



# Three Pivotal Supplier Test: Regulation Market Examples

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- Three pivotal supplier test includes eligible supply
- Definition of eligible supply conforms to the selection criteria used by PJM Markets software
- Regulation offers are submitted daily, but parameters may be modified on an hourly basis
- Market participation is voluntary

- Offered Regulation Supply is Eligible Except Where:
  - Unit is designated as unavailable to provide regulation for the hour (e.g. Offer MW=0)
  - Resource is an offline steam unit
  - Resource is a steam unit with regulation max = regulation minimum
  - Resource is a steam unit with economic maximum = economic minimum
  - Unit selected to provide tier-2 spinning reserves
  - Unit with (Regulation Offer Price + Regulation LOC) > RMCP\*1.5

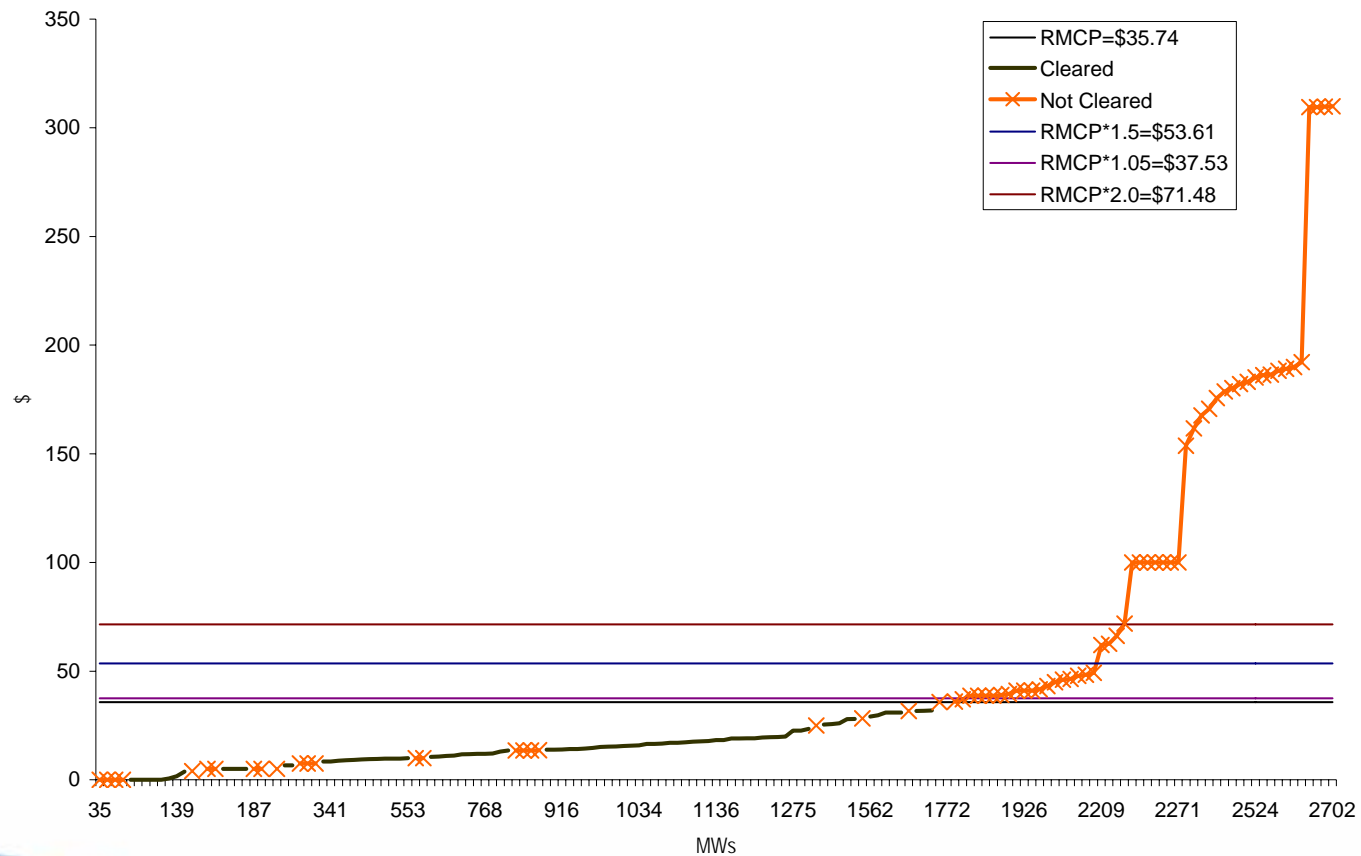


## Regulation Market Pivotal Supplier Sensitivities (2006)

Eligible Supply Definition	Percent Hours 1- pivotal	Percent Hours 2- pivotal	Percent Hours 3- pivotal
All Eligible MW	0%	0%	0%
All Eligible MW $\leq$ RMCP*2.0	0%	0%	5%
All Eligible MW $\leq$ RMCP*1.5	0%	2%	26%
All Eligible MW $\leq$ RMCP*1.05	7%	41%	79%



# Regulation Market Hourly Eligible Supply Curve Example



- The MMU is currently reviewing modifications to the definition of eligible supply used in the three pivotal supplier test to more closely conform with PJM's market clearing software
- These modifications will likely result in changes to sensitivities at different thresholds
- The MMU has completed an evaluation of the impact on 2007 regulation market results

- Offered Regulation Supply is Eligible Except Where:
  - Unit is designated as unavailable to provide regulation for the day or the hour (e.g. Offer MW=0)
  - Resource is an offline non-hydro unit
  - Resource is a non-hydro unit with regulation max = regulation minimum
  - Resource is a non-hydro unit with economic maximum = economic minimum
  - Unit selected to provide tier-2 spinning reserves
  - Unit with (Regulation Offer Price + Regulation LOC) > RMCP\*1.5



## Regulation Market Pivotal Supplier Sensitivities (2007 through August 31st)

Eligible Supply Definition	Percent of Hours 1-pivotal	Percent of Hours 2-pivotal	Percent of Hours 3-pivotal
Price $\leq$ RMCP x 2.0	2%	29%	61%
Price $\leq$ RMCP x 1.5	9%	51%	75%
Price $\leq$ RMCP x 1.05	62%	84%	92%





# Regulation Market Hourly Eligible Supply Curve Example

