

Market Services Update Stakeholder Session

July 5, 2011

Agenda

Introductions General update on market initiatives	Kelly Gunsch
Generation and Transmission Outage Reporting Recommendation Paper	Doug Simpson
Improvements to Market Reports	Matt Davis
<i>* * * Coffee Break * * *</i>	
Operating Reserve Market Redesign	Kris Aksomitis
Transmission Connection Policy	Gordon Nadeau
<i>Questions & Answers</i>	

- Wind Integration
- Interties
- Demand Response
- TCM
- RAS
- FEOC Regulation Implementation
- Contingency Rules
- Outage Information Sharing
- Market Rule Transition
- OR Market
- T-2 Review
- Consultation on Recommendations in Third Party Market Sustainability Report

2011 Progress Report

Program	Complete YTD in 2011	In Flight for BOY 2011
Wind Integration	<p>Wind Technical Rule approved by AUC May 31, effective Dec 01, 2011</p> <p>OPP 515 and OPP 526 for Wind Power Management out for consultation</p> <p>IT solution for real time wind forecasting data built and tested, first site on-boarded</p>	<p>On-board all wind facilities for real time data</p> <p>Operationalize wind power management</p> <p>File OPP 515 and OPP 526 with AUC</p> <p>Phase 2 wind working group underway; phase 2 recommendation paper (Q4)</p>
Interties	<p>ATC Allocation rule drafted, issued for stakeholder consultation, comments received and posted</p> <p>On-going MATL integration work (transmission studies, operations integration)</p> <p>IT scoping and validation for implementing DSS</p>	<p>Re-consult on ATC Allocation rule prior to filing with AUC in October</p> <p>Post responses to Intertie Framework Recommendation Paper stakeholder comments</p> <p>Release information backgrounder and detailed project plan for second round of intertie restoration</p> <p>Consult on rule changes required to implement dispatchable interties using dynamic scheduling</p>
2011 Long-term Transmission Plan	<p>Filed draft LTP for stakeholder comment by Aug 2</p>	<p>File final plan with AUC</p> <p>Load & generation forecasts for 2013 plan</p>
Demand Response	<p>ISO Rule 303.1 in place to allow the operation of new LSSi product</p> <p>LSSi RFP process complete</p> <p>Brattle recommendations received and shared with stakeholders</p>	<p>Operationalize LSSi</p> <p>Amend technical standard to allow aggregators to participate in Supplement – Load market</p> <p>Project plan to prioritize elements of Brattle recommendations</p>

2011 Progress Report

Program	Complete YTD in 2011	In Flight for BOY 2011
Transmission Constraint Management	Rule 9.4 approved 500 series OPPs are in transition to new format that will incorporate 9.4	6 of 11 OPPs transitioned by year end Constraints management tools in place early in the new year (tools will take into account net to grid energy and min stable generation)
Remedial Action Schemes	Draft rule consulted on; comments received. Comments have suggested a more comprehensive approach is required so a policy will be issued soon	File Connection RAS rule Q3 Connection RAS process revised by year end
FEOC Regulation Implementation	IT project scoping complete	None (other than to look for IT efficiencies through other projects, i.e. common ETS work)
Contingency Rules Market Suspension Supply Surplus	Market Suspension draft rule issued for stakeholder consultation Supply Surplus Recommendation paper is circulating	Finalize and file market suspension rule with the AUC; operationalize Supply Surplus rule, including new Minimum Stable Generation (MSG) definition, circulating end of Q3 - Implementation early 2012

2011 Progress Report

Program	Complete YTD in 2011	In Flight for BOY 2011
Outage Information Sharing	Recommendation paper drafted	Begin work on 600 series OPPs in Q3; file any new or revised rules by year end
TOAD Market Rules Transition	Rules are being transitioned though AESO initiatives e.g. 300, 400, 500 series OPPs	Plan in place to address remaining Market rules by Q3 2012
OR Market	Assessing scope for OR rules to reflect current practices in the OR market Initial review of move to all D-1 procurement complete	Framework for rules developed and consulted on Q3 Rules started on in Q4 Alter procurement practices to improve standby market and eliminate use of OTC Pilot project development to allow load and storage devices to participate in OR market
T-2 Review	Discussion paper drafted	Stakeholder consultation
Market Sustainability Study	Report published and made available to stakeholders	Conclusions and recommendations considered in development of all market programs

Generation and Transmission Outage Communication Review

Doug Simpson

Director - Market Operations

Driver

- Continuous improvement project
- Market participants require access to outage information in a FEOC manner

Goal

- Develop a consistent and transparent outage communication approach

Work to date

- Published discussion paper – January 2011
- Stakeholder comments reviewed
- Publish recommendation paper – July 2011

Key Recommendations

- TFO reporting obligations – 24-month rolling reporting window for all critical outages

Reporting Changes

Report	Description	Recommendation
Generator Short Term Outages	Outage (MC-AC) by fuel type aggregated by trading periods	Offer a numerical 7 day availability report by fuel type and a daily outage report for the current month and next 3 months
Generator Monthly Outages	Two years of outages (MC-AC) by fuel type	Provide numeric information
Load Outages	Load submitted outages for the current month and next three	Merge with the generator daily outage report
Transmission Approved Outages	Listing of approved transmission outages	No change
Transmission Long Term Critical Outages	Listing of long term critical transmission outages	Update monthly for 24 months. Assess versioning and historical look back

Generator and Transmission Outage Communication Review - Update



Proposed 7 Day Generation Availability by Fuel Type

Hour Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Coal (MC = 6,242 MW)	07-Mar-11	82%	81%	82%	82%	82%	82%	82%	82%	82%	82%	82%	82%	82%	81%	80%	82%	82%	82%	82%	82%	82%	82%	82%	82%
	08-Mar-11	82%	81%	82%	81%	81%	81%	80%	77%	73%	73%	74%	74%	73%	71%	73%	77%	78%	78%	78%	78%	78%	78%	78%	78%
	09-Mar-11	78%	78%	78%	78%	78%	78%	78%	78%	78%	78%	78%	78%	78%	78%	77%	77%	78%	78%	78%	78%	78%	77%	77%	78%
	10-Mar-11	78%	78%	78%	78%	78%	78%	78%	78%	77%	77%	78%	78%	78%	78%	78%	78%	78%	78%	78%	77%	76%	76%	77%	76%
	11-Mar-11	77%	77%	77%	77%	77%	77%	77%	78%	77%	77%	77%	77%	78%	79%	78%	77%	78%	79%	80%	80%	80%	80%	80%	80%
	12-Mar-11	80%	80%	80%	80%	80%	80%	80%	79%	78%	79%	78%	78%	78%	78%	79%	79%	79%	80%	79%	81%	80%	80%	79%	80%
	13-Mar-11	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	81%	80%	81%	81%	81%	81%	81%	81%	81%	81%	81%	81%	81%
Gas (MC = 4,569 MW)	07-Mar-11	57%	57%	58%	60%	60%	60%	59%	63%	63%	67%	67%	66%	66%	66%	66%	66%	66%	66%	67%	67%	62%	61%	62%	
	08-Mar-11	62%	62%	62%	62%	62%	63%	63%	66%	67%	70%	69%	69%	69%	70%	70%	71%	71%	71%	66%	64%	64%	64%	64%	
	09-Mar-11	64%	64%	64%	64%	64%	64%	64%	64%	64%	66%	67%	67%	71%	71%	71%	71%	65%	64%	64%	64%	64%	64%	64%	
	10-Mar-11	64%	64%	63%	63%	63%	63%	63%	63%	62%	62%	62%	62%	62%	61%	61%	61%	61%	60%	60%	60%	60%	60%	60%	
	11-Mar-11	61%	60%	61%	60%	60%	61%	60%	61%	64%	63%	67%	69%	70%	69%	70%	69%	69%	69%	69%	69%	69%	69%	59%	57%
	12-Mar-11	57%	57%	57%	58%	58%	58%	58%	61%	62%	64%	63%	63%	64%	65%	65%	65%	65%	65%	65%	65%	65%	65%	60%	58%
	13-Mar-11	59%	59%	59%	59%	59%	59%	60%	63%	63%	66%	66%	64%	65%	64%	62%	64%	64%	64%	64%	65%	65%	65%	61%	59%
Hydro (MC = 843 MW)	07-Mar-11	74%	74%	74%	74%	74%	74%	74%	74%	73%	73%	73%	72%	73%	71%	73%	73%	73%	72%	72%	72%	74%	74%	74%	74%
	08-Mar-11	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%
	09-Mar-11	74%	74%	74%	74%	73%	73%	73%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	73%	74%	74%
	10-Mar-11	74%	74%	74%	74%	73%	73%	73%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%
	11-Mar-11	74%	74%	74%	74%	74%	74%	74%	74%	71%	71%	71%	71%	71%	71%	71%	74%	74%	74%	74%	74%	74%	74%	74%	74%
	12-Mar-11	72%	72%	72%	72%	72%	72%	72%	72%	72%	72%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%
	13-Mar-11	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	74%	74%	74%	74%	74%	74%	71%	71%	71%	71%	71%	74%
Other (MC = 306 MW)	07-Mar-11	73%	72%	72%	72%	72%	73%	74%	76%	78%	79%	79%	79%	79%	79%	79%	79%	79%	79%	79%	79%	79%	78%	77%	75%
	08-Mar-11	73%	73%	73%	73%	73%	73%	75%	77%	78%	79%	79%	79%	79%	79%	79%	79%	79%	79%	79%	79%	79%	79%	78%	75%
	09-Mar-11	76%	75%	75%	75%	75%	75%	75%	76%	79%	79%	79%	79%	79%	79%	79%	79%	79%	79%	79%	79%	79%	79%	79%	77%
	10-Mar-11	77%	76%	75%	75%	76%	75%	75%	75%	68%	64%	64%	64%	64%	64%	64%	64%	64%	64%	64%	64%	64%	64%	64%	63%
	11-Mar-11	59%	58%	57%	57%	58%	58%	59%	62%	64%	64%	64%	64%	64%	64%	64%	64%	64%	64%	64%	64%	64%	64%	63%	60%
	12-Mar-11	58%	58%	57%	57%	58%	58%	59%	63%	63%	63%	63%	63%	63%	63%	63%	63%	63%	63%	63%	63%	61%	63%	63%	60%
	13-Mar-11	57%	57%	57%	57%	57%	57%	57%	57%	57%	58%	58%	58%	58%	58%	58%	58%	58%	58%	58%	58%	58%	58%	58%	58%

