



Q3/14 Quarterly Report

July - September 2014

November 6, 2014

Spot market

The average pool price in Q3/14 was \$64.34/MWh (\$85.55/MWh on-peak, \$21.92/MWh off-peak), which is down 23% from Q3/13 of \$83.61/MWh. While average load (AIL) increased by over 200 MW in Q3, the pool price was \$19.27/MWh lower. This was as a result of on average 525 MW of increased supply cushion. The supply cushion increased in 2014 as a result of the return of SD1 and SD2 (576 MW) in November 2013 as well a reduction in overall outages by over 650 MW on average. A higher supply cushion level generally results in a lower pool price.

July

Hot weather resulted in a record-high summer demand of 10,419 MW on July 30; this exceeded the previous record-high summer demand of 10,063 MW set in July of 2013.

The average pool price of \$122.54/MWh in July was the highest monthly average price in the last 6 years.

July also had both high average supply cushion of 1,985 MW and the highest average demand of 9,036 MW. Across these six years, monthly energy consumption has increased by 0.9 TWh (16%) and on-peak demand has increased by 1,350 MW (15%). The high average price was driven by 96 on-peak hours with a pool price greater than \$200/MWh. In the majority of the 96 hours Alberta was well-supplied with power, with high prices caused by the configuration of outages and economic withholding by generators. The high average supply cushion was caused in part by very high values in the off-peak hours.

The MSA continues to observe “late” reporting of natural gas-fired generation deratings; this concern was previously discussed in our Q2/13 Quarterly Report. As an example, the actual natural gas-fired deratings on July 30 totalled 2,590 MW; two days earlier, total reported deratings for July 30 were 1,940 MW, 650 MW less than actual.

August

The average pool price in August was \$45.20/MWh, the fourth lowest average August pool price since 2000. However, forward prices for August indicated it might be a high-average price month, with forward prices typically being greater than 50% higher than this level.

		2013	2014	Change
<i>Average pool price (\$/MWh)</i>	<i>Jul</i>	56.14	122.54	118 %
	<i>Aug</i>	83.64	45.20	-46 %
	<i>Sep</i>	111.98	23.98	-79 %
	<i>Q3</i>	83.61	64.34	-23 %
<i>Average outage¹ (MW)</i>	<i>Jul</i>	3,264	2,685	-18 %
	<i>Aug</i>	3,324	2,784	-16 %
	<i>Sep</i>	3,637	2,806	-23 %
	<i>Q3</i>	3,406	2,758	-19 %
<i>Average supply cushion (MW)</i>	<i>Jul</i>	1,292	1,985	55 %
	<i>Aug</i>	1,346	1,705	27 %
	<i>Sep</i>	1,330	1,854	39 %
	<i>Q3</i>	1,323	1,848	40 %
<i>Average wind (MW)</i>	<i>Jul</i>	164	303	85 %
	<i>Aug</i>	173	236	36 %
	<i>Sep</i>	317	382	20 %
	<i>Q3</i>	217	305	41 %
<i>Average load (MW)</i>	<i>Jul</i>	8,605	9,036	5 %
	<i>Aug</i>	8,658	8,847	2 %
	<i>Sep</i>	8,486	8,724	3 %
	<i>Q3</i>	8,584	8,871	3 %

¹ Outage information in 2014 was normalized with 2013 data by removing a generator presently under construction.

The off-peak pool price averaged \$22.68/MWh. Exports during off-peak hours increased throughout the month, with average off-peak exports during the second-half of the month averaging 185 MW greater than during the first-half; these were primarily scheduled on the BC interconnection.

