the horizontal axis, while the estimated price differential is plotted vertically. The price differential is calculated based on the Dow Jones Mid-C hourly index, Pool price, and an estimate of transmission losses and tariff charges. The scatter plot is color coded by month, and the inset chart magnifies the vertical axis, to \pm \$50 price differential over the full range of net export or net import volumes. Each point in the scatter plot represents an hourly amount of scheduled net import or export together with its associated estimated profitability. Since the profitability component is based on the use of indices rather than actual transaction data the analysis is approximate but useful for identifying trends.

The expectation is that price differential/quantity pairs will generally be found in the upper right and lower left quadrants, indicating imports and exports flowing to the higher priced market. There is a prominent cluster of points around the horizontal axis, which the inset shows is largely limited to the \pm \$25 band.

The quadrants potentially more concerning are the upper left and lower right quadrants where imports and exports appear to be uneconomic, albeit by a relatively narrow margin. There are several possible reasons for such a high number observations in the uneconomic quadrants:

- The estimated price differential may not reflect the actual commercial price of the transaction. The price paid by an importer (or received by an exporter) may beat the index used to estimate

⁹ http://www.albertamsa.ca/files/Q1_05_Report.pdf

the price differential, and appear uneconomic, when in fact it was profitable;

Figure xvi: BC Intertie Price Differentials

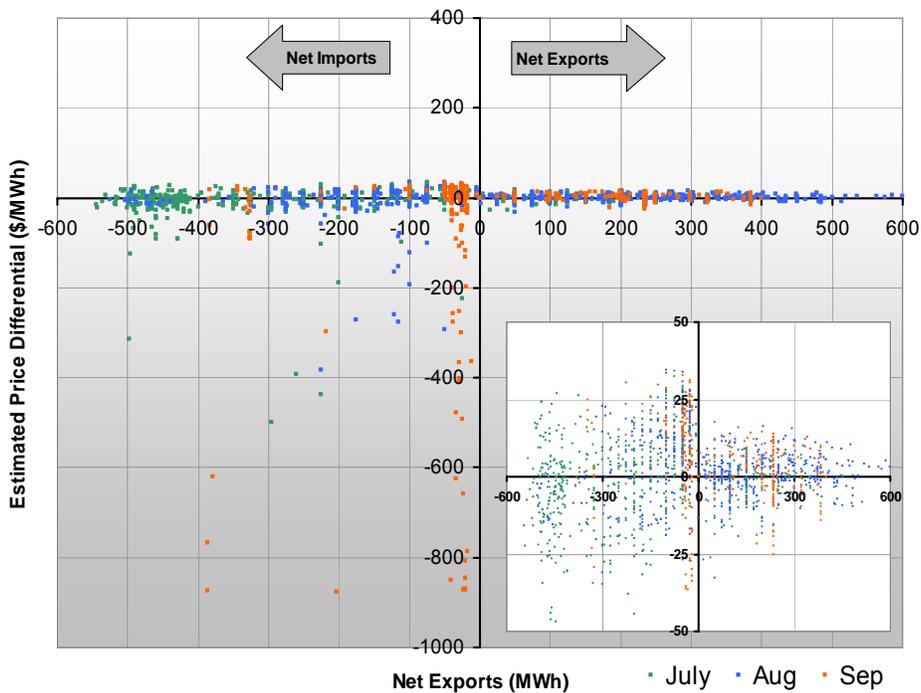
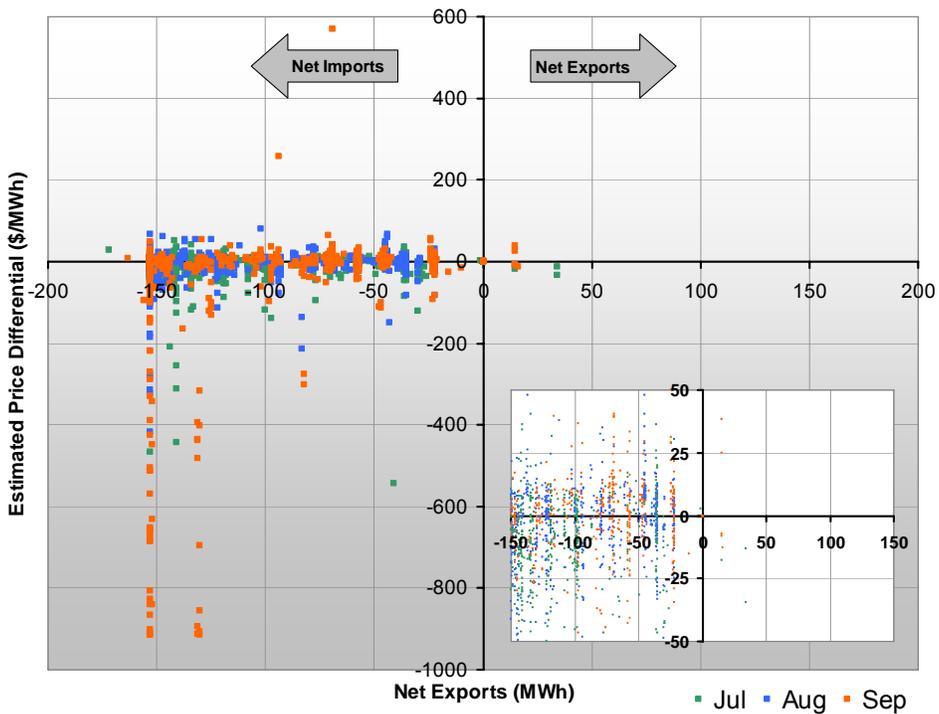


Figure xvii: SK Intertie Price Differentials



- If market conditions change between the time imports or exports are scheduled at T-2, and the time of delivery, the import or export may become uneconomic, but nevertheless must be delivered; and
- Economic import or export opportunities may become oversubscribed, if too many participants attempt to capitalize on the opportunity. This can drive pool price to an uneconomic level, where all the importers/exporters take a loss. The value to the market of the AESO finding some way for import and export transactions to price in is significant. The lack continues to be a source of inefficiency in the market.

The MSA has observed small volume imports over extended periods that, in most hours result in a loss, but given the volatility of the Alberta market, make up for those losses in the occasional hours when pool price spikes. These issues persist in part because of the T-2 lockdown requirement, and the inability of imports/exports to price into the market.

Figure xvi also shows that there were a significant number of hours when imports were extremely profitable. The cluster of points in September near the vertical axis is the result of tie line constraint limiting the volume of imports during what were high priced hours in Alberta.

Figure xvii presents the same data for the SK intertie. The price differential in this case is based on the hourly SPC hub price in MISO, as well as estimates for losses and tariff charges.

Activity on the SK intertie results in a similar cluster of points along the horizontal axis, though the cluster is clearly concentrated on the net import side. The inset shows that most of the price quantity pairs in uneconomic quadrants are within the \pm \$25 band, though excursions outside that band are more frequent than with the BC intertie. Reasons for this are similar to the BC intertie case, noting also that MISO prices are typically more volatile than Mid-C which can increase the uncertainty of the price realized at delivery, relative to when it has to be scheduled.

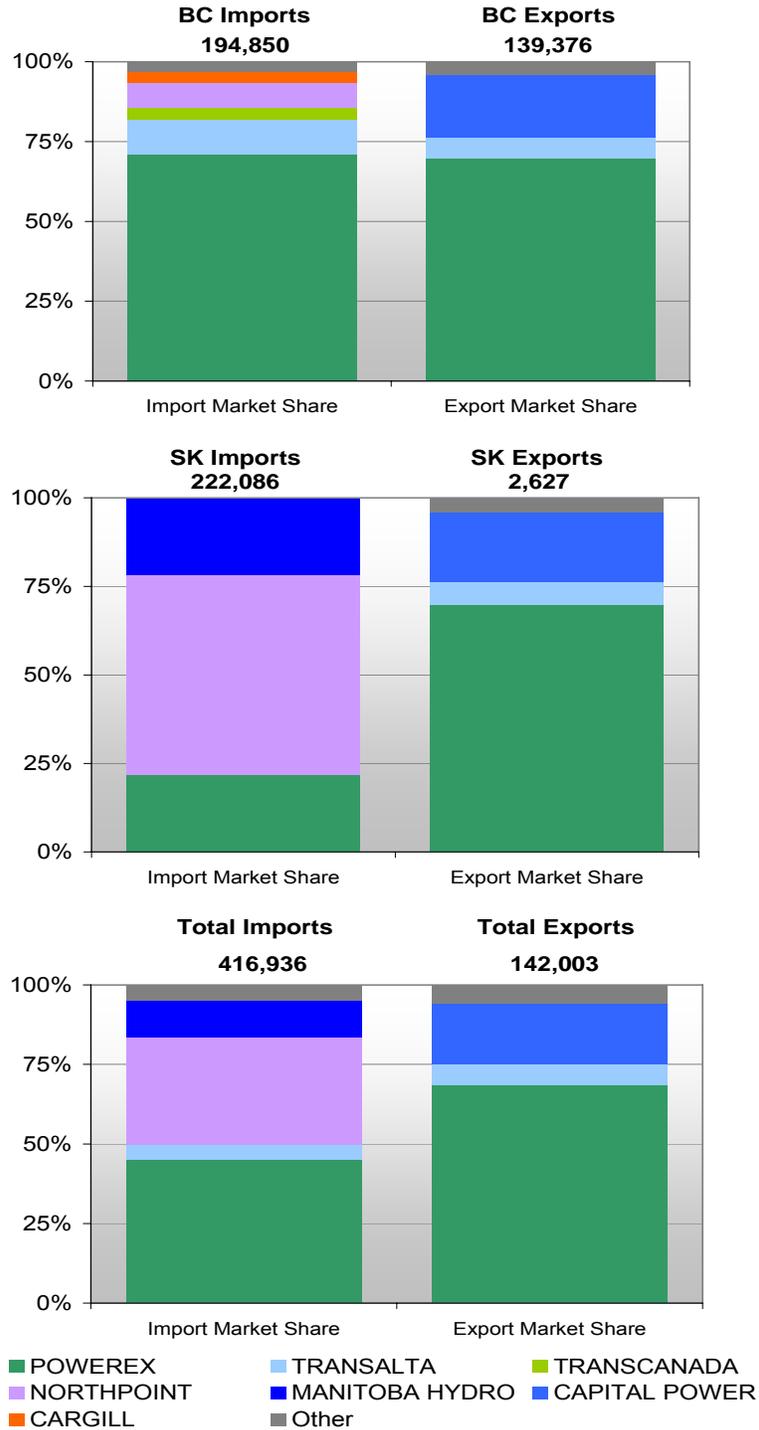
A good example of this is seen in the highest outlier in the upper left quadrant, plotted at (-70 MW, \$570). This can be interpreted as an imputed loss of \$570/MWh for the scheduled 70MWh of import to Alberta. In this hour prices MISO jumped from \$50/MWh to \$600/MWh and back down again the following hour. A similar event drove the second highest outlier in that quadrant as well. MISO real-time prices, like Alberta's Pool price, are not set until after the hour. This contrasts with Mid-C where hourly prices are agreed ahead of time between the buyer and seller.

