

Shared Activation of Reserve

Market Pricing Working Group
February 7, 2008



Public

- **The Market Surveillance Panel (MSP) Monitoring Report for May – Oct 2006**
 - indicates that Shared Activation of Reserve (SAR) is a non-market transaction and has the effect of depressing the HOEP
 - suggests that “shared activation of reserve as a means of incremental supply should be treated in a manner that reflects the scarcity conditions in the market”
 - proposes the IESO to consider adding back to the market demand the energy provided by SAR
- **The IESO investigated the impact of SAR requests on HOEP in 2007**
- **Discuss possible recommendation for SAR**

How Does SAR Impact HOEP?

- **When SAR is implemented, additional supply is added to the market**
- **The additional supply is added “out-of-market” rather than based on prices and economic optimisation**
- **From the stand-point of the market algorithm, this appears as a sudden reduction in market demand**
- **The sudden reduction in market demand (all else held constant) reduces the HOEP**

- **To determine the impact of SAR on the HOEP, simulations were performed**
- **For intervals when SAR was implemented, the market demand was increased by the amounts provided under SAR**
- **The market clearing price for each affected interval was recalculated**
- **HOEP was then recalculated for the affected hours**

- **SAR was requested 9 times in 2007**
- **SAR can only be implemented for a maximum of 30 minutes**
- **Up to half the MWs required by the contingency can be requested**
- **SAR is implemented upon agreement with the assisting control areas**

2007 SAR Impacts on HOEP

Date	SAR Duration (minutes)	MW Requested	Hour-Ending	Actual HOEP	HOEP With SAR MW added in Demand	Change in HOEP With SAR MW in Demand
May 13	8	400	10	23.54	27.14	+3.60
May 21	10	400	10	37.60	39.95	+2.35
June 29	17	500	13	127.91	134.49	+6.58
July 25	30	375	12	60.83	62.49	+1.66
			13	97.13	102.99	+5.86
Aug 16	30	400	14	93.23	94.56	+1.33
Oct 8	30	250	13	90.63	Incomplete data to perform proper simulation	
Oct 8	30	250	15	94.69		
Nov 4	30	500	18	63.19	76.44	+13.25
Nov 10	28	450	12	38.17	43.90	+5.73
			13	59.68	61.14	+1.46

How Does SAR Affect Efficiency or Reliability?

- **To improve efficiency or reliability through a change in HOEP (and not through constrained dispatch), we would expect that the price change should induce a response from participants**
- **So if the MWs supplied through SAR were to be added back to the market demand would efficiency or reliability be improved?**
- **SAR can only be implemented for a maximum of 6 intervals**
 - **Any change to HOEP to induce participant response would be too late**

How Does SAR Affect Efficiency or Reliability? (2)

- **In 2007, if the MWs from SAR were put back into the market demand, the increases to HOEP would average to less than \$0.005 for the year**
- **In the long term, this average price change and the frequency of SAR occurrences would not likely to affect decisions on future investments for supply or any changes to offer/bid behaviour**

- **Make changes as per MSP's recommendation**
 - Addresses potential for “counter-intuitive” prices
 - Consistent with the policy applied to emergency energy
- **However, these changes will be of low priority as the price effects of SAR has little impact on efficiency and reliability**
- **Implementation will likely require tool changes**
 - If tool changes are substantial, then this issue would be deferred until SAR is used more often and hence the changes would result in larger benefits from gains in efficiency and reliability