CTI Project Reporting

- CTI project reporting – participants are satisfied with the current process
- The AESO is committed to formalizing the process

- Review and update OPP 600 series as part of the transition of authoritative documents project
- Review how market metrics and information is presented externally and make report enhancements as required
- Formalize the process associated with reporting major projects and CTI outage information
- Update ISO rules and OPPs as required to support improvements to information sharing practices

Next Steps

- Post recommendation paper
- The AESO encourages feedback on our recommended approach
- Fall 2011 begin recommendation implementation

Questions?

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Market Reports

Matt Davis

Supervisor - Market Analytics

- Pool Price & Demand
- System Marginal Price
- Current Supply & Demand Page
- Outage Reports
- Supply Adequacy Report
- Price and Demand Forecasts
- Event Log
- Long Term Adequacy Metrics
- 60 Day Merit Order Snapshots

- Generator and Transmission Outage Communication
- Market Suspension
 - Changes to the Daily Average Pool Price Report to present the 30 day rolling on and off peak average prices
- Peak Load Forecast Report
 - Indication of the potential for the peak demand in the calendar month to occur within the next 7 days
- Creation of a quarterly report containing market summary statistics and an accompanying data file

Changes – Retirement of Old Reports

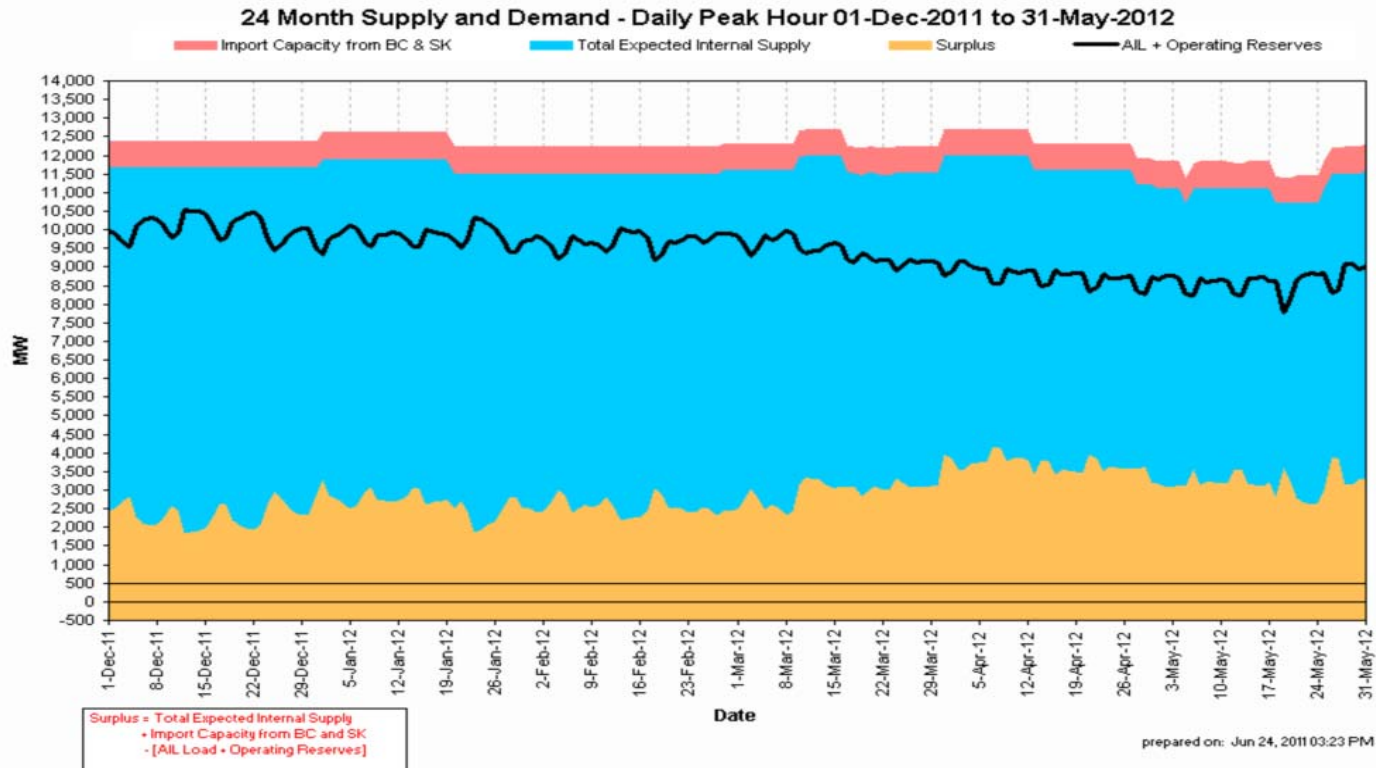
- Dispatch Down Service Monthly Graph
- Import – Export Graph
- Pool Weekly Summary
- Pool Monthly Summary
- Weekly Wind Report
- Wind Forecast vs. Actual Report
- Regulating Reserves Posting

Open for discussion

- Please rate from 1 (strongly disagree) to 5 (strongly agree) your thoughts on the following statements about the reports we will present
 - “I find these reports valuable”
 - “I would like these reports improved”
- Before the voting, I will quickly introduce the 6 sets of reports, please think of your answer as we will follow with interactive voting
 - Supply-Demand Projections: 24-Month Supply Demand Forecast, Long Term Adequacy Reports
 - OR Market Reports: Weekly OR Prices, Daily OTC Prices, 7 Day Forecast, Regulating Reserves Data, Standby Activation
 - DDS Market Report & DDS Summary Report
 - Historical Trading Report (Energy Market & DDS Market)
 - Metered Volumes (All)
 - Asset and Participant List

Supply-Demand Projections

- 24-month supply demand forecast



- Long Term Adequacy Metrics

Operating Reserve Market Reports



- Weekly Operating Reserve Prices
- Daily OTC Transactions
- 7 Day Forecast of OR Volumes
- Standby Activation Report
- Regulating Reserves Report