4.4 Intertie Market Share

Figure xviii shows the intertie market shares for the BC and SK interties, as well as the combined import market share, and export market share. Above each bar chart is the total volume of imports or exports over each intertie in Q3/09. In some hours, a participant may have been importing

on one intertie and exporting on the other (a wheel-through) or even counter flowing on the same intertie. We have taken all these as separate transactions for the purposes of this analysis. To date these occurrences are not very frequent, but should that change in the future, we may have to change the way we treat the data.

Figure xviii: Intertie Market Shares (MWh)



The market shares have also been colour coded by participant and participant names are provided in the legend below. While the MSA has not previously identified market shares by participant name, this information is available from the AESO website, under Market and System Reporting → Historical Reports → Metered Volumes, which includes participant asset IDs which can be cross referenced with the AESO's asset list.¹⁰

For ease of interpretation, market shares under 3% of the total have been rolled up into the catch all category of "Other". It is notable that the participants included in each of the "Other" categories may vary in number and composition.

The BC intertie share figures indicate that importing across the BC intertie is undertaken by a larger number of participants than the SK intertie. Also, note that imports across the SK intertie exceeded imports across the BC intertie by 13% in Q3/09. Despite the small capacity of the SK intertie, imports have tended to be more consistent through all hours, as opposed to the more variable imports across the BC intertie.

5 ISO RULES COMPLIANCE UPDATE

5.1 Q3/09 Overview

Table i provides an update of the MSA's ISO rules compliance activities as of the end of Q3/09. From the beginning of 2009, 34 notices of specified penalty have been issued. In 22 other instances the MSA chose to forbear and 25 matters that have come to the attention of the MSA remained under review (compared to 16, 11 and 23 at the end of Q2/09). All 18 notices of specified penalty issued during Q3 will be posted to the MSA's website by early November.

Table i: Compliance Files (as of the End Q3/09)

ISO Rule	Under review	Notice of Specified Penalty	Forbearance
3.5.3	1	6	3
3.5.5	5		
6.2.3		1	
6.3.3	9	11	2
6.4.3			1
6.5.3	3		3
6.6	6	16	8
9.1.5			1
9.2			1
OPP 003.2			3
OPP 102	1		
Total	25	34	22

¹⁰ <http://www.aeso.ca/market/8631.html>

At the end of Q3/09, four of the matters under review were being considered for handling through either section 44 or section 51 of the AUC Act, rather than as a specified penalty under section 52 of that Act. The reasons for this include, as applicable, that the specific ISO rule involved may not be within the scope of the existing AUC Rule 019 or that a market participant had multiple contraventions of a single ISO rule.

5.2 Emerging Non-compliance Trends

ISO Rule 3.5.3

The MSA has seen a number of referrals related to ISO rule 3.5.3. Some of the contraventions of this rule appear to be related to the lack of coordination of a participant's offers when providing operating reserves or dispatch down service in addition to energy. Some market participants have suggested that compliance would be enhanced if the AESO's Energy Trading System (ETS) had additional functionality to assist them in coordinating offers. The MSA is supportive of such suggestions in that they may enhance participation and competition. Ultimately the addition of new IT systems and functionality is limited by stakeholders' willingness to pay for them (via higher trading charges). The MSA is also of the view that market participants do have options to develop their own systems, policies or procedures to assist in the coordination of offers and, in consequence, compliance with ISO rules.

ISO Rule 6.6

Q4/09 will involve some challenges around the newly approved ISO Rule 6.6. Initially, these will involve monitoring, particularly around ramping and ramp rates. The MSA anticipates it will take longer to consider the new facets of the rule. Market participants who believe they have mitigating or exceptional circumstances can assist the AESO's information request process and any further enquiries conducted by the MSA by referring to particular sections of the rule. Previous experience with monitoring and enforcement of the old rule 6.6 would suggest most contraventions will fall under ISO rule 6.6.3: Ramping Compliance. Fewer contraventions are expected under steady state conditions (ISO rule 6.6.2).¹¹

6 QUESTION AROUND THE INTERPRETATION OF THE FAIR EFFICIENT OPEN COMPETITION REGULATION

The MSA has received a number of questions relating to various sections of the fair, efficient and open competition regulation. The MSA is open to receiving questions informally (in person) or more formally (via letter). Where requests are made more formally the MSA will endeavour to share the question and responses with all market participants, either in a section of its Quarterly Report or if there are a large number of questions through a Frequently Asked Questions (FAQ) posted on the MSA's website. In

¹¹ A steady state contravention can only occur once an asset has reached generating asset steady state.

some cases the MSA may consider whether the question would benefit from further consideration through a stakeholder consultation process (possibly leading to an MSA guideline). Comments and further questions should be addressed to either Mike Nozdryn-Plotnicki (mike.nozdryn-plotnicki@albertamsa.ca) or Matt Ayres (matt.ayres@albertamsa.ca).

1. Section 2 of the FEOC Regulation prohibits the provision of misleading records to market participants. Does the MSA recognize the use of “Puffery” (statements for which neither party should have a reasonable expectation that the statements are an accurate representation of a state of affairs) in informal daily conversation as an acceptable business practice in commodity trading?

The MSA understands that trading often involves an amount of banter not necessarily related to the transaction at hand, or which occurs during a negotiation phase as part of the jockeying between the parties. Such banter could include statements which neither party reasonably believes are true. While the statements may form part of the banter between the parties there is no reasonable expectation that they should be relied upon by the party receiving the statement.

It is the MSA’s view that trading staff should exercise a duty of care, if the other counterparty could reasonably believe the statements made were true and intended to be relied upon, those statements could be misleading.

The MSA also notes that on occasion it has requested and reviewed voice records related to trades. Market participants should be aware of this and statements that indicate potential anti-competitive conduct or that appear to the MSA to be misleading to others are likely to result in investigation.

2. Could the MSA provide more clarity around what types of transactions would be considered offsetting or wash trades, as described in Section 2(c) of the FEOC Regulation? For example there are a number of transactions that might be considered offsetting but have legitimate business reasons and do not impact indices but may create the illusion of liquidity such as providing credit sleeves to reduce credit exposure or executing internal transfers to manage exposures.

Section 2(c) is quite specific that an offsetting (or wash trade) is only prohibited if when completed it results in (i) no material financial risk, and (ii) no net change in beneficial ownership. In order to provide guidance around other transactions that may have legitimate business purposes the MSA would require more specific examples. The MSA does note that “trade” as defined in the regulation involves “2 or more market participants” and would not preclude a purely internal transfer.

3. How does the MSA differentiate between price manipulation and price impact as it pertains to offer strategy?

Price manipulation is, of course, part of subsection 2(j) of the Fair, Efficient and Open Competition (FEOC) Regulation. The MSA believes subsection 2(j) would benefit from further stakeholder discussion. The MSA is currently planning to begin this process with a 'Strawdog' Offer Behaviour Guideline and we will keep stakeholders informed of any change to this plan.

The MSA is on the record as noting that market participants may be deemed to intend a reasonably foreseeable outcome of their conduct. Through that lens, impact to pool price could be seen as the intended outcome in some circumstances. Again, we anticipate that this may form part of the stakeholder consultation contemplated above.

4. With regard to third party market intelligence, such as industry publications, do market participants have an obligation to ensure the accuracy of this information? For example, if a third party reports incorrect facility outage information obtained from a source external to the facility owner/operator, is the facility owner/operator required to notify the market of the error?

Market participants should aspire to the highest ethical standards in dealing with others. Best practice is to develop policies setting clear expectations for the conduct of frontline staff – particularly those involved in trading activity.

In the MSA's view market participants have no obligation to ensure third party market intelligence publications contain accurate information. Market participants should at a minimum have policies that do not condone supplying information for the purpose of misleading others. Accordingly, where a participant is aware of the inaccuracy in the reporting offered by a third party it should avoid being seen to endorse that specific reporting.

5. With respect to the reporting of outage information in the event that the AESO graphs fail to update due to the AESO experiencing an IT issue, what is the best practice for market participants to adopt?

Issues with the AESO's outage information systems are infrequent and the MSA understands that the AESO continues to work on ensuring they have a high degree of reliability. The short term and monthly outage graphs (which show generation outages by fuel type) are the most complex and update the most frequently. Should problems with these graphs occur, the MSA would suggest participants follow the instructions contained in the AESO's FAQ ([http://www.aeso.ca/downloads/TPG_FAQ_-_FINAL_11-Aug-2009_\(3\).pdf](http://www.aeso.ca/downloads/TPG_FAQ_-_FINAL_11-Aug-2009_(3).pdf)), i.e. contact the AESO if the graphs have not updated within 20 minutes.

7 MSA ACTIVITIES

7.1 Stakeholder Consultation: Publication of Retail Market Statistics

On June 11, 2009 the MSA commenced a stakeholder consultation regarding the publication of retail statistics. This consultation concluded on August 5 with the MSA adopting two changes related to providing additional information around the size of market segments and regional distributions. The MSA wishes to thank stakeholders for their participation in this consultation. For further details see <http://www.albertamsa.ca/981.html>.

7.2 Stakeholder Consultation: Market Share Offer Control Process

Section 5 of the Fair, Efficient and Open Competition Regulation requires that the MSA, at least annually, publish certain metrics relating to market share offer control. The MSA commenced a stakeholder consultation regarding the process for collecting and publishing data and the related requirements for market participants. That consultation began with a “Strawdog” on July 13, 2009. Following stakeholder comment the MSA released a draft process on August 27, 2009. Further stakeholder comment was received prior to the finalization of the process document, posted to the MSA’s website on September 25, 2009. The MSA appreciates stakeholders’ participation in these matters.

Table ii: Summary of Market Share Offer Control Process

Step	Approximate timing	Description
1 Collection of maximum capability data from the AESO	Prior to May	MSA requests AESO provide maximum capability data of all units as per Section 5(1)(e) of the Regulation
2 MSA determines annual reporting threshold	Prior to May	MSA determines if annual reporting threshold. In most years this is expected to be set at 5%.
3 Publication of Notice	Early May	MSA publishes a notice on its website providing the annual reporting threshold, MC values for assets and date by which responses are required. The notice also includes a pro-forma to assist with data submission.
4 Market Participants submit data	May – at least two weeks after publication of the notice	Market participants submit data on pro-forma. At least four weeks is given to respond where the annual reporting threshold is less than 5%.
5 Publishing of Report	June	MSA publishes report with a summary table and more detailed appendices.

Based on the final process the MSA will commence the annual process by collecting information from the AESO and then publishing a notice to market participants in May. Table ii summarizes the five steps in the annual Market Share Offer Control Process. The process also includes a requirement for some participants to provide ongoing reporting of changes in offer control greater or equal to 100MW. For further details see <http://www.albertamsa.ca/1027.html>

7.3 MSA Report: Operating Reserves Procurement - Understanding Market Outcomes

On September 16, 2009 the MSA released a report on Operating Reserves Procurement. The report is not focused on a specific market event but has a broader objective in explaining some of the complexities and dynamics present in the market. The MSA also hopes that a better appreciation of these factors will assist participants in understanding the AESO's proposed re-design of the operating reserves market. The report is available at: <http://www.albertamsa.ca/1015.html>.

