



Transmission-Related Local Market Power Mitigation Issues in the PJM Market

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- What is Transmission-related local market power and how is it mitigated?
- Market Power vs. Market Scarcity ?
- Impact of Generation Retirement on Transmission Issues and on Generation Deliverability.

- In PJM, only three Transmission constraints have been exempted from Local Market Power Mitigation
 - PJM models over 2000 transmission contingency constraints
 - The three exempted constraints are large regional 500 kV transmission limits.
- The test for local market power occurs in the Day-ahead market and in the Real-time market
- If a generator is required to be committed and/or dispatched out of economic merit order because of a transmission limit, then it is subject to local market power mitigation.
- Currently, generation that began commercial operation after July 16, 1996 is not subject to market power mitigation.

- If local market power is detected, then the generator with market power has offer data capped at a value that is agreed upon advance
- Options for Capped Generation Offers in the PJM Market
 - Cost plus 10%
 - Historic Market Value
 - Negotiated price between generator and PJM
- Capped offer is determined in advance
- After the fact mitigation is not performed

- Each generator is required to submit both a market-based schedule and an offer-capped schedule
- The Day-ahead Unit Commitment process will detect any generation Commitment that is required purely based on transmission limit.
- If unit is committed for transmission limit, it is automatically committed on the lower offer-priced schedule.
- Offer capped units receive the higher of their offer capped price or their Locational Marginal Clearing Price

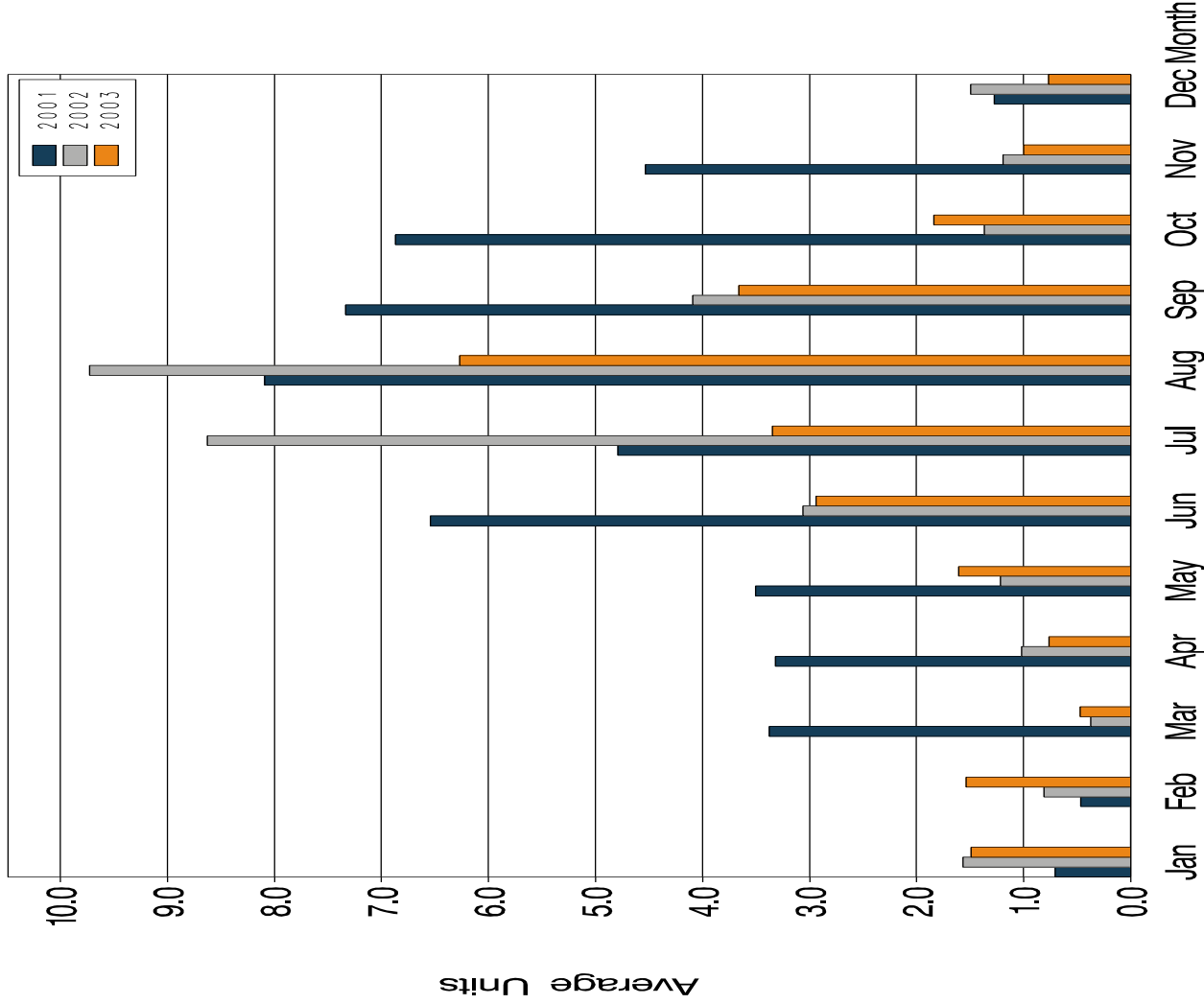
- Each generator is required to submit both a market-based schedule and an offer-capped schedule
- The Real-time dispatch process will detect if a generator is required to be committed or dispatched above its Day-ahead level purely based on transmission limitation.
- If unit is committed for transmission limit, it is automatically committed on the lower offer-priced schedule.
- Offer capped units receive the higher of their offer capped price or their Locational Marginal Clearing Price

