

# Dispatch Technical Working Group (DTWG)

Dispatch Frequency

November 7<sup>th</sup>, 2011 - Revised



- Define Surplus Baseload Generation (SBG) and contributing factors
- IESO historical study of when variable resources would have been dispatched

- SBG is a condition that occurs when electricity production from baseload facilities are greater than Ontario demand.
- SBG can occur as a global condition or locally as a transmission congestion.

SBG conditions occur due to multiple factors.

SBG Contributing Factors :

- Reduced demand - economic downturn
- Time of year - temperature and weather
- Freshet
- Market Behaviours
- Similar conditions throughout Eastern Interconnection

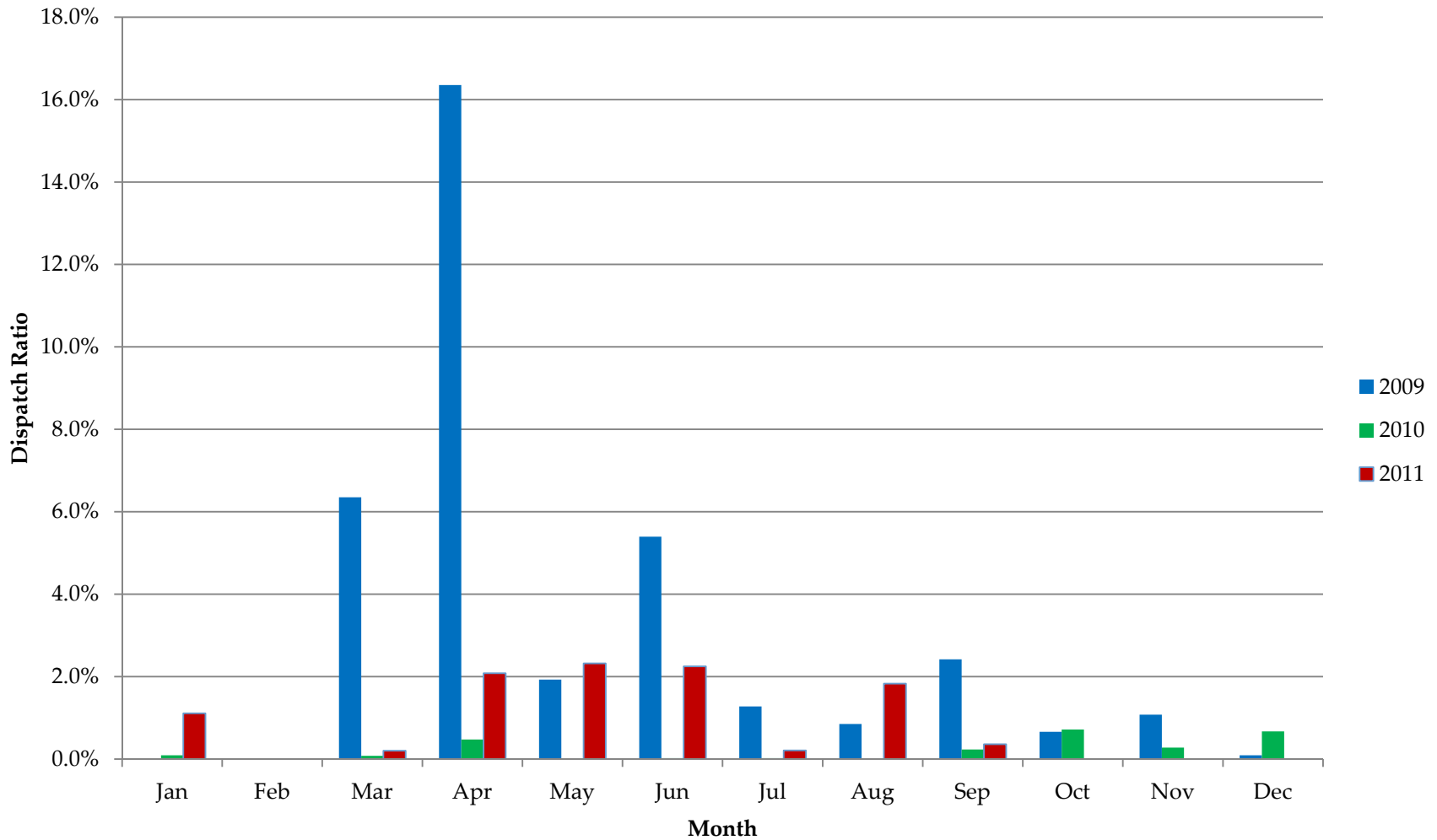
- Dispatch instructions are calculated every 5 minutes for dispatchable resources through the dispatch algorithm
- Not all resources will be issued a dispatch instruction every 5 minutes

- For purposes of investigation:
  - 5 minutes = 1 interval
  - 288 intervals/day
- Intervals with a Market Clearing Price (MCP)  $\leq -\$1$  were investigated from January 2009 to September 2011.

The following chart illustrates:

- The percentage of intervals/month that the dispatches would have been issued to wind resources
- These time frames could consist of one interval (5 minutes) or multiple intervals.

# Study – Periods of Negative MCP





- The longest periods of dispatches:
  - 2009 : 250 consecutive intervals (~20 hours)
  - 2010: 32 consecutive intervals (~2.5 hours)
  - 2011: 67 consecutive intervals (~6 hours)
- April, September, and October average the highest amount of time with possible dispatches
- From May to August 2010 there were only 4 intervals where dispatches would have been issued

- Since the beginning of 2009, dispatches would have been produced to variable generation on average less than 2% of the time
- As the 18 month outlook indicates, SBG conditions will follow similar patterns. However, SBG is forecast to increase in magnitude as the installed capacity of variable generation increases as we approach the beginning of 2013.

Questions?