7.4 AUC Proceedings and other matters

During Q3/09 the MSA has been actively involved in several proceedings before the Alberta Utilities Commission (AUC):

- **Proceeding 168 - Confirmation of a Specified Penalty issued to Syncrude Canada Ltd** – An oral hearing for this proceeding took place on May 27, 2009. Following the hearing opportunity was provided for written argument and reply argument. A decision from the AUC released on September 22 confirming the \$8,000 specified penalty issued by the MSA. In accordance with AUC Rule 019 the decision and the notice of specified penalty has been placed on the MSA's website (<http://www.albertamsa.ca/1025.html>). The MSA subsequently filed an application for costs pursuant to AUC Rule 015 (Application 1605552), and is awaiting direction from the AUC regarding the process for that matter.
- **Proceeding 269 – Application by Market Surveillance Administrator for an Order Imposing an Administrative Penalty on ENMAX** – On July 21, 2009 the MSA filed an application pursuant to section 51 of the AUC Act for an order imposing an administrative penalty on ENMAX. In August both ENMAX and the MSA made submissions regarding process and form of proceeding. In September the AUC requested motions on preliminary matters, and on October 21, 2009 the AUC issued its decision in respect of the various motions argued by the parties. The application has been set down for a hearing November 16 and 17, 2009.
- The MSA also participated in a written comment process and related roundtable meetings held by the AUC on September 18 and October 2, 2009. These roundtable meetings were part of a Commission initiated consultation associated with proceedings brought before the Commission by the MSA. For further details see Bulletin 2009-15, 2009-16 and 2009-22 on the AUC's website.

7.5 Offer Behaviour Consultation

During Q3/09 the MSA has been drafting a 'Strawdog' to commence its consultation around offer behaviour. The MSA wishes to thank those stakeholders who engaged in the informal filtering stage during Q2/09 and

Q3/09. With the number of active industry consultations diminished the MSA envisages beginning this consultation within Q4/09.

7.6 Appointment of a New MSA

The MSA staff is pleased to welcome Harry Chandler as the new Market Surveillance Administrator, effective October 1, 2009. Harry joins the MSA for a five year term. For further details on Harry's background see http://www.albertamsa.ca/files/HSC_Stakeholder_091014_w_cv.pdf. The MSA Staff would also like to thank the outgoing MSA, Martin Merritt and wish him well in his future endeavors.

7.7 MSA Fall Stakeholder Meeting

The MSA held its Fall stakeholder meeting in Calgary on October 14, 2009. The fall meetings are generally geared to highlighting specific work of the staff. This year the meeting presented the following:

- A review of the FEOC Regulation and in particular what the MSA has done or published relative to the FEOC regulation and what we see on the horizon;
- An overview of the "educational" paper which the MSA had recently published on the Operating Reserve Market;
- Summary statistics with respect to the status of the rules compliance function at the MSA and comments on our view on the new reliability standards.

The meeting also provided market participants with the opportunity to be introduced to the new MSA, Harry Chandler. Harry presented a highlight of the guiding principles which will position his direction for the MSA over his term.

Copies of the presentations made at the Fall meeting are available at http://www.albertamsa.ca/files/MSA_Fall_2009_Stakeholder_Meeting_101409.pdf and http://www.albertamsa.ca/files/HSC_Stakeholder_091014_w_cv.pdf

While the MSA had advertised the holding of a similar meeting in Edmonton on October 15, 2009, a smaller audience made for a more interactive conversation instead of formal presentations on all of the above points.

7.8 EISG Fall Meeting

The MSA hosted the recent fall meeting of the Energy Inter-Market Surveillance Group (EISG) – an association of electricity market monitoring groups in other jurisdictions in North America and abroad. This group meets on a semi-annual basis to review and discuss matters of mutual interest regarding monitoring of competitive electricity markets.

APPENDIX A – WHOLESALE ENERGY MARKET METRICS

Table 1 - Pool Price Statistics

	Average Price ¹	On-Pk Price ²	Off-Pk Price ³	Std Dev ⁴	Coeff. Variation ⁵
Jul-09	41.39	53.98	23.94	42.29	102%
Aug-09	34.60	45.45	20.85	36.91	107%
Sep-09	73.25	113.27	18.48	168.40	230%
Q3-09	49.49	70.68	21.11	102.86	208%
Apr-09	31.53	38.56	21.91	35.58	113%
May-09	31.91	39.73	22.01	27.87	87%
Jun-09	33.48	45.09	17.60	43.82	131%
Q2-09	32.30	41.12	20.54	36.26	112%
Jul-08	64.51	81.01	41.67	64.80	100%
Aug-08	82.72	114.86	41.95	120.21	145%
Sep-08	93.86	135.29	37.15	172.28	184%
Q3-08	80.21	110.01	40.31	126.87	158%

1 - \$/MWh

2 - On-peak hours in Alberta include HE08 through HE23, Monday through Saturday

3 - Off-peak hours in Alberta include HE01 through HE07 and HE24 Monday through Saturday, and HE01 through HE24 on Sundays

4 - Standard Deviation of hourly pool prices for the period

5 - Coefficient of Variation for the period (standard deviation/mean)