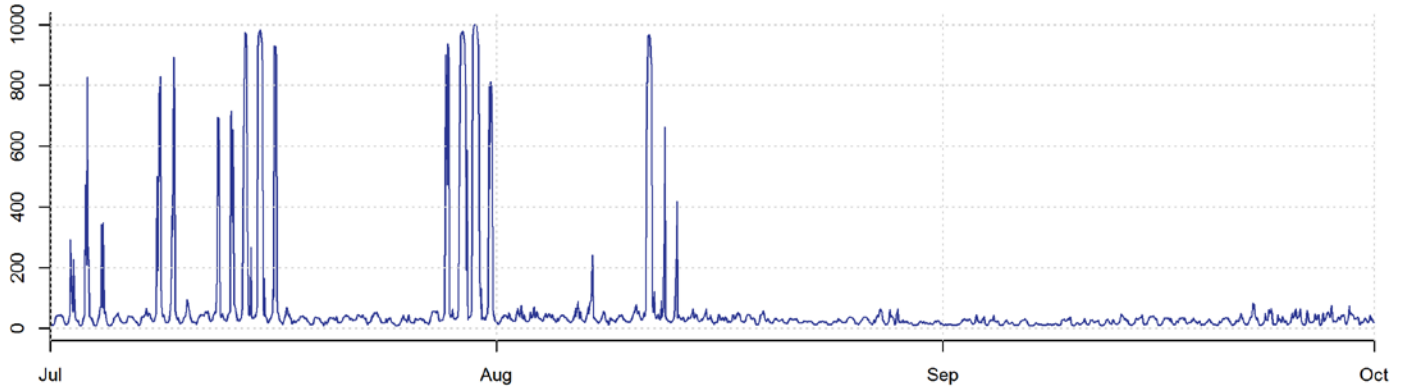
September

The average pool price in September was \$23.98/MWh, was the lowest average pool price of any month since 2002. Over this time period the average load increased by approximately 2,700 MW. As an aside, prices in October averaged \$27.04/MWh, the lowest October pool price since 2000.

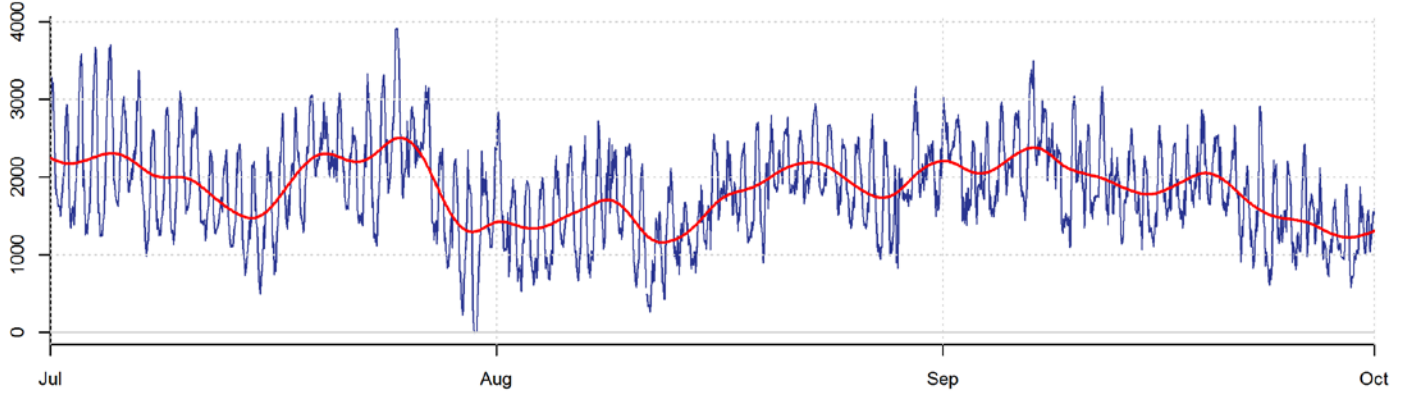
During the first-half of September both the BC and MATL interconnections were on outage; the Saskatchewan interconnection was on outage for the whole month. While this reduced supply available to the market, low demand, high wind-fuelled generation, and few major outages resulted in an average supply cushion that exceeded 1,800 MW.

Commissioning activities associated with the Shepard Power Station (EGC1) resulted in the first power from this station being injected into the power system.

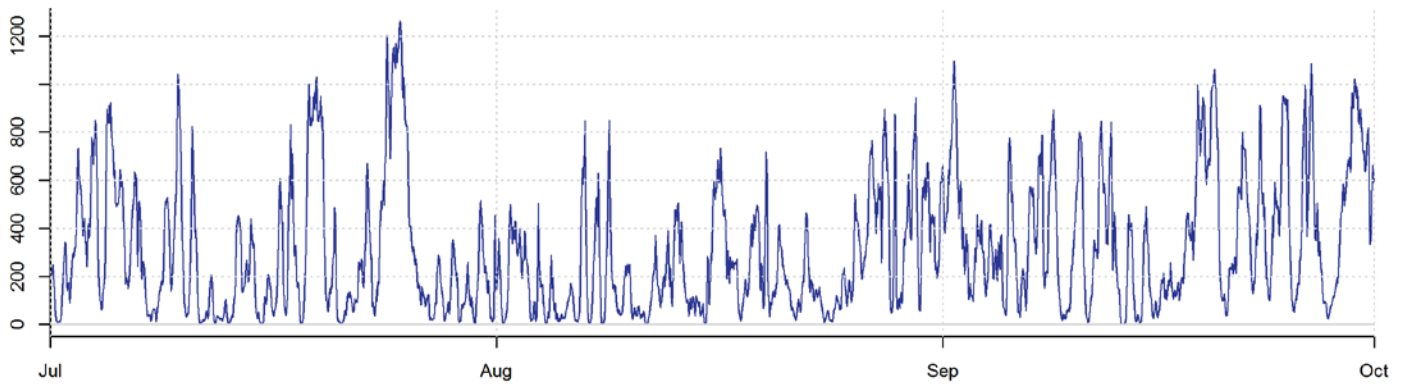
Pool Price (\$/MWh)