ASP Weekly Operating Reserve Price

ACTIVE RESERVES						
Date	Regulating		Spinning		Supplemental	
	OFF PEAK	ON PEAK	OFF PEAK	ON PEAK	OFF PEAK	ON PEAK
2011-05-29 to 2011-06-04	\$22.77	\$19.67	\$22.14	\$20.55	\$3.03	\$15.64
2011-06-05 to 2011-06-11	\$15.31	\$5.98	\$7.24	\$12.91	\$0.73	\$8.69
2011-06-12 to 2011-06-18	\$19.25	\$9.90	\$3.18	\$12.37	\$4.32	\$10.04
2011-06-19 to 2011-06-25	\$13.23	\$212.82	\$6.97	\$248.71	\$16.04	\$249.02

STANDBY RESERVES					
Date	Regulating Weighted Average				
	OFF PEAK		ON PEAK		
	Premium	Activation	Premium	Activation	
2011-05-29 to 2011-06-04	\$4.01	\$41.18	\$4.00	\$56.99	
2011-06-05 to 2011-06-11	\$4.00	\$40.00	\$4.08	\$71.33	
2011-06-12 to 2011-06-18	\$4.00	\$37.86	\$4.08	\$62.45	
2011-06-19 to 2011-06-25	\$4.00	\$35.00	\$4.74	\$189.16	

Date	Spinning Weighted Average				
	OFF PEAK		ON PEAK		
	Premium	Activation	Premium	Activation	
2011-05-29 to 2011-06-04	\$3.00	\$30.00	\$3.43	\$74.72	
2011-06-05 to 2011-06-11	\$3.00	\$30.00	\$3.31	\$108.29	
2011-06-12 to 2011-06-18	\$3.00	\$27.86	\$3.48	\$115.50	
2011-06-19 to 2011-06-25	\$3.05	\$25.95	\$3.28	\$189.75	

Date	Supplemental Weighted Average				
	OFF PEAK		ON PEAK		
	Premium	Activation	Premium	Activation	
2011-05-29 to 2011-06-04	\$3.00	\$30.00	\$3.25	\$74.23	
2011-06-05 to 2011-06-11	\$2.97	\$29.67	\$2.99	\$45.83	
2011-06-12 to 2011-06-18	\$3.00	\$27.86	\$2.98	\$51.02	
2011-06-19 to 2011-06-25	\$2.98	\$25.71	\$3.84	\$199.30	

Note: If the last day of the month is not Saturday, the prices for that week are moved into the report of the next month.

Prices are \$/MWh

Dispatch Down Service and Payment to Supplier on the Margin Reports

- DDS Market Report
 - Megawatts remaining in the DDS merit order
- DDS Payment and Charge Summary Reports
 - Contains DDS dispatch amount, DDS payments/charges, total source metered volumes (AIES generation)
- Payments to Suppliers on the Margin (PSM, a.k.a. “Uplift”)
 - Contains payments/charges and total sink metered volumes (AIES load)

Historic Trading Report

- Available after the settlement interval for both DDS and Energy Markets
- Contains day ahead & last offers/bids
- Does not include any asset identification

Reports							
Select Report:				Select Format:		Begin Date:(MM/DD/YYYY)	
— Historical Trading				csv		06 26 2011	
Current		Historical					
A1 fx							
	A	B	C	D	E	F	G
2							
3	Historical Bid data for: June 26, 2011. In Hour Ending 01						
4							
5	Price after	MW after	Price Prev	MW Previous Day's Bid			
6							
7							
8	Historical Offer data for: June 26, 2011. In Hour Ending 01						
9							
10	Price after	MW after	Price Prev	MW Previous Day's Offer			
11	0	95	0	120			
12	0	344	0	460			
13	0	15	0	15			
14	0	365	0	330			
15	0	161	0	158			
16	0	145	0	145			
17	0	17	0	17			
18	0	200	0	200			
19	0	45	0	50			
20	0	250	0	250			
21	0	17	0	17			
22	0	33	0	33			
23	0	64	0	64			
24	0	105	0	105			
25	0	135	0	135			
26	0	250	0	250			
27	0	253	0	253			
28	0	5	0	5			
29	0	5	0	5			
30	0	73	0	94			
31	0	3	0	3			
32	0	4	0	4			
33	0	4	0	4			
34	0	4	0	4			

Metered Volumes (All)



- Contains hourly metered volumes for all sink and source assets

Reports

Select Report:

Metered Volumes (All)

Report Date: June 27, 2011.

April 26, 2011.

Customer ID	Asset Type	Asset ID	Hour 1	Hour 2	Hour 3	Hour 4	Hour 5	Hour 6	Hour 7	Hour 8	Hour 9	Hour 10	Hour 11	Hour 12	Hour 13	Hour 14
			16.77	15.30	14.77	14.75	14.85	15.08	14.59	24.52	27.12	27.64	31.79	40.52	45.70	
4285	IPP	42G1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
9496	RETAILER	941A	1.2198	1.1950	1.1997	1.2105	1.1986	1.1958	1.2627	1.3643	1.5443	1.6794	1.6950	1.7419	1.6605	
9496	RETAILER	941C	0.0063	0.0059	0.0058	0.0058	0.0058	0.0060	0.0066	0.0078	0.0088	0.0094	0.0095	0.0098	0.0098	
9496	RETAILER	941E	1.3250	1.2366	1.1638	1.1696	1.1913	1.3262	1.3025	1.6098	1.8669	1.9762	2.0293	2.0768	2.0761	
9496	RETAILER	941F	0.0127	0.0122	0.0119	0.0116	0.0116	0.0124	0.0136	0.0159	0.0175	0.0183	0.0185	0.0185	0.0182	
9496	RETAILER	941L	0.3038	0.2803	0.2706	0.2656	0.2676	0.2897	0.3323	0.3789	0.4227	0.4486	0.4653	0.4793	0.4788	
9496	RETAILER	941P	0.0234	0.0219	0.0217	0.0215	0.0215	0.0231	0.0263	0.0321	0.0358	0.0379	0.0387	0.0390	0.0390	
9496	RETAILER	941R	0.2653	0.2496	0.2420	0.2430	0.2571	0.2804	0.3059	0.3619	0.3897	0.4080	0.4176	0.4269	0.4260	
9496	RETAILER	941U	2.0925	2.0133	1.9896	1.9861	2.0141	2.2041	2.3874	2.6111	2.7835	2.8674	2.9067	2.9204	2.8953	

Asset and Participant Lists

- Listings of all assets and participants

Reports Version: prod 6_8_0

Select Report: Select Format: OK

Current Historical

Asset List ?

[A](#) - [B](#) - [C](#) - [D](#) - [E](#) - [F](#) - [G](#) - [H](#) - [I](#) - [J](#) - [K](#) - [L](#) - [M](#) - [N](#) - [O](#) - [P](#) - [Q](#) - [R](#) - [S](#) - [T](#) - [U](#) - [V](#) - [W](#) - [X](#) - [Y](#) - [Z](#)

