

# LMPMWG

EMC  
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## Issue

- Is cost capping compensatory for units that are cost capped effectively all the time?
- Is cost capping compensatory for units that are cost capped at times?

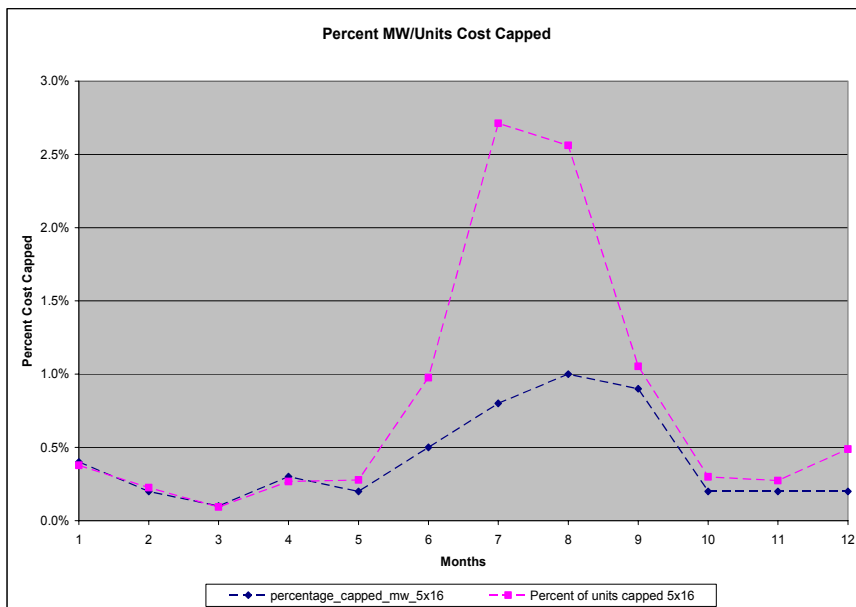


## Extent of Cost Capping Issue

- PJM data on extent of cost capping in 2002
  - Percent of MW cost capped by month: on peak hours
  - Percent of units cost capped by month: on peak hours
  - MW cost capped by month: on peak hours
  - Number of units cost capped by month: on peak hours
- Average over hours (5x16 peak hours)

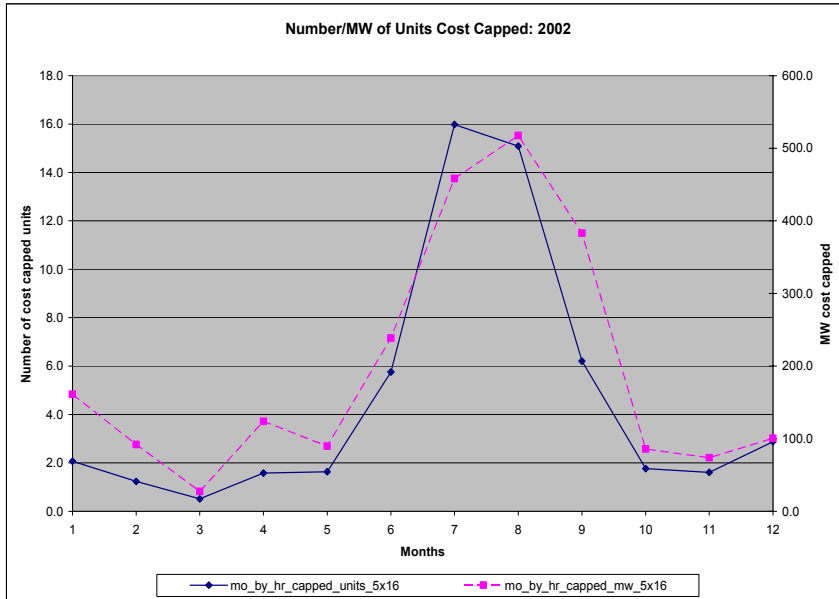


## Percent of Units Cost Capped





## Number of Units Cost Capped



## Number of Units Cost Capped By Percent of Run Hours

Number of units by cost capped hours and percent of run hours cost capped

Percent of run hours cost capped	Minimum Cost Capped Hours				
	500	400	300	200	100
90%	4	6	8	11	11
75%	5	7	11	18	27
50%	7	10	22	29	42



## Extent of Cost Capping Issue

- Units cost capped more than 90% of time
  - Between 4 and 11 units
  - Varies by run hours: 500 to 100 run hours
- Units cost capped more than 75% of time
  - Between 5 and 27 units
- Units cost capped more than 50% of time
  - Between 7 and 42 units
- Determinants of total run hours
  - Economics of units
  - Net revenue: actual
  - Net revenue: theoretical



## Cost Capping Concerns

- Definition of inadequate compensation/revenue
  - Marginal costs
  - To go costs
  - Full carrying costs
- Alternatives to cost-capped units
  - Cost of alternatives vs higher cost caps for units
- Ownership of units in load pocket
- How many of cost capped units required for reliability?
  - What proportion of run hours cost capped



## Definition of Cost Capping Issue

- Unit cost capping threshold: percent of hours/run hours
- Reliability requirement: definition of required for reliability
- Cost capped 100% case:
  - Appropriate price
  - Appropriate revenues
  - Appropriate accounting
- Approximate equivalent to cost capped 100%
- Other significant cost capping thresholds



## Proposed Solutions

- Proxy/proxy approach
  - Fixed/variable costs floor
  - Run hours assumption
- Proxy/actual approach
  - Fixed/variable costs floor
  - Run hours assumption
- Marginal cost approach
  - Short run variable costs
- To go cost approach
  - Short run variable costs
  - Fixed O&M (annualized)
  - Out of pocket costs (annualized)



## Proposed Solutions (1)

- Proxy/proxy approach
  - Proxy fixed costs: \$72,000/MW-year
    - 100 run hours: \$720/MWh
    - 500 run hours: \$144/MWh
  - Proxy variable costs: Heat rate = 10,500
    - Gas costs @ \$5.00 plus O&M: \$50 - \$65/MWh
  - Total: \$194 - \$785/MWh
- Proxy/actual approach
  - Proxy fixed costs: \$72,000/MW-year
  - Actual variable costs:
    - Heat rate; Variable O&M; Fuel Costs
    - \$50 - \$110/MWh
  - Total: \$194 - \$830/MWh



## Proposed Solutions (2)

- Marginal cost approach
  - Fuel costs
  - Short run variable costs
  - Total: \$50-\$110/MWh
- To Go Cost approach (actual)
  - Fuel costs and short run variable costs
    - \$50 - \$110/MWh
  - Long run variable costs
    - \$5 - \$10/MWh
  - Annual out of pocket costs
    - \$15 - \$125
  - Total: \$70 - \$245



## Possible Tradeoffs

- Units required to provide cost data
  - Fuel costs
  - O&M costs
  - Other costs
- Units revenue true up
- Cost cap is limit on price paid
- Review of maintenance practices/expenditures