Figure 1 – Pool Price Duration Curves

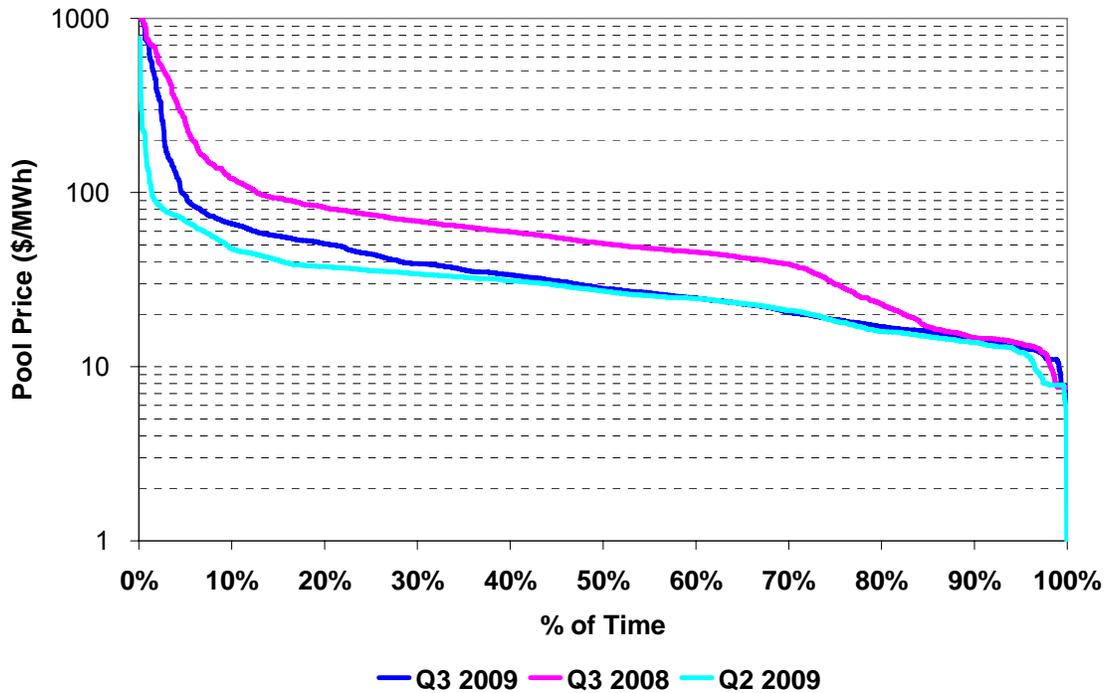


Figure 2 – Pool Price with Pool Price Volatility

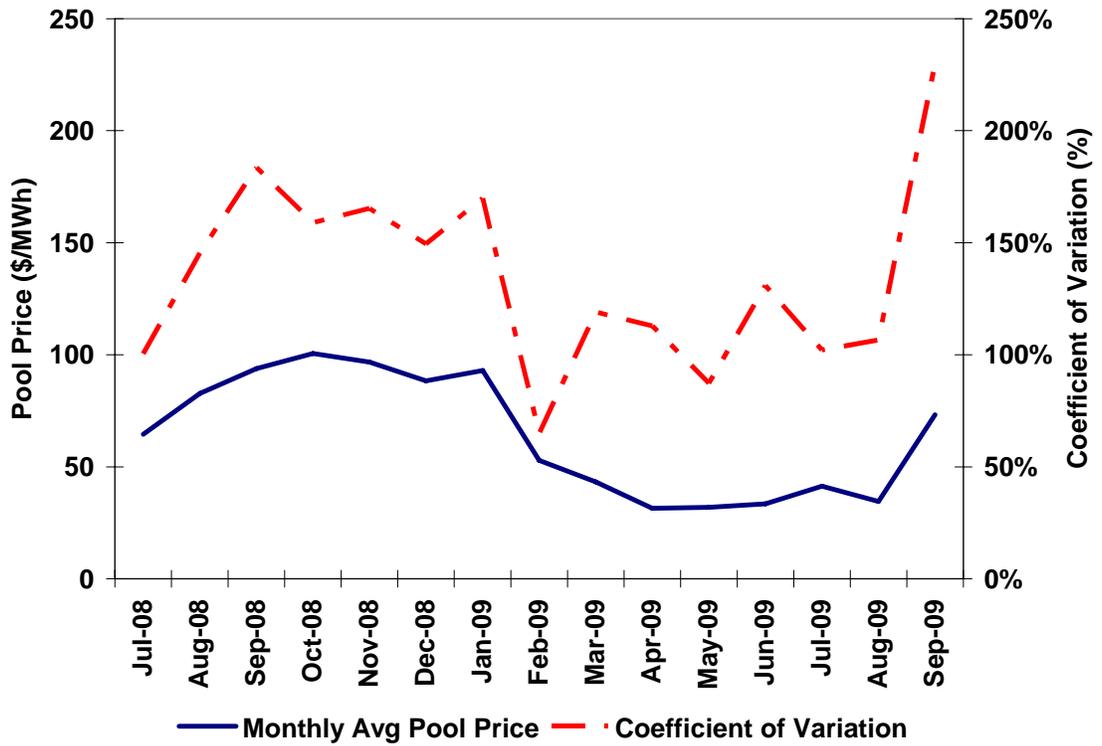


Figure 3 - Pool Price with AECO Gas Price

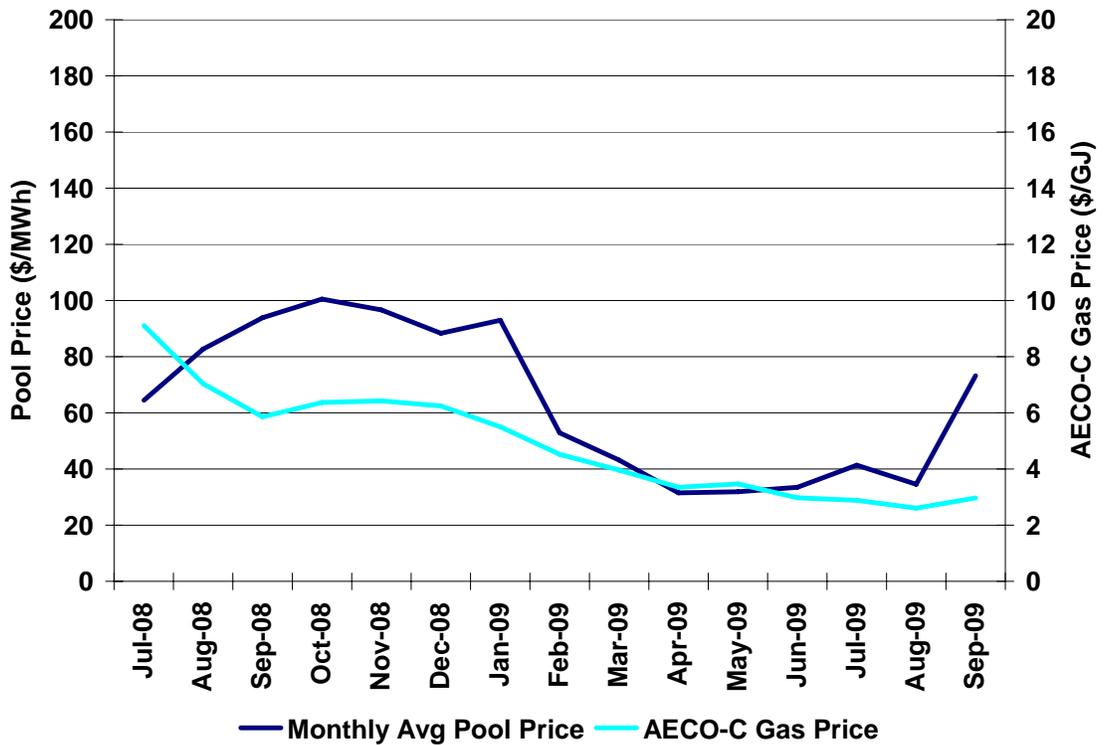


Figure 4 - Price Setters by Pool Participant (All Hours)

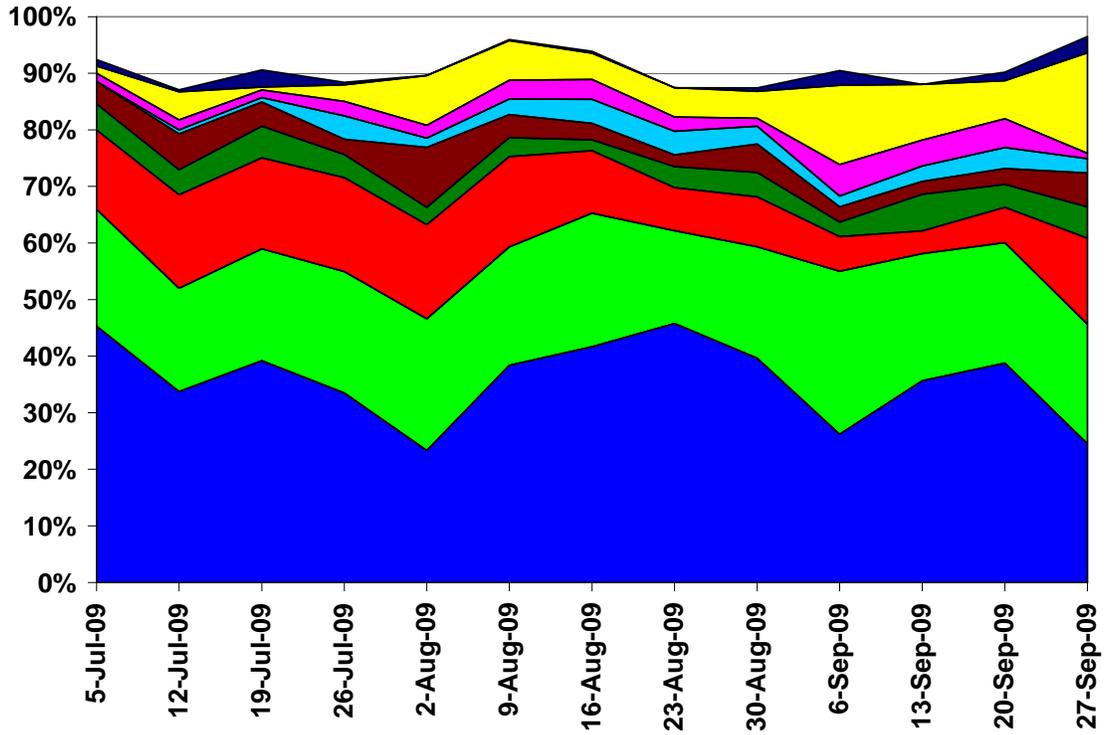


Figure 5 - Price Setters by Fuel Type (All Hours)

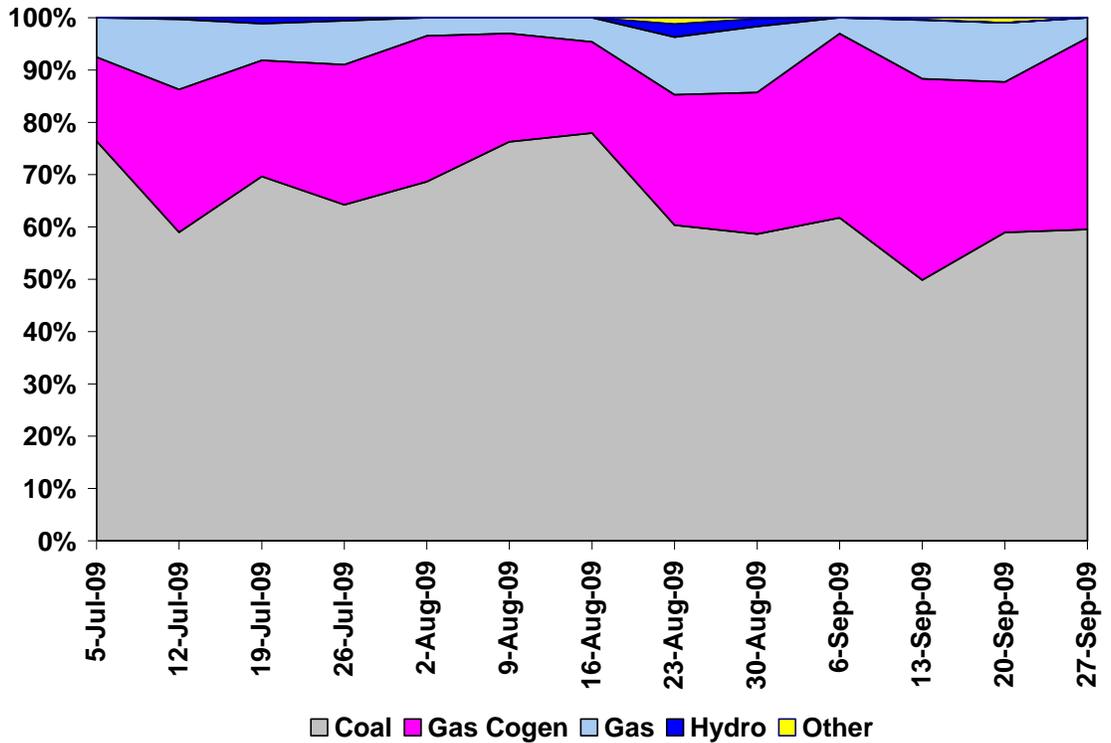


Figure 6 – Heat Rate Duration Curves (All Hours)