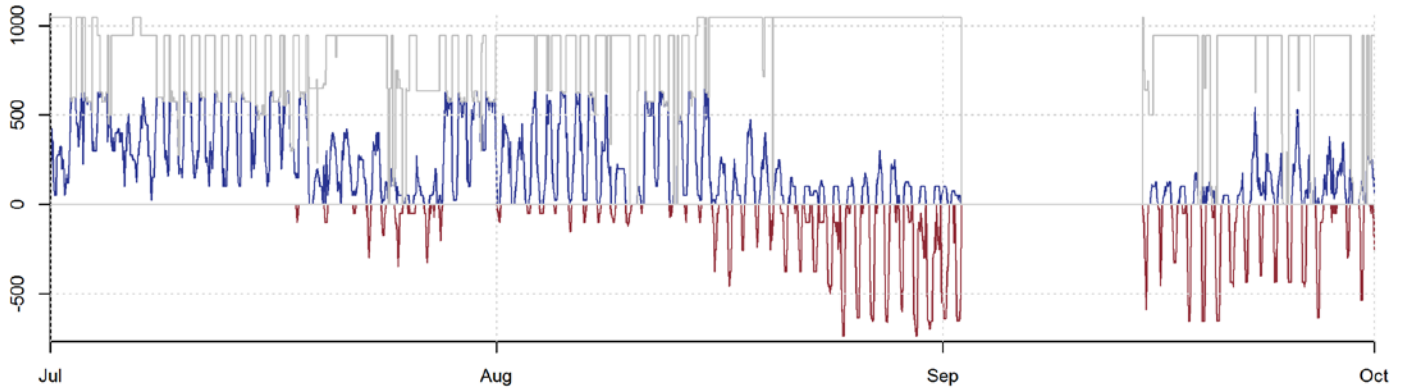
Supply Cushion (MW)



Wind Generation (MWh)



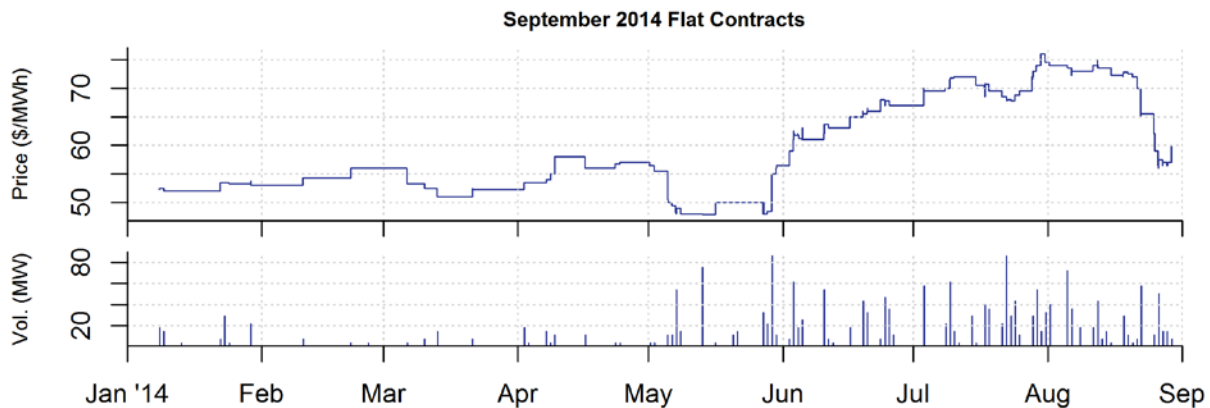
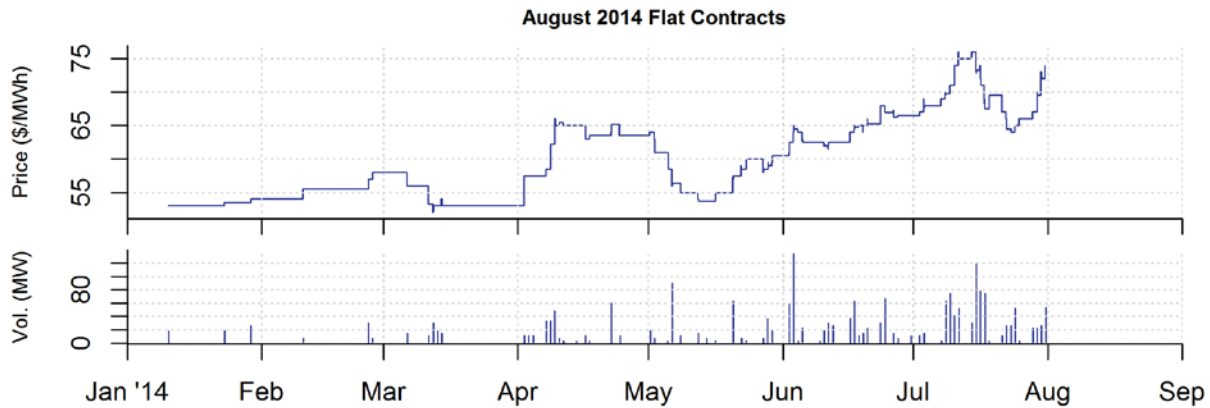
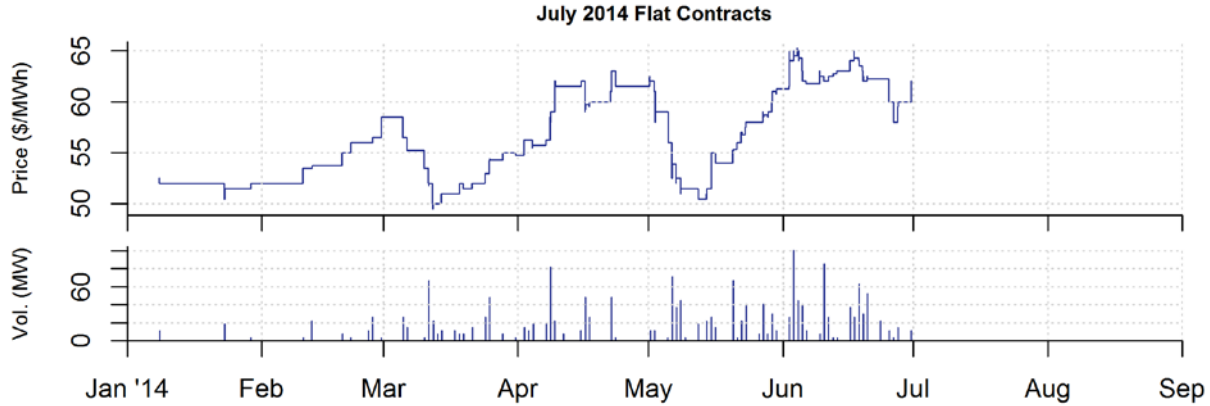
Imports/Exports/ATC (MW, BC + MT)



