



Alberta Market Surveillance Administrator (MSA) Newsletter

February 2013

The MSA is an independent enforcement agency that protects and promotes the fair, efficient and openly competitive operation of Alberta's wholesale electricity markets and its retail electricity and natural gas markets. From time to time the MSA receives enquiries from academics, students and consultants about the Alberta market.

The purpose of this newsletter is to provide useful information on current research topics and data availability. The MSA hopes this will inspire more analysis and greater understanding of the Alberta electricity market. Moreover, the MSA hopes to advance its own analyses by adopting better practices and techniques and by increasing its interaction with external researchers.

MSA's State of the Market Report

The MSA recently completed a [State of the Market](#) report. This report established a benchmark for assessing Alberta's wholesale electricity market, taking its energy-only structure into account (no separate payments for capacity that are common in some other markets). The methodology employed is a mixture of established economic theory and antitrust principles. In certain areas innovative approaches are adopted to answer long standing questions. Challenging established approaches and testing innovative ones are areas where we think useful research could be conducted. A set of [foundational reports](#) is also available on the MSA's website.

Generator market power

The wholesale market is an oligopoly in which generators are permitted to offer supply at prices they choose, subject to a price cap. The MSA takes the view that the unilateral exercise of market power is an expected behaviour and there is no automatic mitigation of offer prices that is common in some other electricity markets. The State of the Market report contains a structural assessment of market power, observations of market participant behaviour, and an analysis of the mechanisms by which the exercise of market power would promote competitive response. A detailed report on measures of structural market power can be found [here](#).

Long run marginal cost (LRMC)

Electricity generation capacity tends to be characterised by high fixed costs. In the absence of externally-sourced transfers to firms, e.g., capacity payments or direct transfers from government, the long-run free-entry equilibrium characterised by generators breaking even requires that all costs, including fixed costs and a risk-adjusted rate of return to capital, be just fully covered. To that end, sufficient transfers must be made from consumers to producers. Important in an assessment of whether competition is effective is that these transfers are no larger than they need to be over the medium term. The MSA has adapted the levelised unit cost methodology to develop a test for comparing LRMC to prices so as to test whether this result is obtained. There remains latitude for improvement, in particular in relation to the handling of cost non-convexities and modelling the incremental impact of substantial entry on market prices. The MSA's report can be found [here](#).

Static efficiency losses

Part of the State of the Market report considered static efficiency losses associated with the operation of the real-time market. For the first time the MSA has made an assessment of these losses. One

interpretation given to them is that not only should the market ensure that sufficient, but not excessive, transfers are made to cover fixed costs, but that the mechanism for achieving these transfers should not itself result in large efficiency losses. The MSA's assessment estimated that only small losses have been occurring but there remains significant latitude for improvement, in particular in relation to the estimation of the market demand curve. The MSA's report can be found [here](#).

Volatility

Price volatility is a fundamental feature of electricity markets as it signals a competitive response: investment in certain technologies and not others; large consumers to curtail consumption when the price exceeds their willingness to pay; and forward contracting by those seeking to avoid it. As a result of these effects, some degree of price volatility is needed and valued by electricity markets. Less well-known is what level of volatility is optimal and how to distinguish between volatility that prompts a competitive response and that which results from deficiencies in market design, transmission congestion, and other impediments unlikely to prompt such a response. The MSA's discussed these issues in section 3.2 of [this](#) report.

Selected Analyses of Similar Electricity Markets Elsewhere

A number of electricity markets share the energy-only character of Alberta's market. Among these are those in Texas (ERCOT) and Australia's National Energy Market (NEM). Each of these markets has unique characteristics as well and is subject to significant analysis, a selection of which is cited below.

Investment incentives and resource adequacy in the Electric Reliability Council of Texas (ERCOT) market

The availability of sufficient capacity to meet demand is one of the primary concerns of electricity market regulators. Recent changes have been made to the market in Texas in order to incentivise incremental investment in that market. In particular, the price cap has been raised substantially. These changes were based on a more general assessment of the state of investment in Texas and the incentives related thereto. A Brattle Group report that discusses these issues is available [here](#).

Measurement of long-run marginal cost (LRMC) in the Australian National Energy Market (NEM)

The Australian Energy Market Commission (AEMC) commissioned a report to compare LRMC estimates to observed and implied prices in the NEM. There are important methodological differences from the analysis cited above that the MSA conducted in relation to Alberta's market. The report is available [here](#).

Data Availability regarding Alberta's Electricity Market

Significant data regarding the wholesale market is available from Alberta Electric System Operator (AESO), including firm-level offers, demand, and pool prices. In some cases, these data are available for up to 12 years at an hourly frequency. Forward market and retail data is available from the MSA. No confidential data will be released.

While interpretation and understanding of some of these data is highly complex, the MSA is willing to engage with interested researchers to overcome these barriers.

Contact Information

Additional information is available on the MSA's website at www.albertamsa.ca. Interested readers can also contact Derek Olmstead at derek.olmstead@albertamsa.ca with questions and comments.

The MSA envisions publishing a short newsletter describing recent electricity market analyses on a semi-annual basis. Readers wishing to subscribe to this newsletter can [subscribe here](#). Please note that this newsletter is independent from the MSA's regular news subscription available on its website.