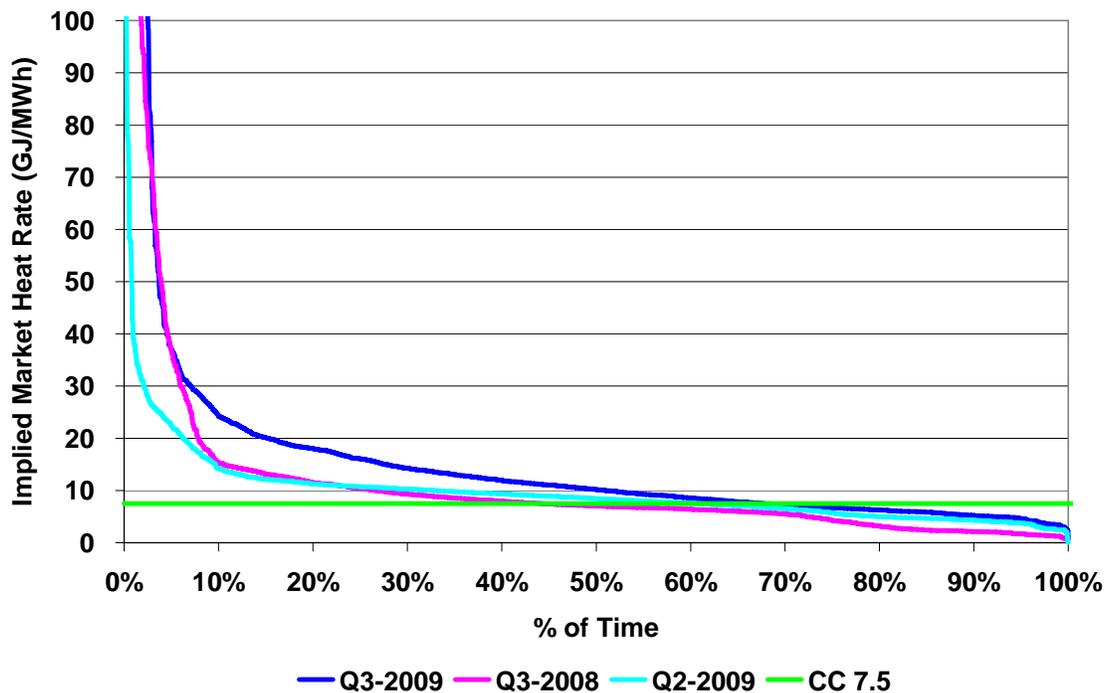


Figure 7 - Implied Market Heat Rates On-Peak

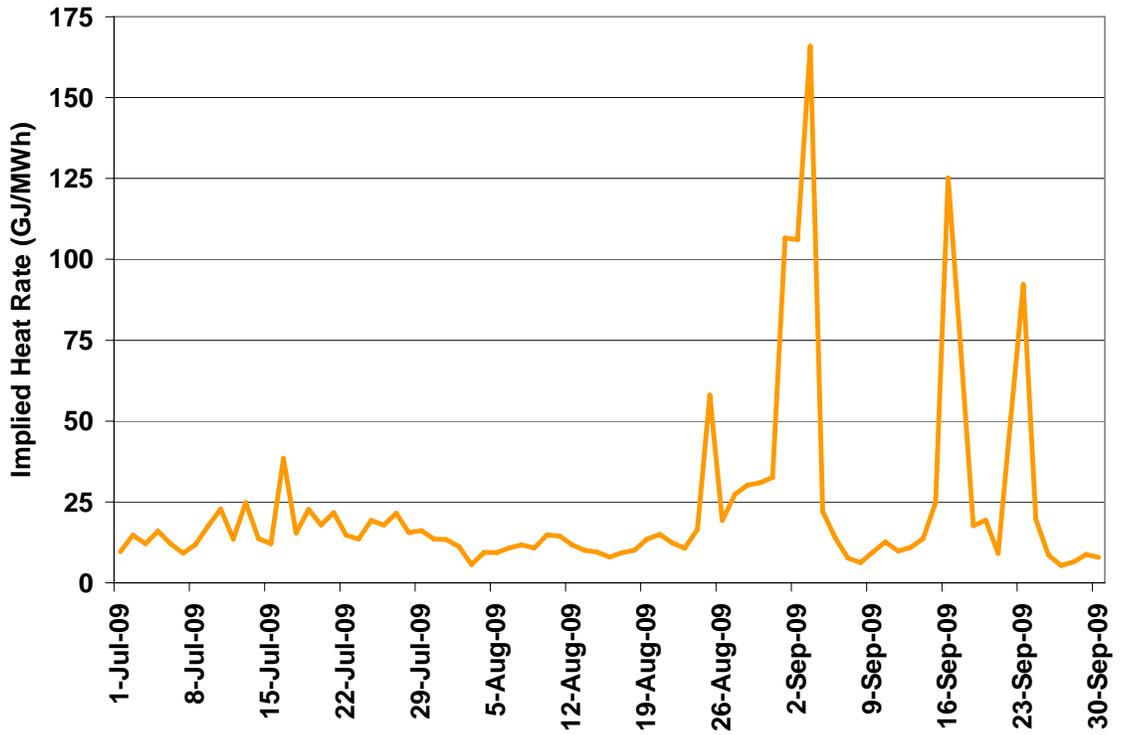
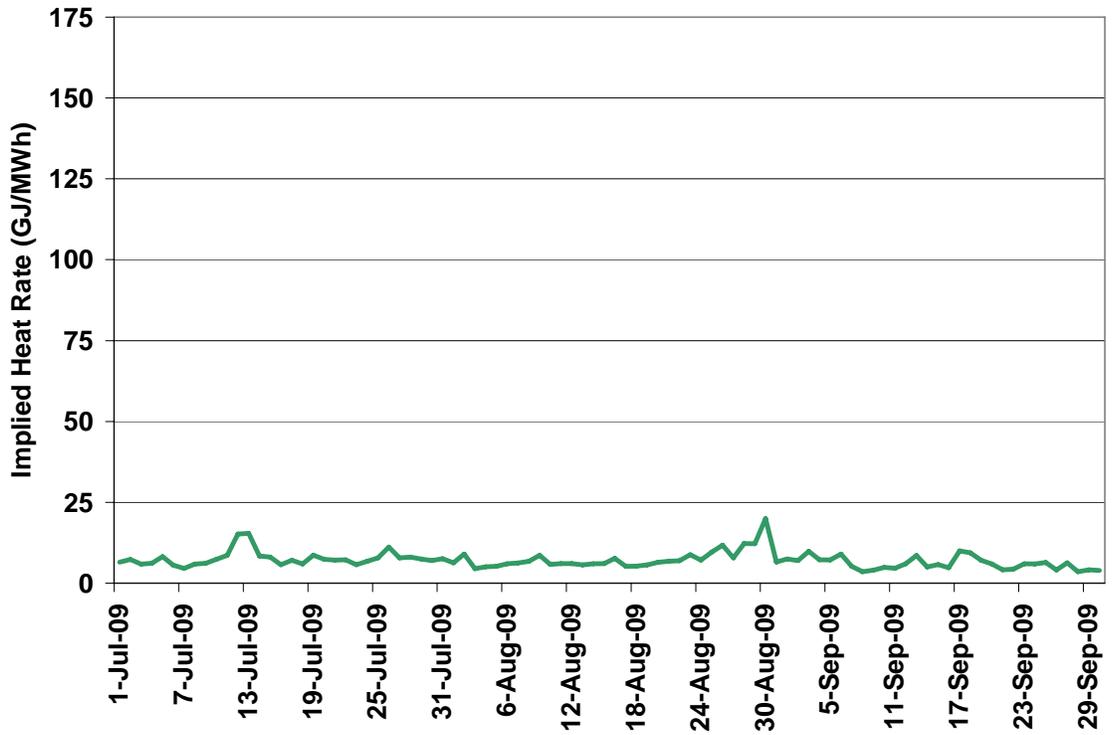


Figure 8 - Implied Market Heat Rates Off-Peak

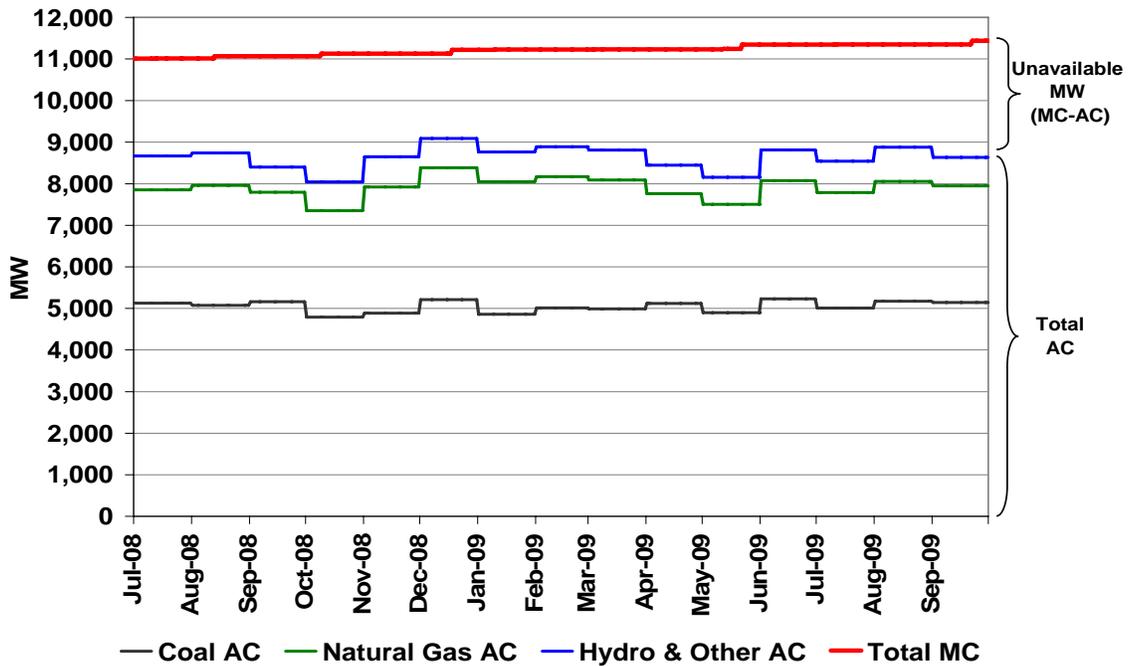


APPENDIX B – SUPPLY AVAILABILITY METRICS

Table 2 - Availability Factor and Capacity Factor

Fuel Type	Quarter	Average MC	Average AC	Availability Factor	Generation	Capacity Factor
		[A] (MW)	[B] (MW)	[C]=[A]/[B]	[D] (GWh)	[E]= [Dx1000]/([A]xhrs)
All Fuels	Q3/09	11,357	8,543	75%	15,330	61%
	Q2/09	11,282	8,468	75%	14,727	60%
	Q3/08	11,042	8,604	78%	15,489	64%
Coal	Q3/09	6,011	5,008	83%	10,241	77%
	Q2/09	6,011	5,081	85%	9,955	76%
	Q3/08	6,011	5,122	85%	10,678	80%
Natural Gas	Q3/09	4,431	2,779	63%	4,600	47%
	Q2/09	4,356	2,695	62%	4,314	45%
	Q3/08	4,116	2,749	67%	4,193	46%
Hydro & Other	Q3/09	915	756	83%	221	11%
	Q2/09	915	692	76%	458	23%
	Q3/08	915	734	80%	618	31%
Wind	Q3/09	502	n/a	n/a	202	18%
	Q2/09	497	n/a	n/a	307	28%
	Q3/08	497	n/a	n/a	246	22%

Figure 9 – Availability Capacity (AC) vs Maximum Capacity (MC)



APPENDIX C – OPERATING RESERVE MARKET METRICS

Ancillary services are the system support services that ensure system stability and reliability. The Alberta Interconnected Electric System (AIES) is required to carry sufficient operating reserves in order to assist in the recovery of any unexpected loss of generation or an interconnection. Operating reserves are competitively procured by the AESO through the Alberta NGX Exchange (NGX) and over the counter (OTC). Standard operating services products (contracts) include active and standby products for each of Regulating, Spinning, and Supplemental operating reserves. The majority of active operating reserve products are indexed and settled against the Pool price prevailing during the contract period. Standby operating reserve products are priced in a similar manner to options with a fixed premium and an exercise price (activation price). The activation price is only paid in the event that the contract is activated.

Figure 10 - Active Settlement Prices - All Markets (NGX and OTC)

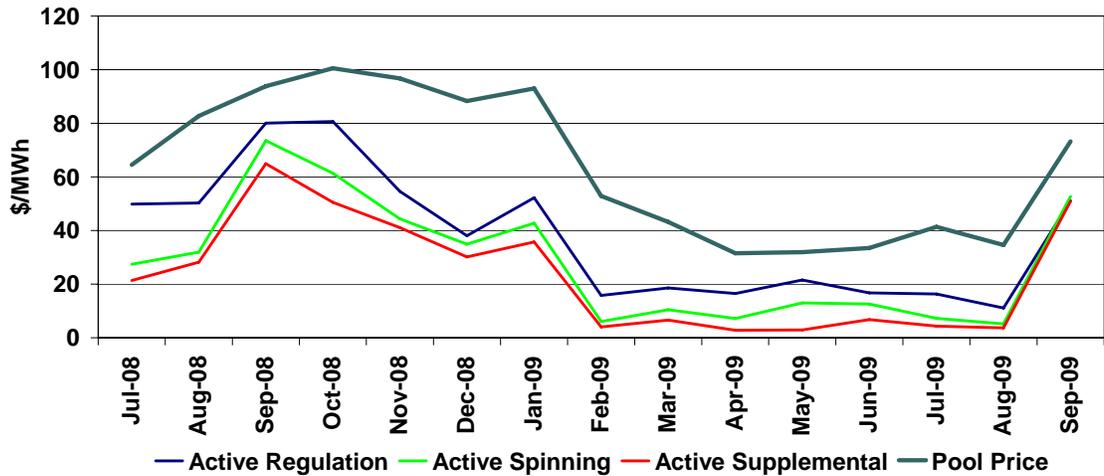


Figure 11 - Standby Premiums – All Markets (NGX and OTC)