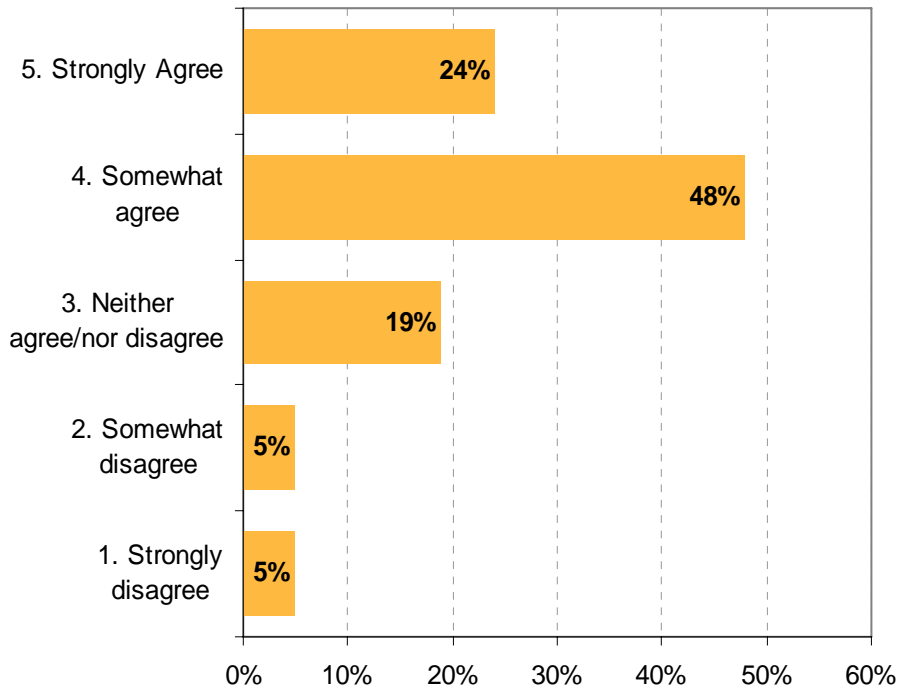
Asset Name	Asset ID	Asset Type	Operating Status	Participant Name	Participant ID
101A 1016 SR #1	101A	Sink	Active	Kinder Morgan Canada Inc.	TPI
101U 1016 SR #2	101U	Sink	Active	Kinder Morgan Canada Inc.	TPI
301A 3070 Ret #1	301A	Sink	Retired	3070281 Nova Scotia Company	3070
301C 3070 Ret #5	301C	Sink	Retired	3070281 Nova Scotia Company	3070
301E 3070 Ret #3	301E	Sink	Retired	3070281 Nova Scotia Company	3070
301F 3070 Ret #7	301F	Sink	Retired	3070281 Nova Scotia Company	3070
301L 3070 Ret #8	301L	Sink	Retired	3070281 Nova Scotia Company	3070
301R 3070 Ret #9	301R	Sink	Retired	3070281 Nova Scotia Company	3070
301U 3070 Ret #4	301U	Sink	Retired	3070281 Nova Scotia Company	3070
301W 3070 Ret #6	301W	Sink	Retired	3070281 Nova Scotia Company	3070

- To vote, press the corresponding number
- If you want to override your vote, press the new vote and your original response will be overwritten
- The scale is from 1 to 5
 - 1 indicates strongly disagree
 - 5 indicates strongly agree

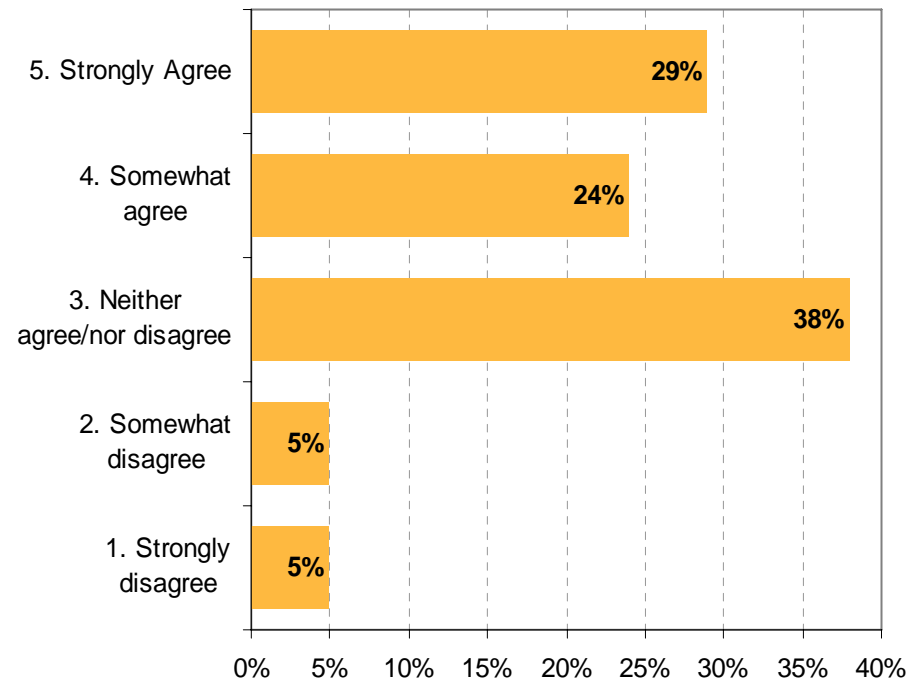
The following results were gathered from the stakeholder session on July 5, 2011. The responses were anonymous and non-binding. They were gathered to allow the AESO to get a sense of how stakeholders feel about these reports.