Forward market

Forward market trading volume increased 28% year-over-year, with approximately 13 TWh of forward contracts traded in Q3/14. On a monthly basis, August trading volume was an exception, falling slightly compared to the previous year.

	TWh Traded		
	2013	2014	Change
<i>Jul</i>	3.28	4.28	30 %
<i>Aug</i>	3.62	3.58	-1 %
<i>Sep</i>	3.32	5.20	57 %
Q3	10.22	13.06	28 %



Incorrectly entered outage information negatively impacts the forward market

At 10:18 a.m. on September 19, a market participant submitted an outage record to the AESO associated with coal-fired generator. While the outage was supposed to be for approximately two days in the second-half of October, it was in fact submitted as a 32-day outage beginning in late September and lasting through most of October.

At 10:25 a.m., the AESO's generator outage reports were updated to reflect this incorrect information. In the monthly report, the coal outages for October increased from 280 MW to 560 MW; in the daily report, coal outages increased from 360 MW to 710 MW for much of October.

The company that entered the incorrect information did not trade on this information and reacted to correct its mistake at 10:24 a.m., 6 minutes after its original error. The correct outage information was reflected in the AESO's outage reports at 10:35 a.m., resulting in a 10-minute period in which incorrect information was available to the market.

Prior to the AESO's outage reports being updated with incorrect data, the prevailing flat forward contract price for October was approximately \$65/MWh. Immediately following the update, reflecting new information that indicated a meaningful reduction in supply in October, this price increased by approximately \$5/MWh. During the 10-minute period in which the AESO's outage report contained incorrect information, 25 MW of contracts were exchanged. The MSA estimates that greater than \$50,000 was lost by traders in relation to these contracts.

While mistakes of this type are rare, market participants are required to provide accurate outage information to the AESO and are urged to take care in doing so. Traders react to new outage information and mistakes in reporting such data can, and in this case did, cause financial losses.

This event suggests that outage information, in particular non-emergent outages of significant duration, may best be provided to the market after the forward market has effectively closed for the day. This would allow for the market to integrate the outage and allow for incorrect outages to be corrected without adverse forward market effects. It would mean that participants whose outage was so delayed would be unable to trade on the outage information until the next trading day.

The MSA will write to the AESO to propose this as a potential solution and suggest that perhaps it would be an opportunity for stakeholders to consider the proposal using the industry problem solving process currently being developed among stakeholders.