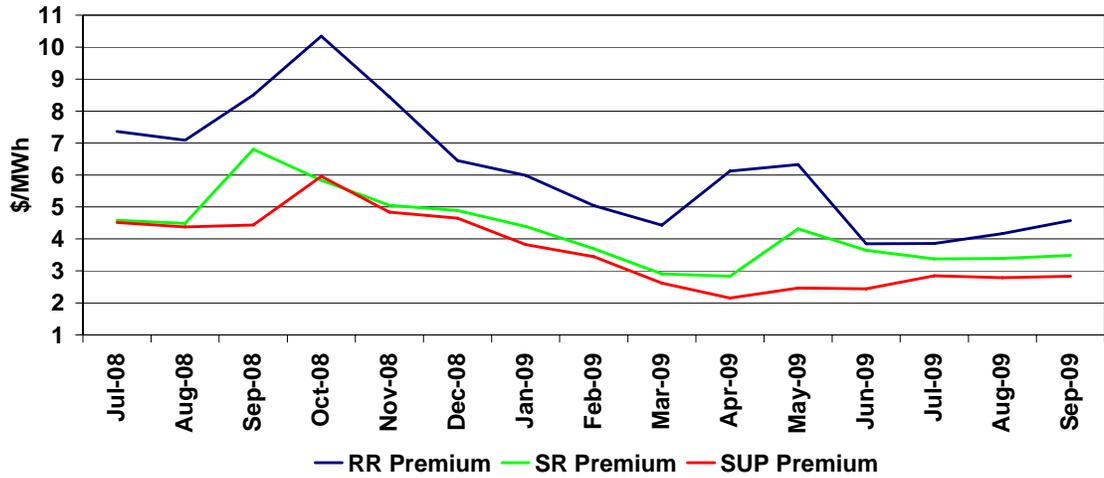


Figure 12 - Standby Activation Prices – All Markets (NGX and OTC)