Vote Results: Supply Demand Projections

I find the reports/information useful

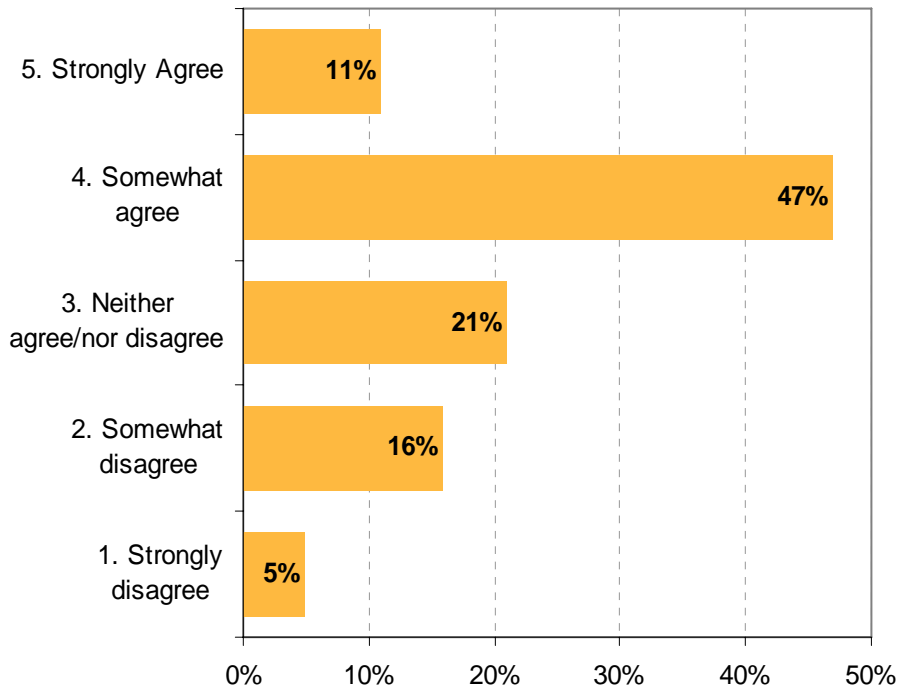


Improvement in the presentation of this information is necessary

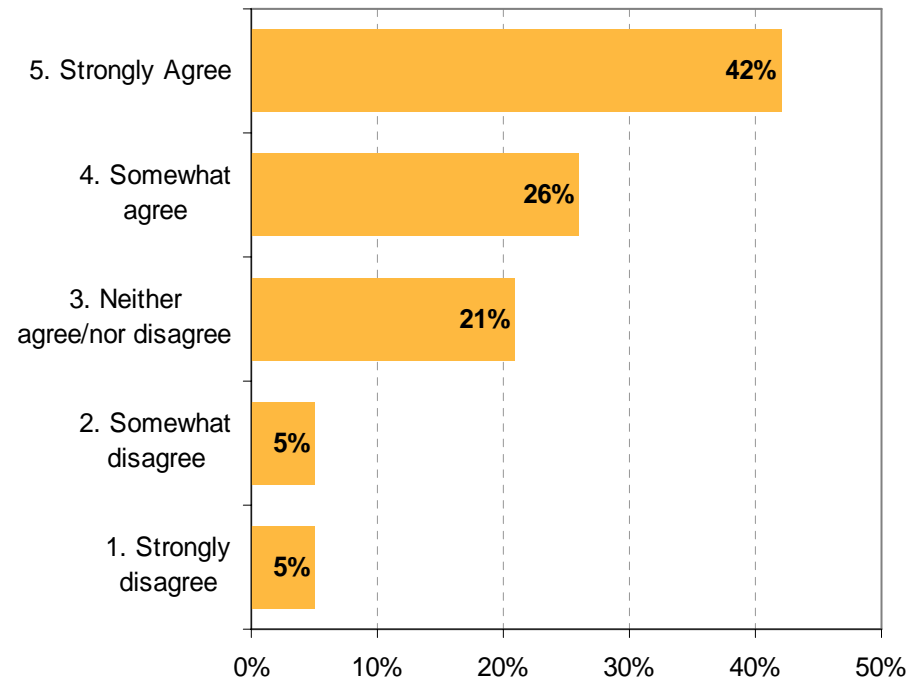


Vote Results: Operating Reserve Market Reports

I find the reports useful

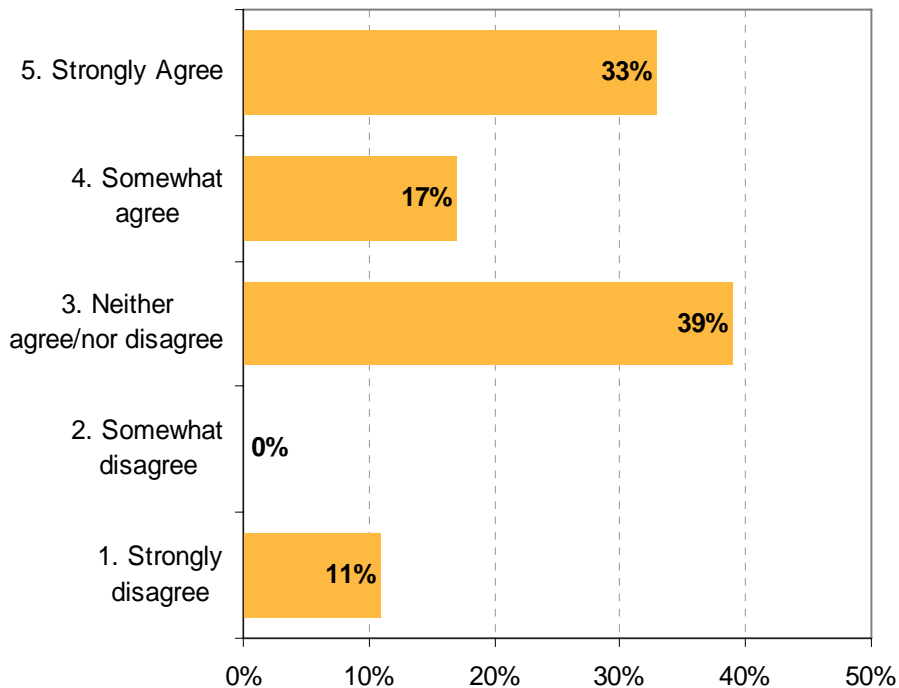


Improvement in the reports/information is necessary

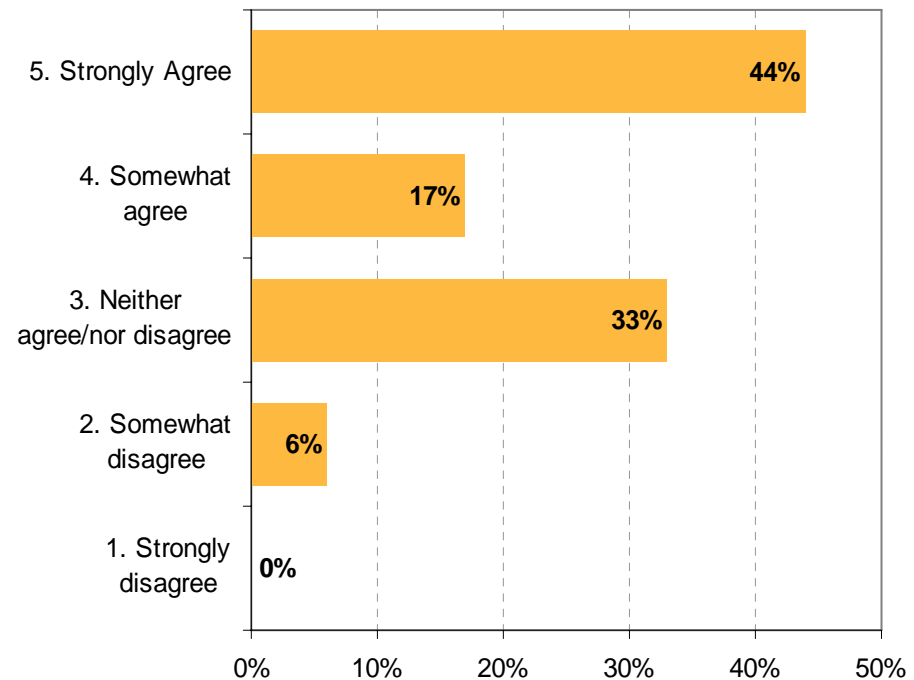


Vote Results: Dispatch Down Service and Payments to Suppliers on the Margin Reports