The risk premium in forward prices

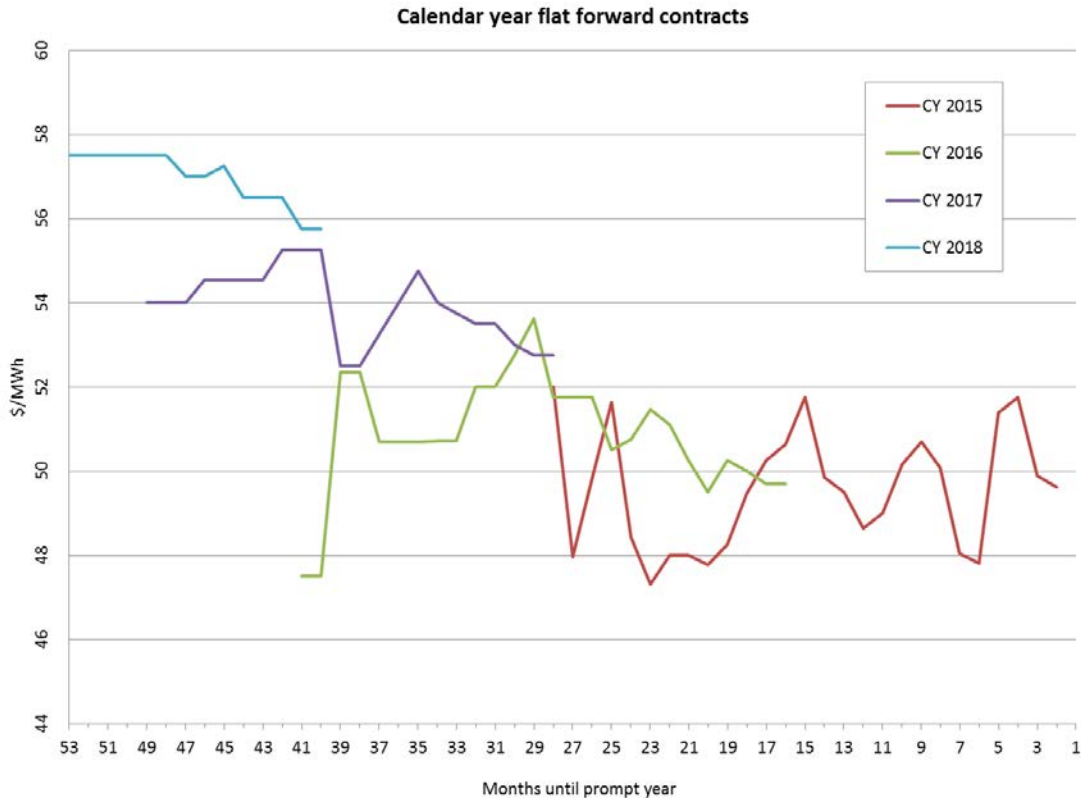
Forward prices reflect the market's collective expectations of future market conditions, adjusted for a risk premium. Since there is inherently greater uncertainty about the future the further distance out one looks, the risk premium demanded by generators may be expected to increase with the distance. This relationship is expected to break-down in the last few months before the

prompt period as system issues such as transmission and generation outages are scheduled, perhaps re-scheduled, and eventually materialise. If this is so, all else equal, one would expect that forward prices to be high initially and then fall (until a few months before the prompt period) as the risk premium diminishes. But, all else is usually not equal.

However, since the announced return of SD1 and SD2 in summer 2012, expectations of the future have been relatively stable. There have been few 'surprises' in the market. With respect to supply, in addition to the returning generators, capacity additions, specifically Shepard and BlackSpring Ridge, have moved along on schedule, there have been no major retirements or prolonged outages, and input prices have been flat. Demand has continued to grow along its historic trend, net inertia capacity has been steady, and transmission upgrades have reduced the impact of constrained energy. Moreover, offer control has been fairly stable, with the expirations of the BR3 and BR4 PPAs being long-foreseen. However, any unexpected change in the distribution of offer control may materially change expectations of future market conditions.

Thus, since summer 2012 expectations of future have been almost constant. The figure illustrates the evolution of forward prices for the 2015 to 2018 calendar year flat contracts.² Rather than being plotted against time, these prices are plotted against the number of months before, in this case, the prompt year. This approach provides greater potential to observe a diminishing risk premium as time progresses. While there have been some deviations from the general pattern, the figure provides some evidence that the risk premium in forward prices does indeed diminish through time.

² The forward price for each month is defined to be the equally-weighted average of recorded transaction prices.



New wind offer rules may require modified information sharing agreements

On September 9, 2014 the Alberta Utilities Commission (AUC) issued a notice of application stating that the AESO had applied to update ISO rules 304.3, 306.5, and 502.1, which would allow wind generators to be dispatched according to offer price, which can be greater than \$0/MWh. This rule change would require that wind generators submit energy market offers and maintain accurate available capability values through the Energy Trading System. It has a planned implementation date of April 1, 2015.