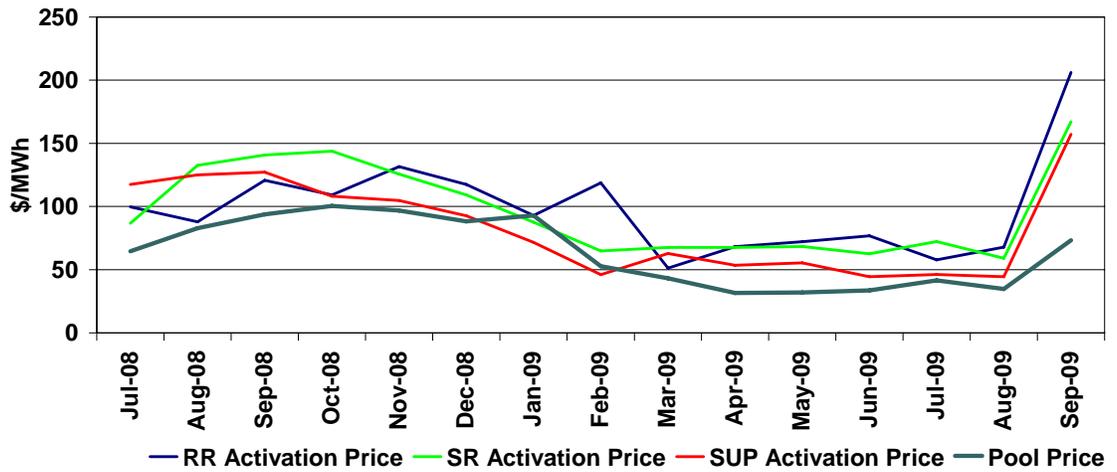


Figure 13 - Standby Activation Rates

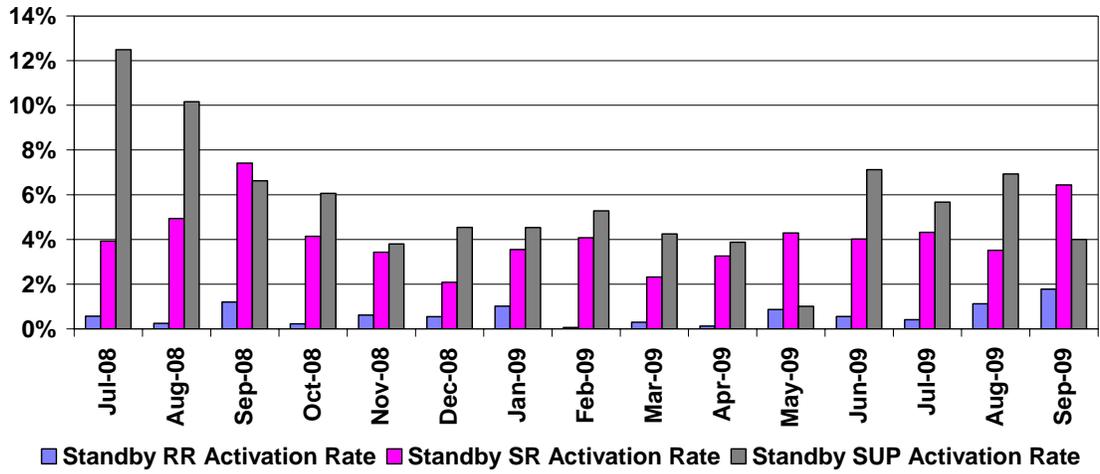


Figure 14 - OTC Procurement as a % of Total Procurement

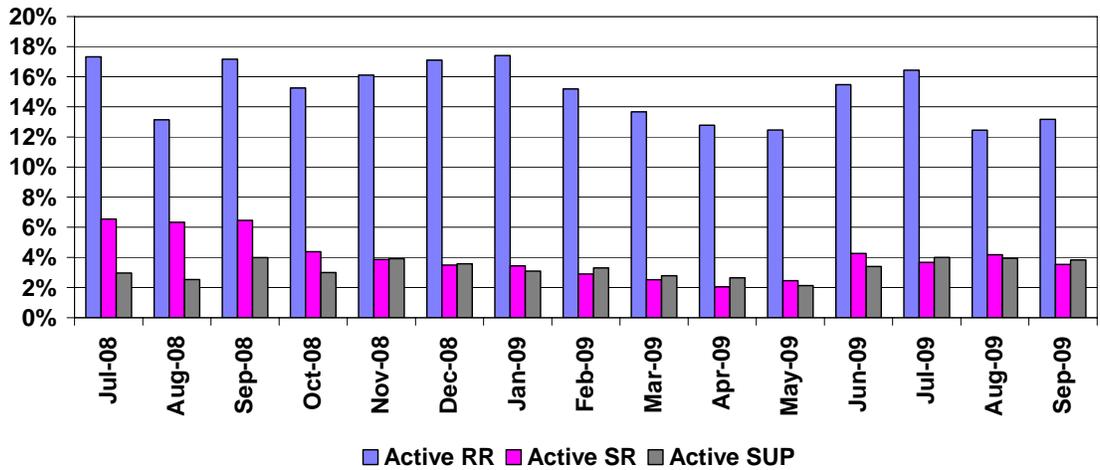


Figure 15 - Active Regulating Reserve Settlement by Market

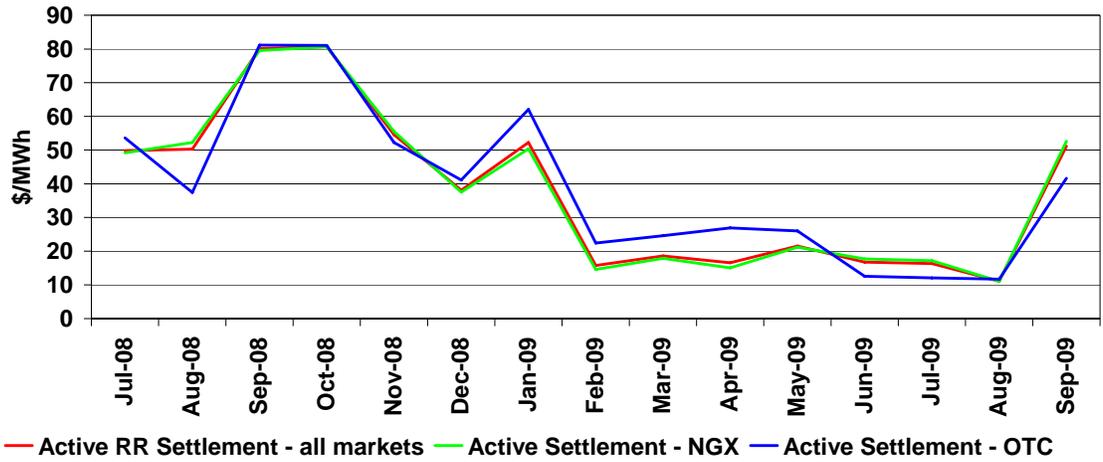


Figure 16 - Active Spinning Reserve Settlement Price by Market

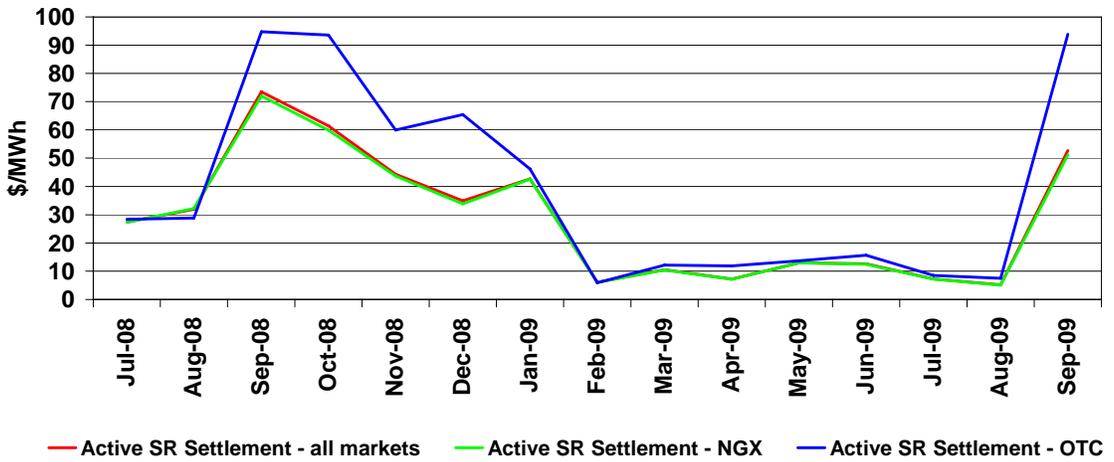


Figure 17 - Active Supplemental Reserve Settlement Price by Market

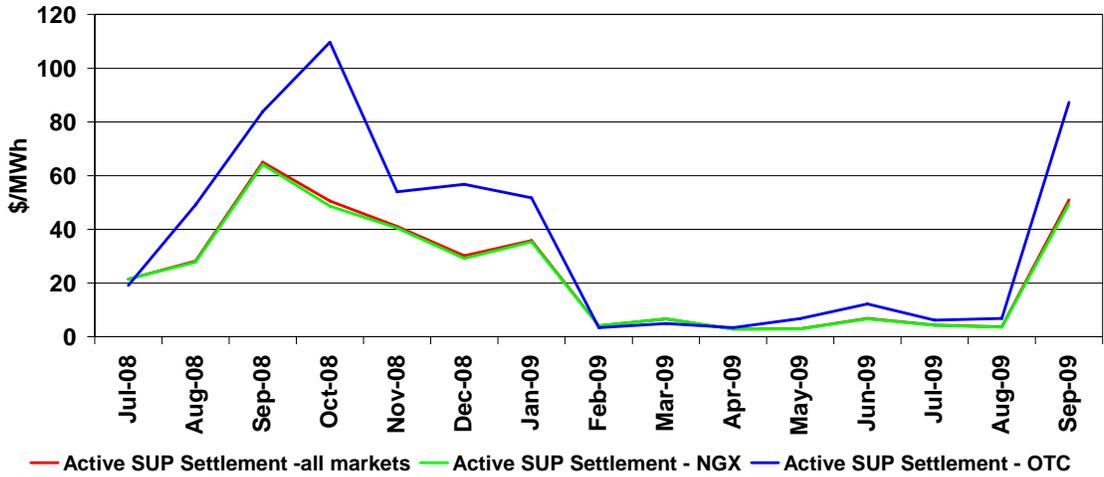


Figure 18 - Active Regulating Reserve Market Share by Fuel Type

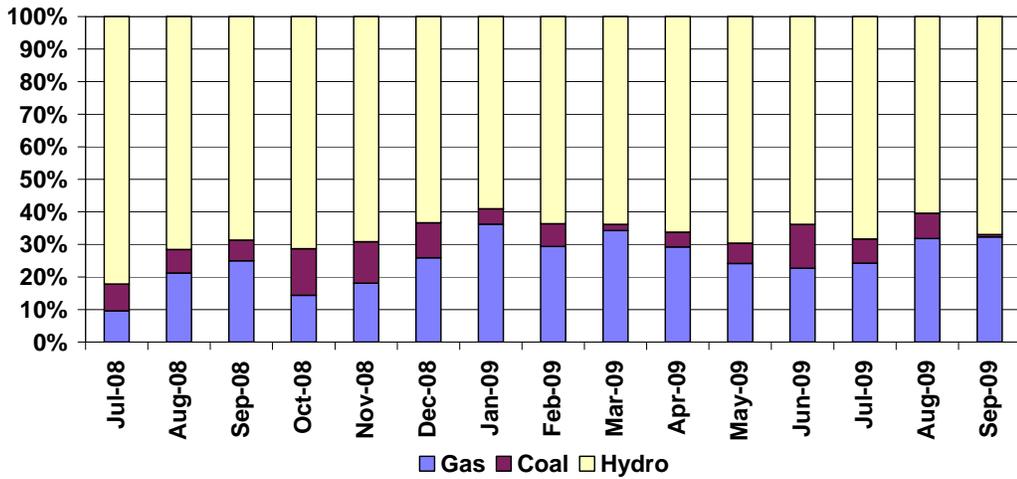


Figure 19 - Active Spinning Reserve Market Share by Fuel Type

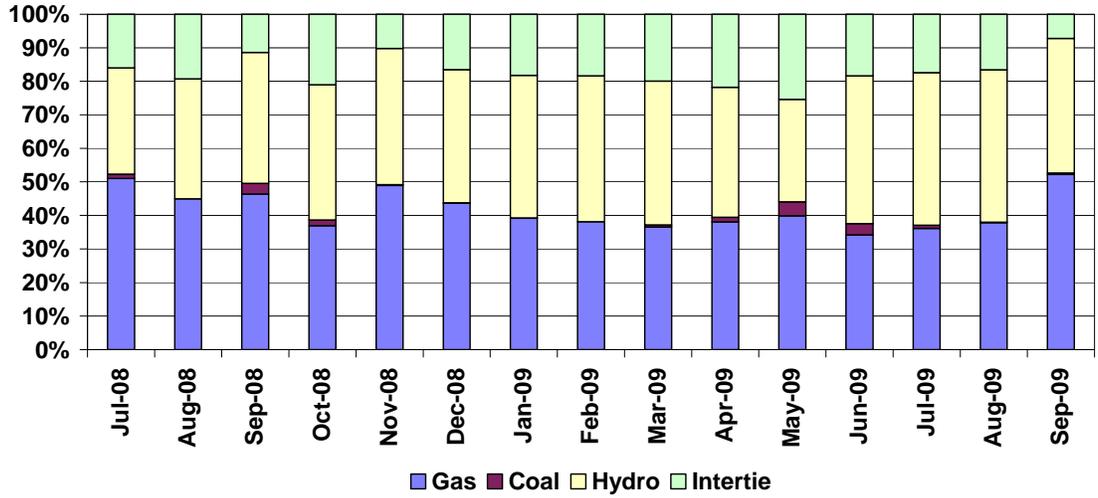
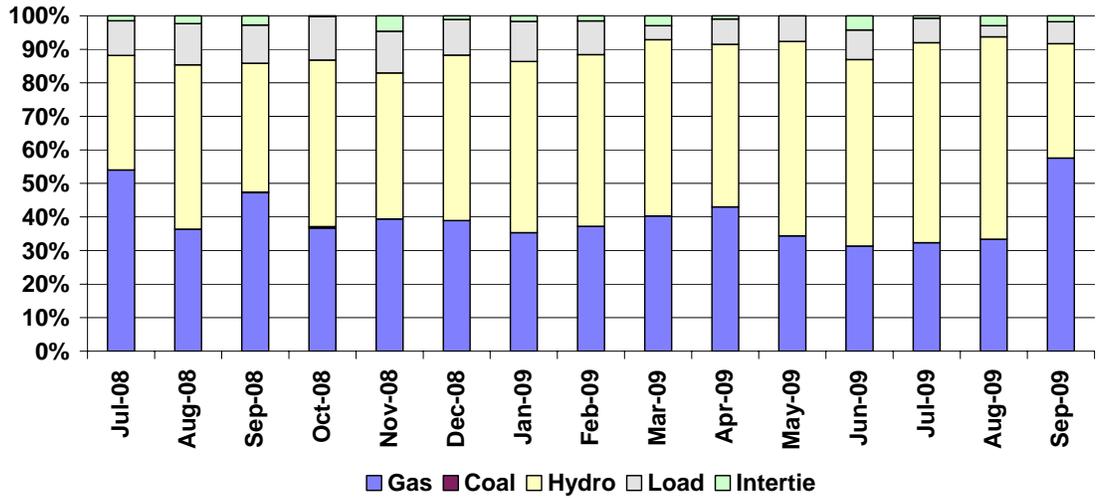


Figure 20 - Active Supplemental Reserve by Fuel Type



APPENDIX D – DDS METRICS

Table 3 - DDS Costs and Revenues

Month	Total Payment (\$M)	Total Dispatched (MWh)	Total Energy Production (MWh)	Estimated DDS Charge (\$/MWh)	Estimated Revenue to DDS
	[A]	[B]	[C]	[A]/[C]	[A]/[B]
July	\$0.34	34,539	4,674,286	\$0.07	\$9.79
August	\$0.37	43,001	4,685,410	\$0.08	\$8.58
September	\$0.79	71,080	3,563,355	\$0.22	\$11.13
Total	\$1.50	148,620	12,923,051	\$0.12	\$10.08

Figure 21 - Average Daily TMR, Available, Eligible & Dispatched DDS Volumes (MW)

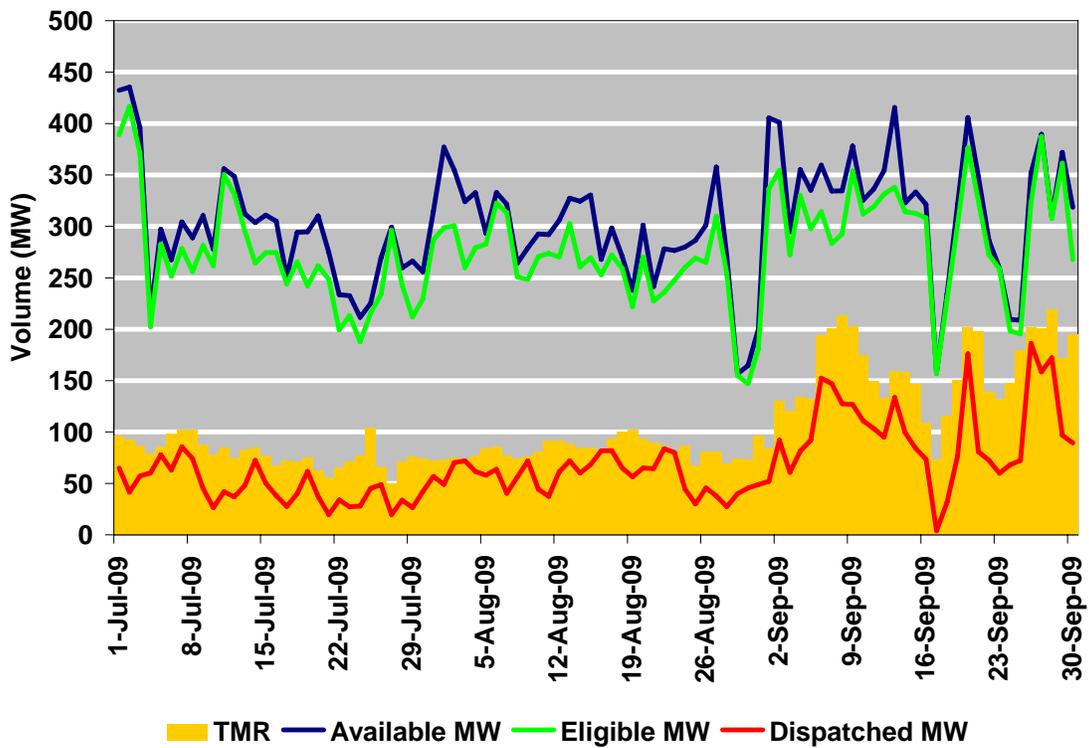


Figure 22 - Average Daily DDS Dispatched and Constrained Down Volume (MW)