I find the reports/information useful

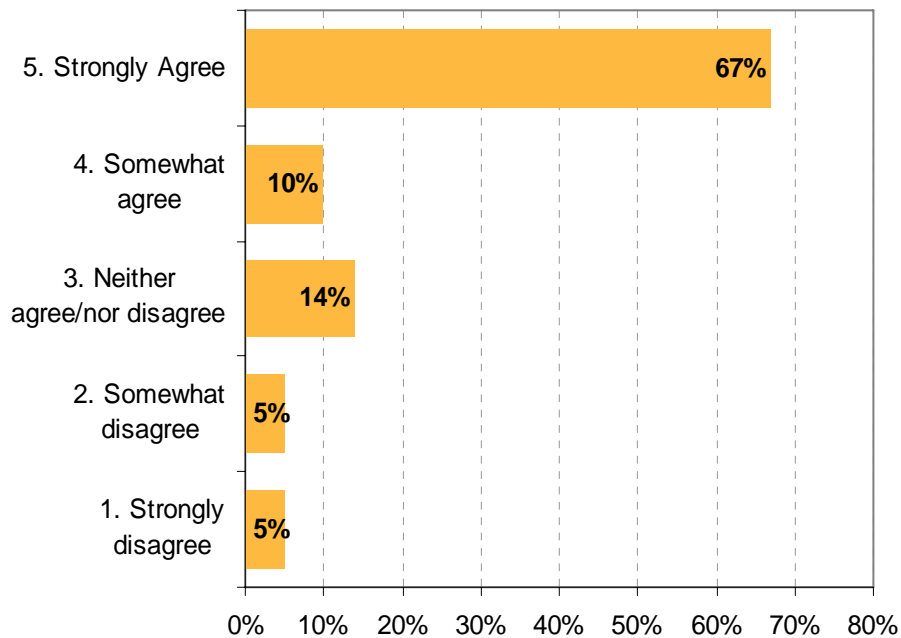


Improvement in the reports is necessary

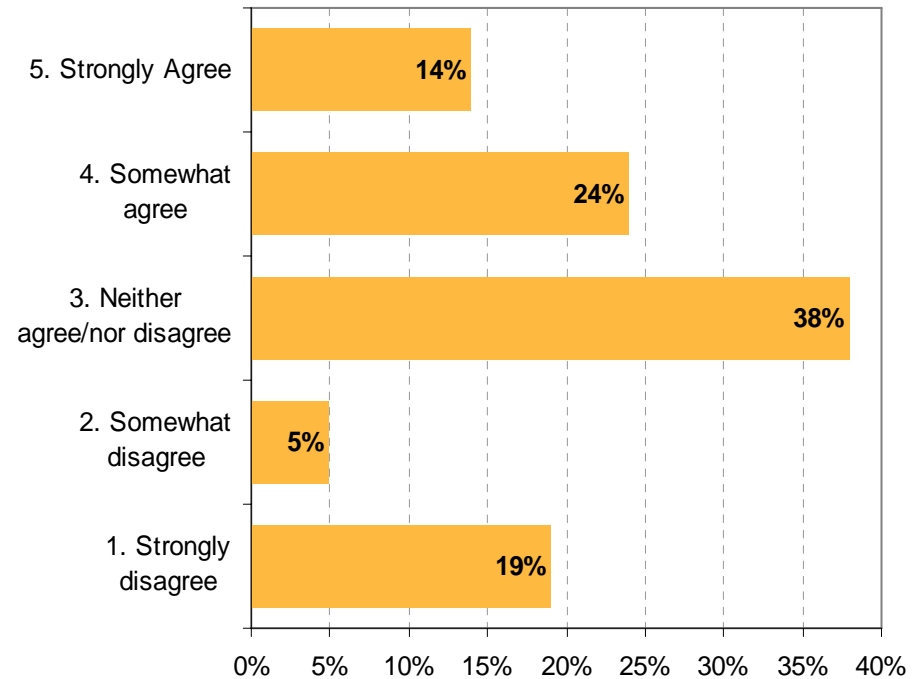


Vote Results: Historic Trading Report

I find the report valuable for business decisions

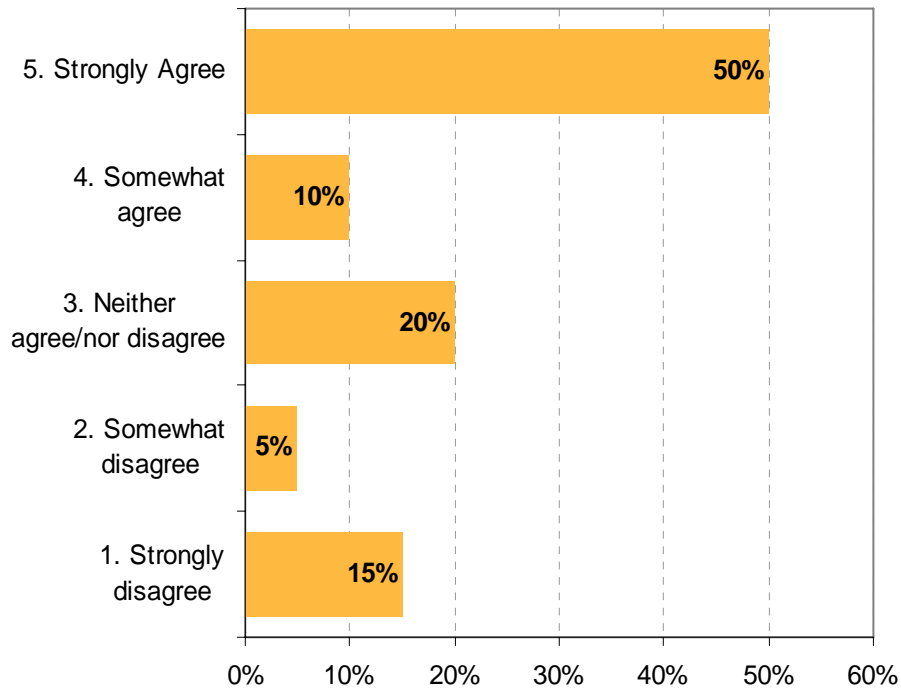


Improvement in the report is necessary

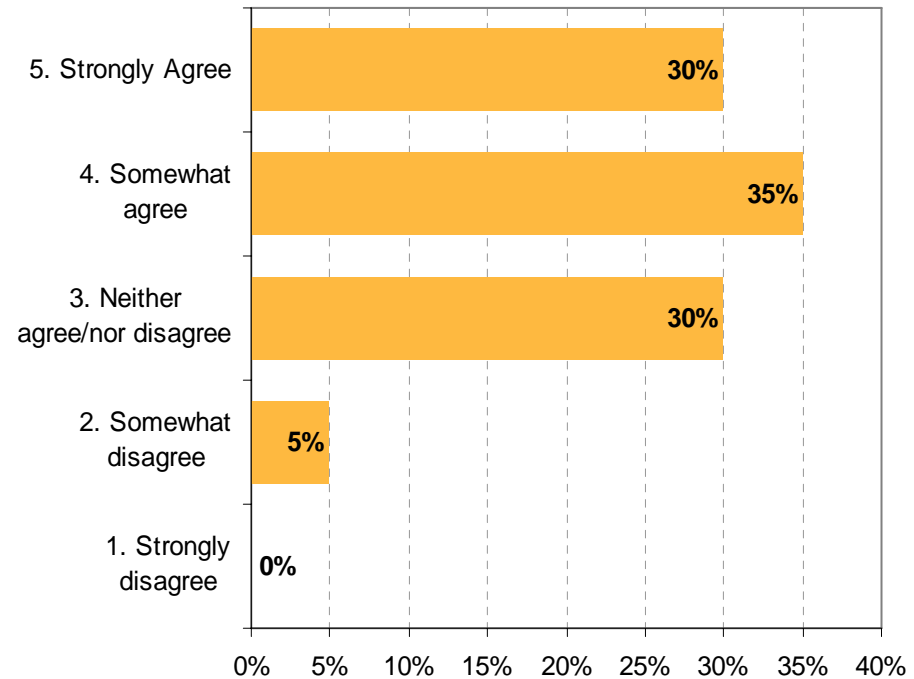


Vote Results: Metered Volumes (All) Report

I find the report useful

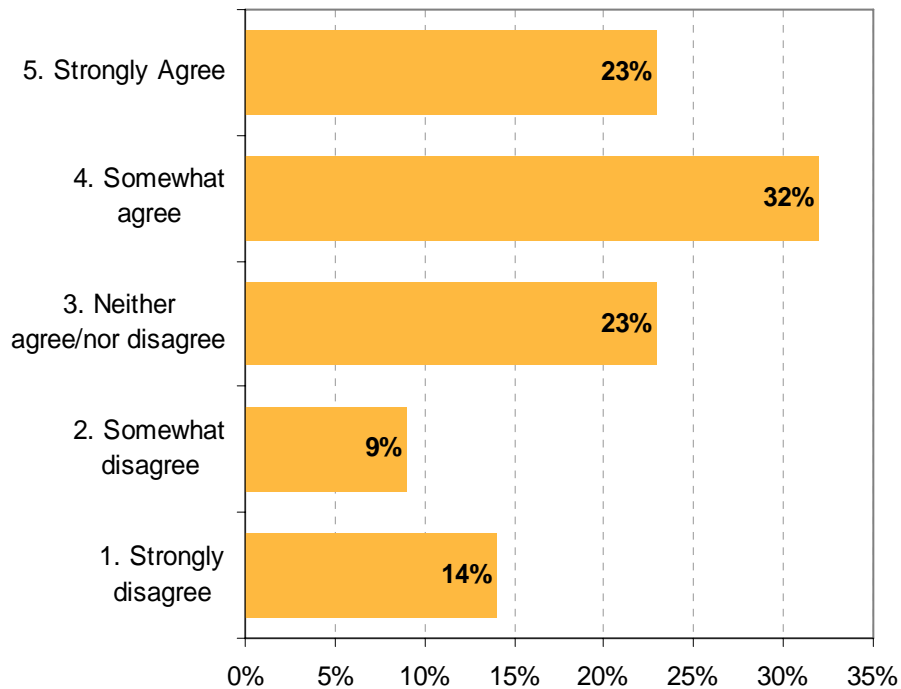


Improvement in the presentation of the report is necessary

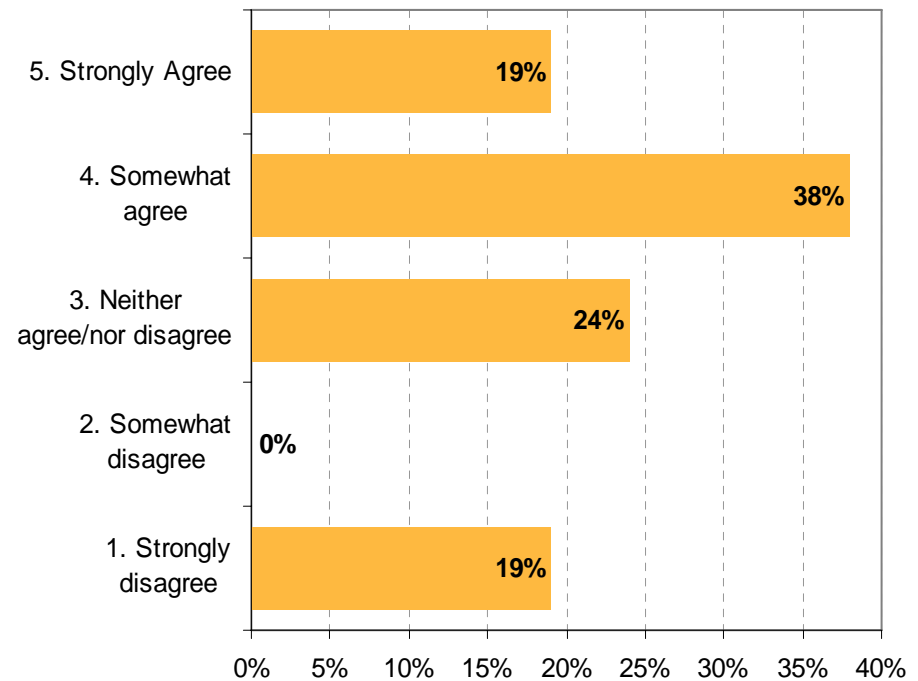


Vote Results: Asset and Participant Lists

I find the reports useful



Improvement in the reports is necessary



- Review the feedback from today's session
- Communicate upcoming report changes
- Initiate consultation on report changes
- In the long term, the AESO envisions improvements to the existing reporting solution

Questions?