Before the rule change, AUC Decision 2010-531 found that section 3 of the *Fair, Efficient and Open Competition Regulation* (FEOC Regulation), which limits the sharing of non-public offer information, applies to wind generation facilities. Since this decision, some wind generators subject to joint venture agreements that require the sharing of non-public information between companies have submitted information sharing agreements to the AUC for approval. The MSA has not expressed competition concerns with these agreements because wind generators were not able to change the price or quantity of electricity they offered into the market and were, therefore, unable to exercise market power.

With the rule change proposed by the AESO, wind generators will become dispatchable and may be offered at various price and quantity pairs. As such, the sharing of any information related to these offers is competitively sensitive and could raise concerns under section 3 of the FEOC Regulation if shared improperly. The MSA recommends that all market participants

with wind generators review whether the sharing of information, if any, complies with the FEOC Regulation and, if necessary, submit or revise information sharing agreements as soon as possible to comply with the FEOC Regulation once the rules are changed. Typically, once an application is complete, the AUC requires 2 to 3 months to process it and issue a decision. While the refiling of such agreements is voluntary, the MSA will exercise its discretion to commence an investigation if it appears that competitively sensitive information is being shared in potential violation of section 3 of FEOC.

The MSA also has a standing offer to talk to market participants intending to submit an application to the AUC under section 3 of the FEOC Regulation. In some cases market participants have found these discussions useful in determining whether the MSA would support or object to an application as-filed and for improving the clarity of their application. Market participants interested in discussing an application with the MSA should contact Mark Nesbitt by e-mail at mark.nesbitt@albertamsa.ca.

Retail market

Retail state of the market report

The *Alberta Utilities Commission Act* gives the MSA a broad mandate to oversee Alberta's electricity and retail natural gas markets from the perspective of competition and economic efficiency – the fair, efficient, and openly competitive legislative standard. While the MSA's focus has traditionally been the wholesale electricity market, the Minister of Energy's Retail Market Review Committee recommended that the MSA strengthen its role in the retail market.

In response, during the summer the MSA set out to canvas and assess the key factors that promote or interfere with competitive outcomes and economic efficiency with a view to identifying areas where the MSA could make a difference in discharging its mandate in the retail space. As a first step, we have chosen to focus our attention on the residential consumer segment of the retail market because it has the most customers.

To help with this task, an advisory group representing the major constituencies and agencies that shape the Alberta market was formed, with members representing small consumers, retailers (electricity, natural gas, and boutique), generators, and relevant government agencies. Two meetings were held to discuss the prospective content and analytical approach to be employed. The advisory group is currently reviewing a draft of the report. Once final comments have been considered, the MSA will make public the final report. This is expected to occur in late November.

Energy Price Setting Plans

Proceeding #2941 is currently before the Alberta Utilities Commission (AUC) and will ultimately result in the new Energy Price Setting Plans (EPSPs) for the period 2014-2018 for Direct, EPCOR, and ENMAX. Two of the proposed plans mentioned specific roles for the MSA. As part of the proceeding the MSA provided a panel to answer questions on the proposed roles. Looking forward, the MSA sees an enhanced role in the monitoring of the EPSPs, while the AUC may define specific duties regarding the plans in its decision.

Complaint against ENMAX solar energy program

Introduction

In Q4/13 the MSA received a complaint from a market participant against ENMAX's practices regarding its Solar Energy Program, which sells and leases solar PV panels to residential and business consumers. The complainant is a firm engaged in the design and installation of solar energy systems primarily for commercial businesses in Alberta.

The allegation was that the participant was harmed due to several ways that ENMAX takes advantage of its ownership by the City of Calgary in breach of the requirements of section 95 of the Electric Utilities Act. In particular, the complainant alleged that ENMAX has been able to

unfairly leverage its brand affiliation with the City of Calgary and use its advantage as the local distributor when retailing solar PV panels. They further alleged that the solar program evolved over time in a manner that fundamentally changed the nature of the program that was approved by the Minister of Energy. The complainant also raised concerns about ENMAX's practice of contracting solar panel installers, some of whom compete directly with ENMAX in the sale of solar panel PVs, to install solar panel PVs on ENMAX's behalf.

Legislative framework

Under the Solar Energy Program, ENMAX maintains ownership of solar PV panels installed on its customers' premises and leases the use of the panel to the customer. Alternative arrangements are possible including where the customer takes ownership of the installation.

As a government-owned participant, ENMAX is required to comply with the provisions of section 95 of the *Electric Utilities Act*. Section 95(1) states:

No municipality and no subsidiary of a municipality may hold, directly or indirectly, an interest in a generating unit except in accordance with any or all of the provisions of this section and the regulations.

The relevant relief for ENMAX is described in section 95(10):

A municipality or a subsidiary of a municipality may, with the authorization of the Minister, hold an interest in a generating unit if the arrangement under which the interest is held is structured in a manner that prevents any tax advantage, subsidy or financing advantage or any other direct or indirect benefit as a result of association with the municipality or subsidiary.