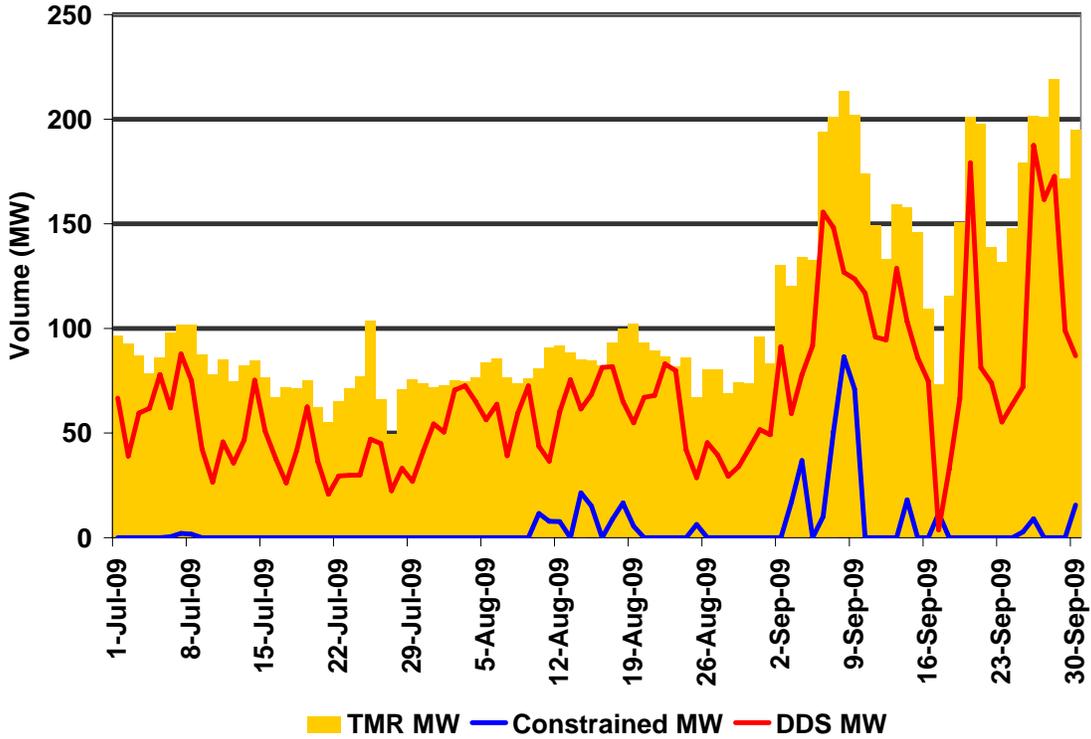


Figure 23 - Average Weekly DDS Market Share by Submitting Participants

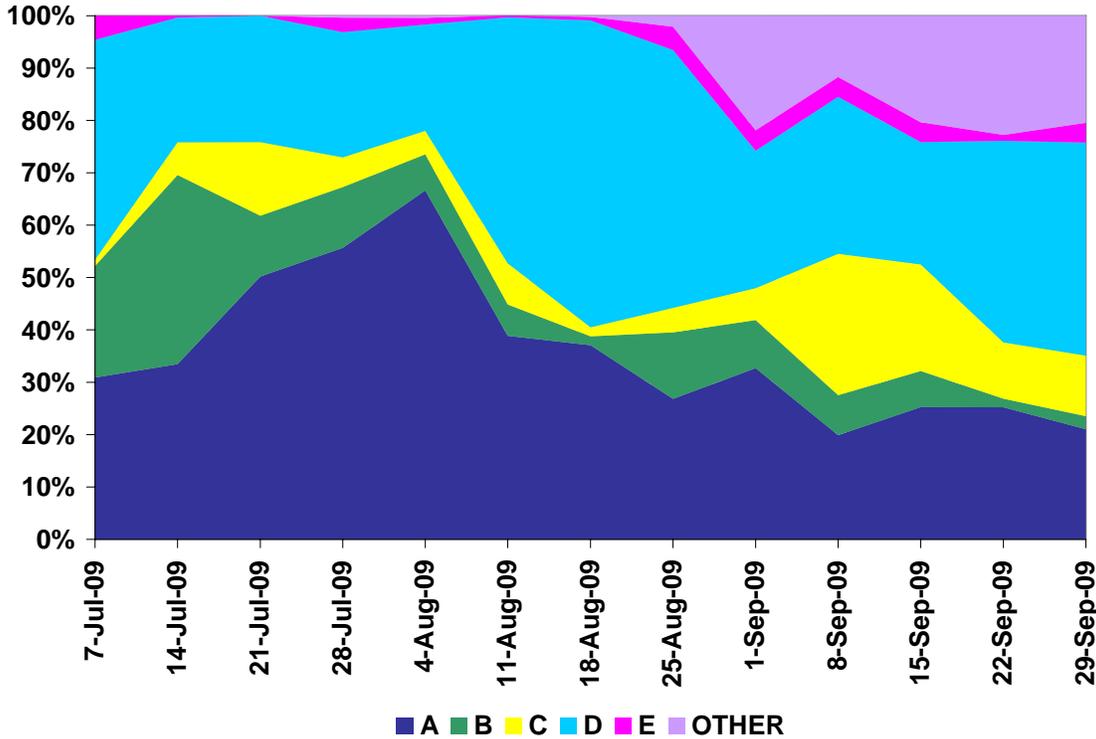
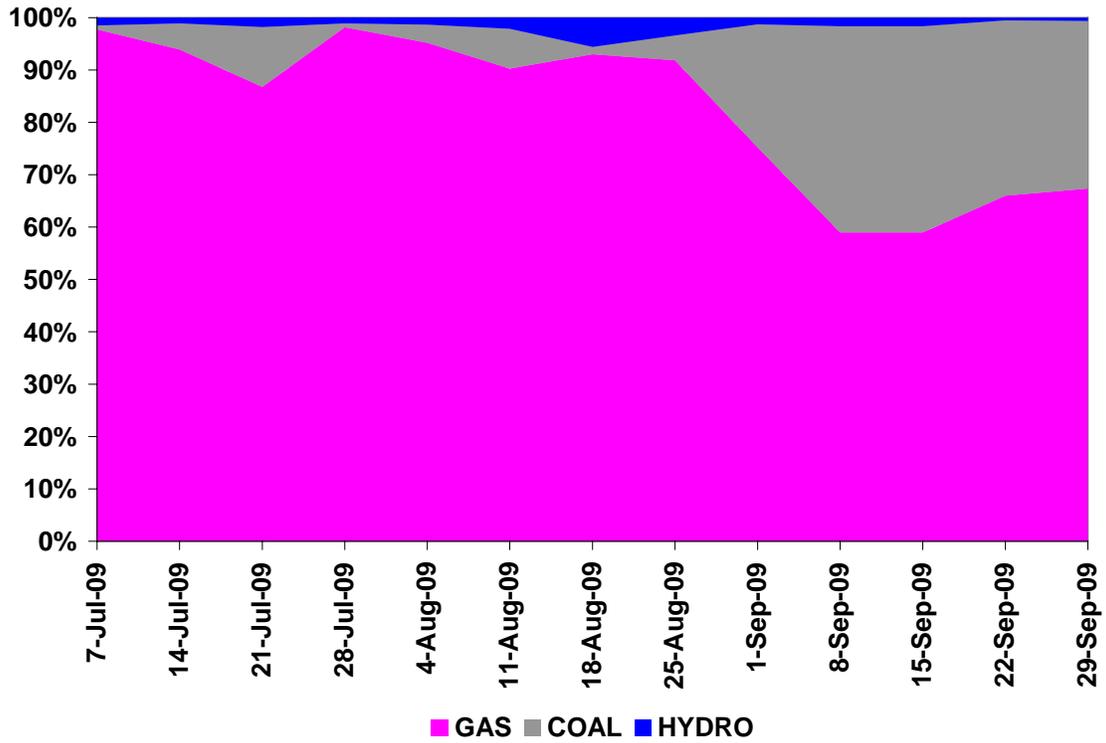


Figure 24 - Average Weekly Market Share DDS by Fuel Type



APPENDIX E – FORWARD MARKET METRICS

Figure 25 - Volume by Trading Month¹²

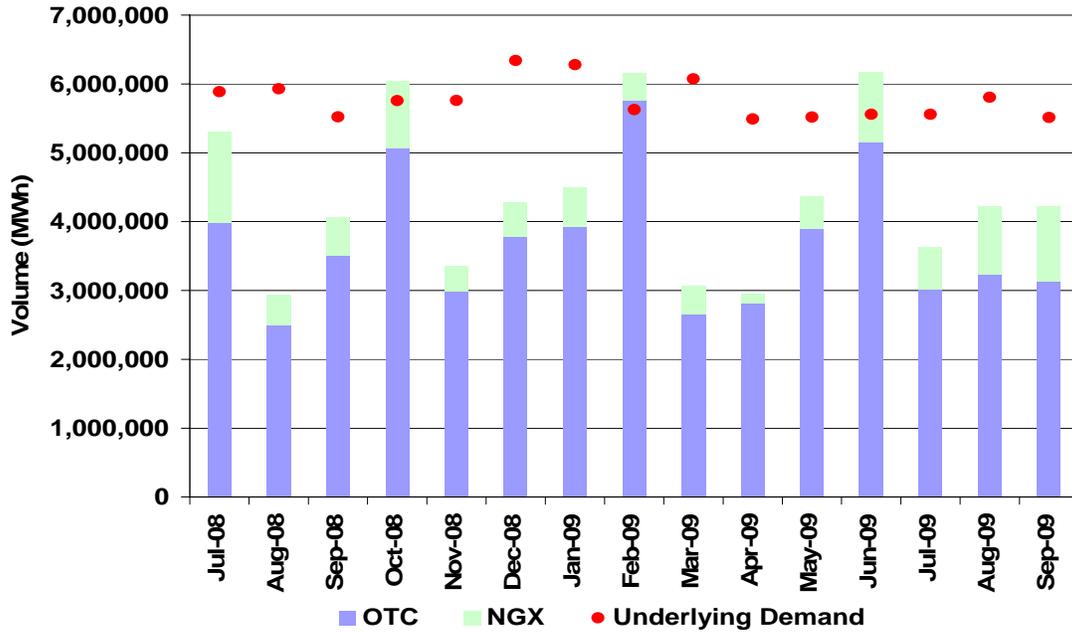
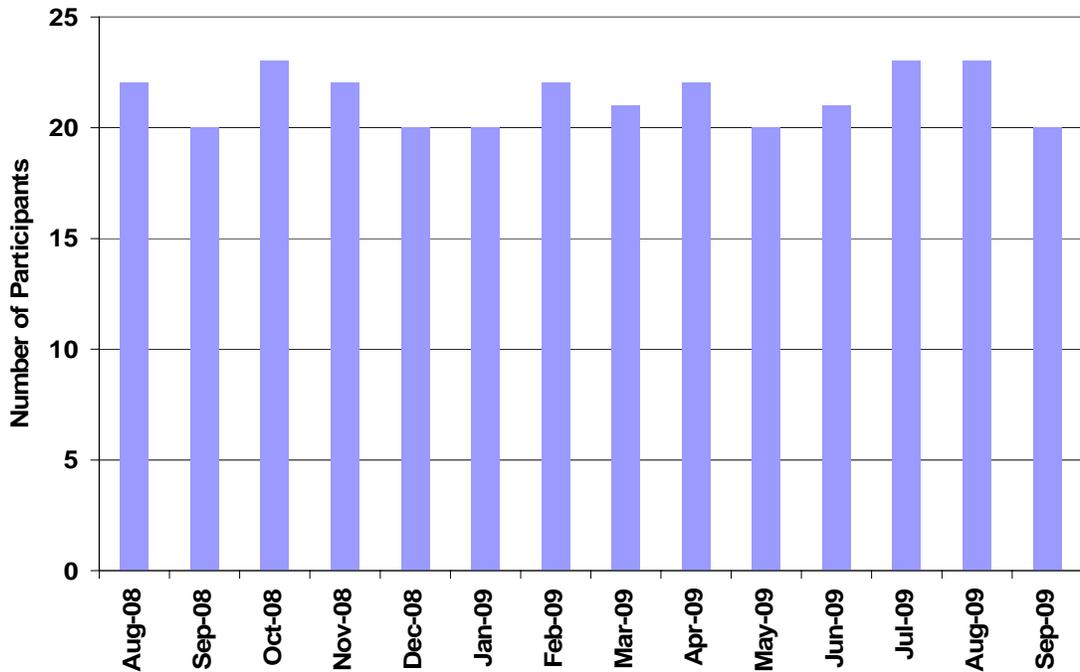


Figure 26 - Number of Participants by Trading Month



¹² The volumes include only one side of the transaction. NGX volumes do not include transactions not facilitated by but settled through NGX.