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Phase Two Operating Reserve Market Redesign

Kris Aksomitis

Program Manager – OR and Demand
Response

- Review Operating Reserve redesign initiative
- Changes to date
- Outline proposed phase two changes
 - August 2 changes
 - October changes
- Next steps

- Consultation started in 2008
- AESO Recommendation released January 2009
- The key goals of the OR redesign are:
 - Reduce AESO influence in the market
 - Improve market transparency
 - Create better alignment with energy market
 - Simplify the design
- Revised AESO Recommendation Paper released March 2010
- Phase 2 implementation plan released March 17, 2011

Phase One Changes

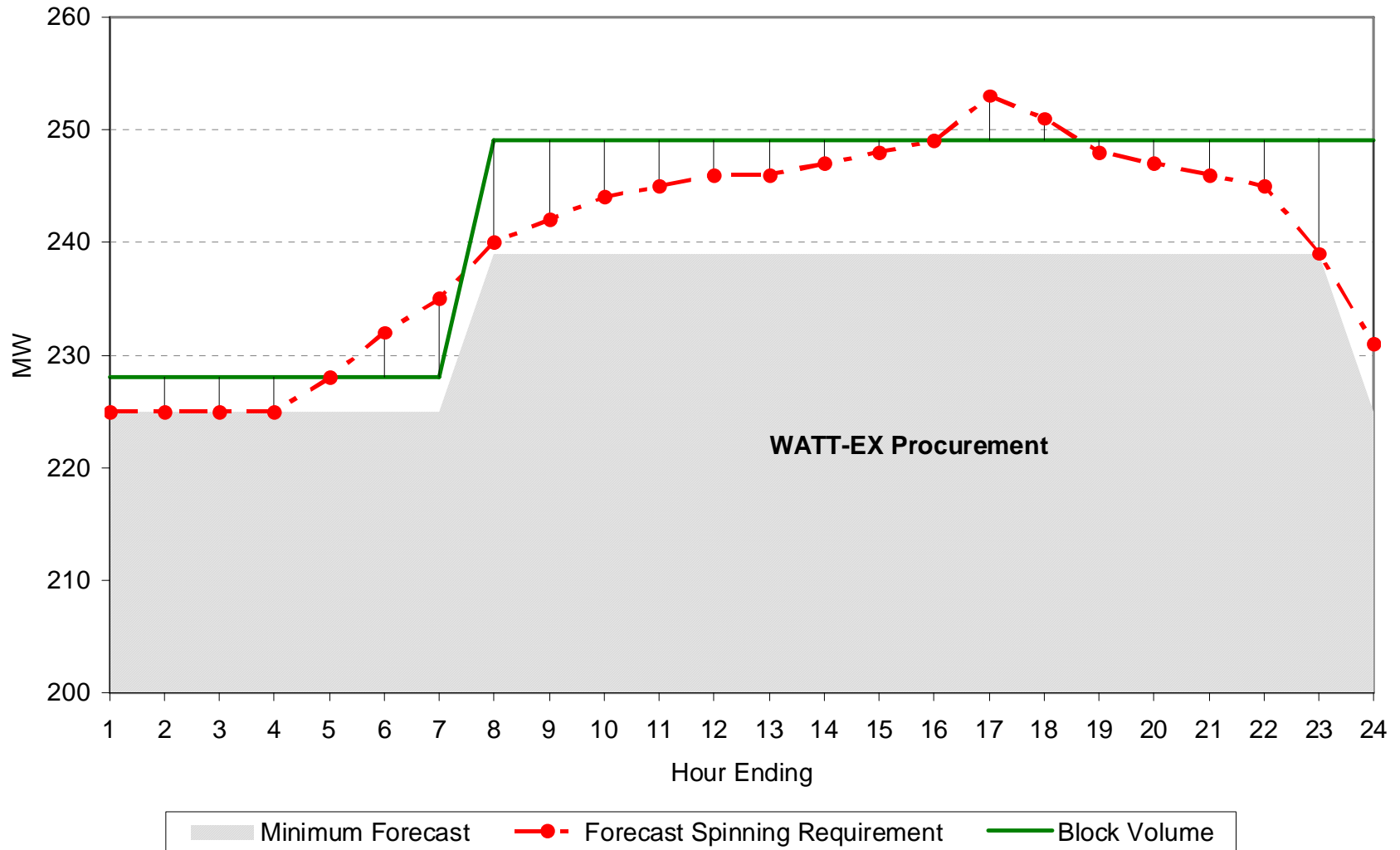
- The AESO made two changes in July 2010
- All active volumes were moved to D - 1
 - Eliminated afternoon session
 - Moved all volumes to a single point
 - Impact has been positive
- Improved transparency in the Over-the-Counter (OTC) market
 - Better reporting of OTC trade prices
- Proceeding with phased approach
 - Minimize transitions and retain ability to assess individual impacts

Next Steps – August 2 Market Open

- AESO will procure Spinning and Supplemental Reserve with block procurement model starting August 2
 - OTC market for Spinning and Supplemental will be eliminated
- ‘Super Peak’ regulating procurement in OTC market August 2
 - New Watt-Ex instruments available October
 - Volume requirements OTC will reflect new super peak definitions
- AESO considering move to \$0, \$0 standby bids August 2
 - IT tool to enforce lockdown not available until October
 - Prior to IT upgrade, the risk is that participants alter offers while the market is being cleared and the clearing is not automated
 - Feedback on interim measure requested by July 15 – proceed with manual clearing or wait until October

- Purchase all Contingency Reserve Requirements in on/off peak blocks on Watt-Ex
 - Analysis suggested that day-ahead uncertainty and added complexity do not justify hourly shaping
 - The ability to forecast day ahead contingency needs impacted by:
 - Load forecast
 - Wind levels (5% contingency requirement vs 7% requirement)
 - Intertie schedules (source BA carries the reserves)
 - Procurement to be optimized based on forecast needs and tradeoffs between Active and Standby products

Volume Impact From Block Procurement



Estimated Impacts

MWh (000s)	Overall	2008	2009	2010	2011
Active	13516	4154	4140	4158	1064
Standby	202	73	51	64	14
OTC volume	495	176	142	141	36
Total Old Volume	14213	4404	4334	4362	1114
New active	14253	4416	4342	4370	1125
New standby	152	55	40	47	10
New volume	14406	4471	4381	4418	1135
% Change	1.4%	1.5%	1.1%	1.3%	1.9%