All market participants are bound by the provisions of section 6 of the *Electric Utilities Act* which states:

Market participants are to conduct themselves in a manner that supports the fair, efficient and openly competitive operation of the market.

The Alberta electricity market is protected from distortions caused by unfair advantages for government-owned participants by a two stage process: in the first instance by the section 95 review and authorization, and secondly through the continuing responsibility of the MSA to enforce the section 6 obligations. Section 6 is about a market participant's conduct once in the market whilst section 95 is about eligibility to be in the market.

Background

ENMAX began its solar energy program following a successful application to Alberta's Climate Change and Emissions Management Corporation (CCEMC) in 2008 which provided them \$14.5 million in funding to develop 12.5 MW of installed solar and wind micro generators across

Alberta. As of mid-2014, according to CCEMC's website, ENMAX has installed about 8% of the 12.5 MW of new capacity.

The micro-wind sector was essentially non-existent in 2008. It proved to be difficult to enter and subsequently ENMAX focussed all its efforts into the solar business.

The existing market for the supply and installation of micro solar generation in the Alberta residential sector was also essentially non-existent but there was reasonably healthy and growing activity in the commercial sector. The CCEMC funding enabled ENMAX to start solar development in the residential sector and subsequently penetrate the commercial solar sector through subsidising the cost of solar PV panels to end-users.

In 2008 ENMAX submitted its application to the Minister of Energy for approval under section 95(10) to hold an interest in a generating unit. The application was conditional on ENMAX being successful in obtaining funding from CCEMC. Following receipt of the report by the independent assessor, the Minister granted the approval in early 2009. The approval was subject to certain conditions including annual affirmations by ENMAX that the nature of the program has not changed in a way that renders the assessment no longer valid.

As required, ENMAX has filed the annual affirmations which have also included changes to the solar program. Such changes include marketing to customers not already with ENMAX which was a requirement of the CCEMC funding. In 2013 the Minister requested the assessor to re-examine the section 95(10) approval in light of these changes. The assessment found that the approval was still valid.

Assessment

The MSA has a broad mandate to conduct surveillance and investigations in relation to electricity markets as defined by the *Electric Utilities Act*. Under this act, the definition of an electricity market is framed around the generation, transportation, supply, exchange or sale of electricity and associated services. ENMAX operates in the market for the sale or lease of installed micro-generation units to residential and commercial consumers. While micro-generation units produce electricity, the sale or lease of these units does not directly involve the generation, transportation, supply, exchange or sale of electricity itself. On a narrow interpretation of the legislation, conduct in the relevant market does not fall within the scope of section 6 of the *Electric Utilities Act*.

Under section 39(1)(b)(iii) of the *Alberta Utilities Commission Act*, the MSA has the ability to investigate and undertake activities to address matters that relate to or affect the structure and performance of the electricity market. The MSA considers this provision enables the MSA to address external issues impacting the electricity market that are not otherwise directly within the MSA's mandate. Accordingly, if conduct around the installation of micro-generation units was materially affecting the wholesale or retail electricity markets, the MSA considers it would have the mandate to address the conduct. In this instance, ENMAX's Solar Energy Program does not raise concerns at this time. On balance, the MSA considers that the CCEMC funding is

the most significant advantage which has been conferred on ENMAX. The MSA notes that the CCEMC continues to call for proposals around energy efficiency and clean energy production. Any entity is entitled to apply for these funds, as ENMAX has successfully done in this instance.

Section 95(10) assessments are undertaken by an independent auditor appointed by the Minister of Energy. In a broad sense the auditor collects information from ENMAX to fully understand the proposed project and all relevant aspects. Frequently the auditor will consult with participants for any concerns that they may have with the project. Ultimately the auditor is testing whether ENMAX is leveraging off any aspect of its association by the City of Calgary and its regulated functions undertaken by ENMAX Power. Further, the auditor tests whether commercially the project seems viable with expected returns comparable to ENMAX's peers in the industry.

Given the Minister's acceptance of the auditor's report including the recent re-assessment, the MSA's role now is limited to assessing whether ENMAX has breached the terms of the approval or otherwise misled the Minister. We have no evidence of such behaviour.