- 720 generating units
- 77,728 MW Installed Generation Capacity
- 37,395 Average Hourly Demand (2003 Annual average)
- 63,762 MW hourly peak load (occurred August 14, 2002 at hour ending 1600)
- 76,900 MW peak hourly economic offers (2003)

Offer Capping Frequency

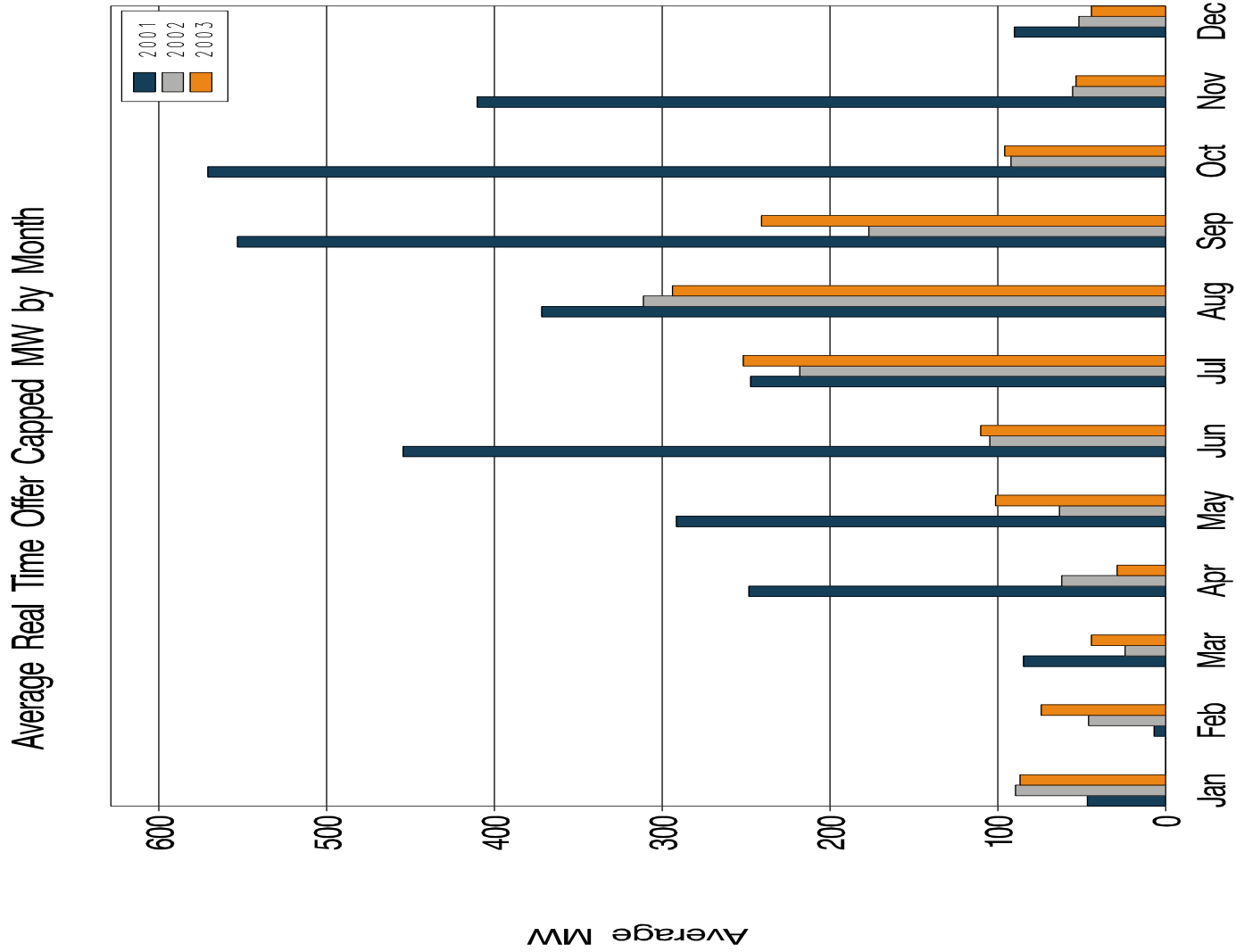
Average number of Generating Units Offer Capped per Hour

Average Real Time Offer Capped Units by Month



Offer Capping Frequency

Average MW of Generation Offer Capped per Hour



Number of Units Grouped by Offer Capped Hours and Percent of Total Operation Hours

Percentage of Offer-Capped Run Hours	2003 Minimum Offer-Capped Hours					
	500	400	300	200	100	1
90%	0	0	0	0	1	2
80%	0	1	1	2	3	11
75%	1	2	2	5	9	18
50%	1	2	2	11	23	51
25%	5	9	11	20	35	97
10%	6	10	12	23	49	153

Note: The Values are cumulative across each row

- In PJM there is currently no distinction between local market power and local scarcity conditions
 - Local Market Power – Transmission limit requires some local generation to operate out of merit, local market not competitive.
 - Local Scarcity – Transmission limit requires all local generation to operate and further requires emergency operating procedures
- Should scarcity condition be treated differently ?

- Signal to drive transmission expansion through Regional Transmission Expansion Planning Process.
- Locational Generation Capacity Market alternative being considered.
- Does lack of scarcity pricing inhibit development of demand response ?
- Should local market power mitigation be suspended under scarcity conditions ?

- In the past six months, PJM has received notification of 2086.6 MW of generation that is intending to retire .
- Since PJM the PJM market has excess supply in aggregate, these retirements do not present an immediate concern from a total market supply point of view.
- Some of the retirements will create transmission and deliverability concerns.
- Can generators exert local market power by retiring ?