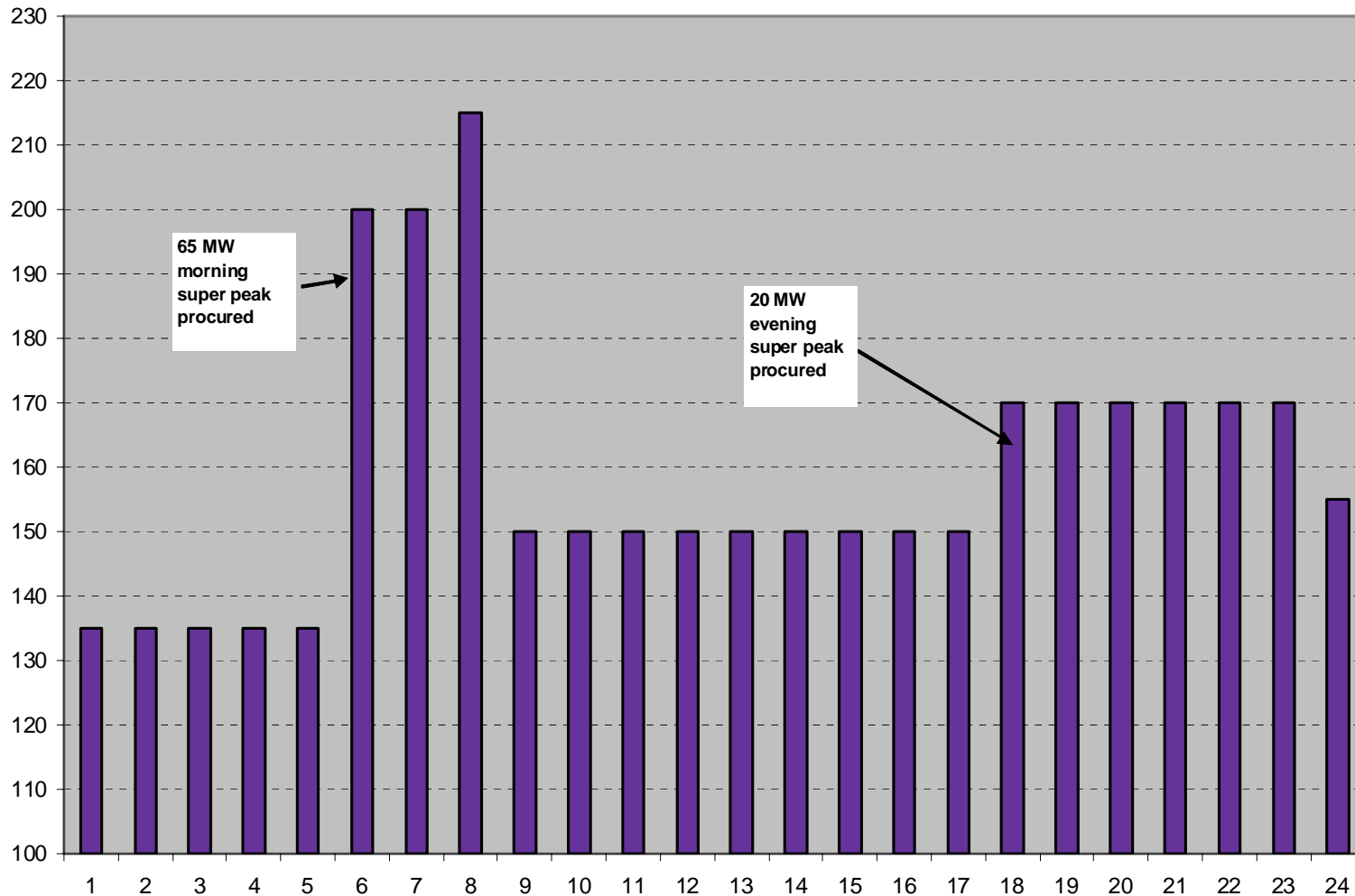
- Approximately 7 MW of incremental Contingency Reserve (3.5 MW Spin + 3.5 MW Supp) purchased hourly (1.4% of total)
- Historical analysis suggests cost savings of 1.4% (approx \$2m per year) assuming active prices do not increase
 - Driven by cost differentials – OTC market ~50% more expensive than Watt-Ex and standby activations ~5 times more expensive than active
- All volumes traded at a single, transparent point with common pricing mechanism

Super Peak Regulating Product

- Total volume requirement unchanged
- Block procurement on/off peak would not be efficient
- AESO developing two Super Peak products
 - Morning Super Peak is HE 6 to HE 8
 - Evening Super Peak is HE 17 to HE 24 November to January
 - Evening Super Peak is HE 18 to HE 24 rest of year
- Implement via OTC August 2
 - Software upgrade scheduled for October to trade new instruments on Watt-Ex
- OTC market discontinued in October

Regulating Reserve Volume Requirements

Forecast August Regulating Reserve Procurement
Super Peak Product Implemented



Standby Clearing – Representative Example

Bid	Volume	Premium	Activation	
AESO	50	\$0	\$0	
Offer	Volume	Premium	Activation	Clearing Order
1	50	\$0.01	\$200	\$40.01
2	50	\$5	\$50	\$15.00
3	50	\$8	\$250	\$58.00

"Clearing Price" = Premium + 0.2 * Activation

- AESO will make the 'activation factor' public for Watt-Ex procurement in October
- Value will be adjusted periodically to reflect actual experience
- AESO willing to offer \$0, \$0 bids in August prior to software and follow process above on 'best efforts' basis

Timeline and Next Steps

- August 2 for August 3 delivery
 - Block procurement for contingency reserve
 - Contingency OTC market discontinued
 - Super Peak products for regulating purchased OTC
 - Potential to move AESO standby bid to \$0,\$0
- October
 - Super Peak products for regulating reserve traded on Watt-Ex
 - Standby lockdown and automatic clearing implemented on Watt-Ex
- Next Steps
 - Identify next set of changes to move forward with based on elements in the Recommendation Paper
 - Blind auction, ability to make standing offers?
 - True clearing price – remove AESO bid?
 - Others?
 - Anticipated 2012 implementation

Questions?

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AESO Connection Policy

Gordon Nadeau
Senior Market Design Specialist

- Stakeholder comments received on draft Connection Remedial Action Scheme (RAS) rule
- Key Issues:
 - What are the AESO connection policies?
 - Where does the AESO get its authority to impose RAS?
 - What RAS information will be provided and when?
- Connection Policy paper developed to deal with the issues at a high level

- Three key AESO duties are interrelated and relevant, namely:
 - duty to plan the capability of the transmission system ,
 - duty to direct the safe, reliable and economic operation of the system and
 - duty to facilitate a fair and open market which gives all market participants a reasonable opportunity to participate.
- AESO also the sole provider of system access service (SAS)
 - SAS must provide reasonable opportunity to access system
 - SAS plan must be efficient, reliable and non-discriminatory

Constraints Under Abnormal Conditions

- If the constraint can be managed in real time, then the AESO will allow the connection to proceed
 - Compete for access through offers
- If a Connection RAS is needed, then the AESO will allow the connection to proceed and will document the RAS in the NID filing for the connection
 - NID will include a transmission facility solution to the constraint, Transmission facility NID will be filed in a reasonable time period
 - after RAS activated and system stable, compete for access thru offers

Constraints Under Normal Conditions

- Participants must have a reasonable opportunity to compete
- The AESO will not allow the connection to proceed until there is a publicly available plan to alleviate the constraint
 - Before the plan is implemented, if the constraint can be managed in real time, participants compete for access. If a RAS is required, participants compete for access after the RAS has been activated.
 - If participants can not compete for access before the plan is implemented, the AESO will not allow the connection to proceed until the plan is implemented

The Transmission Regulation (T-Reg) and RAS

- A RAS is a non-wires solution
- The use of a RAS is contemplated in the circumstances prescribed by section 15 of the *Transmission Regulation*
- The AESO has the following views on section 15:
 - 15(1)(e)(i): *plan for 100% of anticipated in-merit energy*
 - Wires solutions will be available under normal conditions
 - TMR and RAS not acceptable for normal conditions with exceptions under 15(2) and 15(3)
 - 15(1)(e)(ii): *plan for 95% of energy under abnormal conditions*
 - RAS acceptable and may be permanent to handle multiple contingencies if it enables the AESO to meet the 95% requirement

The Transmission Regulation (T-Reg) and RAS

- The AESO has the following views on section 15:
 - 15(2): *specific and limited exceptions to 15(1)(e) & (f) which are temporary and filed for approval*
 - Temporary RAS is permitted if filed for AUC approval
 - AESO will document the RAS in the appropriate NID filing

- The AESO has the following views on section 15:
 - 15(3)(a): *specific and limited exceptions to propose non-wires solutions which is both cost effective and is in an area where there is limited potential for growth of load*
 - If duplication of facilities is not supportable given the forecast loading, a permanent non-wires solution is permitted
 - 15(3)(b): *specific and limited exceptions to propose non-wires solutions which have a shorter lead time than a wires solution*
 - Temporary RAS is permitted without AUC approval

- The AESO Connection policies discussed today are intended to form part of the AESO response to stakeholder comments on the Connection RAS rule
- The AESO will be publishing a Connection Policy paper and an AESO Connection RAS comment and response matrix which fully responds to stakeholder comments
- The AESO will be seeking additional comment on the connection policies outlined in the Connection Policy paper to determine whether the policies outlined are addressing stakeholder questions and concerns

Questions?

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