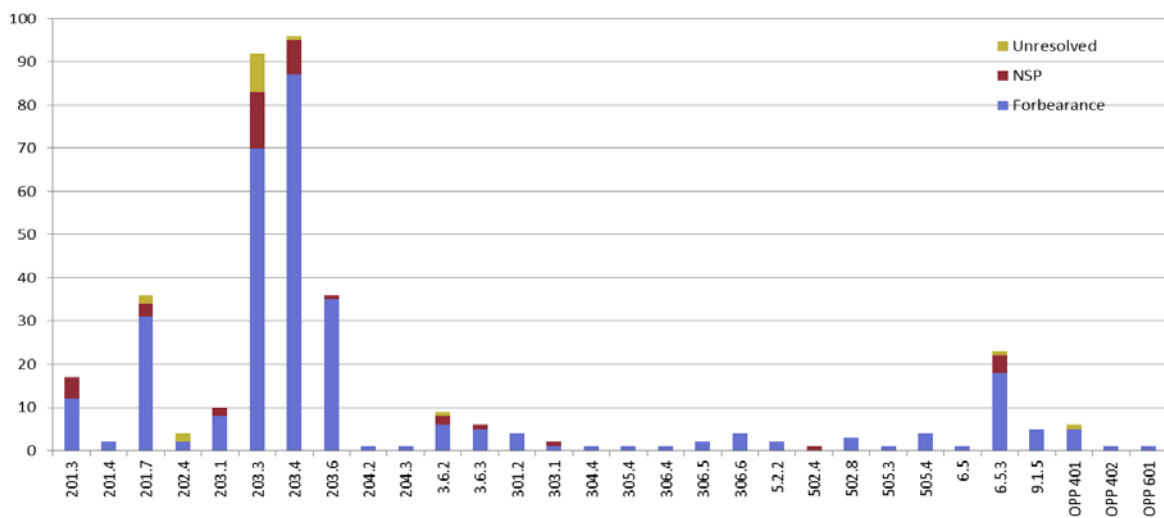
Outcome

The MSA came to the view that the issue was not clearly within our mandate and that no possible breach of Section 6 of the EUA was possible. Further, there was no evidence of a breach of the Section 95(10) approval granted ENMAX by the Minister. The case was not taken to formal investigation.

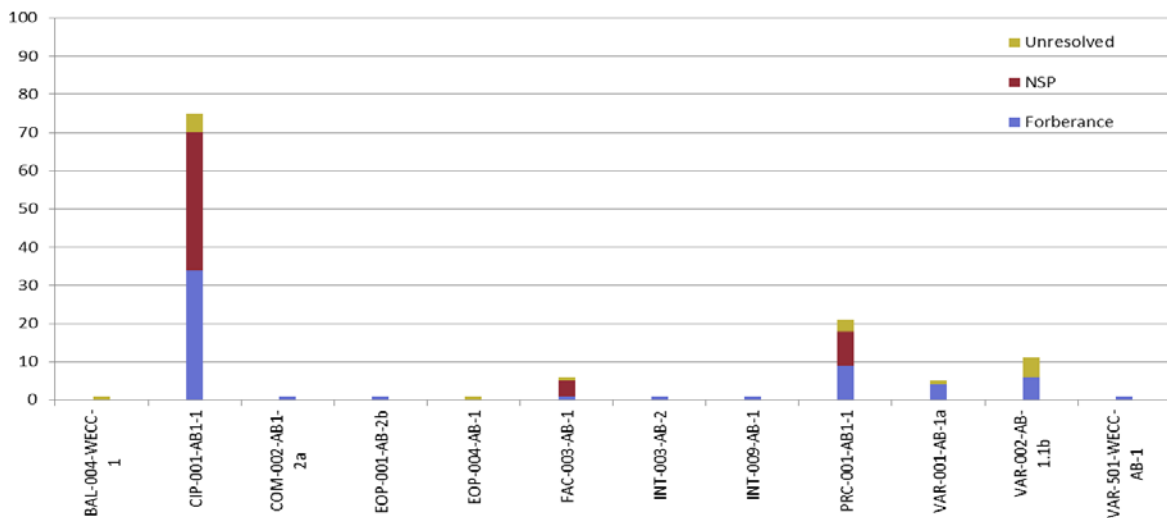
Compliance

- As of September 30, 2014, 356 ISO rules compliance files were closed. In this period, 41 Notices of Specified Penalty were issued totaling \$36,500 in penalties.
- With respect to Alberta Reliability Standards compliance, 18 Notices of Specified Penalty were issued in the first three quarters of 2014 totaling \$135,000 in penalties.
- The year-to-date volume of CIP-001 related files as of Q3/2014 is a function of the AESO’s compliance audit activities and the MSA’s practice of tracking each referred standard requirement contravention separately.

ISO Rules Compliance, YTD Q3 2014



Alberta Reliability Standards Compliance, YTD Q3 2014



MSA activities and releases

Market reporting

[MSA 2014 Second Quarter Report](#) (07/24/14)

[Notice re Alberta Retail Markets for Electricity and Natural Gas](#)
(07/17/14)

[Notice re Market Share Offer Control 2014](#) (07/07/14)

Presentations

[MSA Speaking Notes at the Alberta Power Symposium](#) (09/25/14)

Other

[Notice re MSA Stakeholder Meeting](#) (09/18/14)

[MSA Staff Announcement](#) (07/29/14)

[Notice re Employment Opportunity - Compliance Analyst](#) (07/07/14)

[Notice re Court of Appeal Proceedings](#) (07/03/14)