

Generator Offer Flexibility

GOFSTF

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Objective

- **Accurate reflection of costs in generator offers including incremental, no load and start costs**
 - **DA:**
 - **Gas costs may vary based on timing of gas day using current day nomination cycles**
 - **RT:**
 - **Gas costs may vary based on gas nomination cycles and market conditions**
- **Ensure that market power mitigation rules reflect changes in offers**
- **Ensure that uplift rules reflect appropriate offers**

MMU Proposal

- 1. Gas fired generators only**
- 2. Fuel cost components of offers only**
 - No change to any other components of cost based schedules or price based schedules**
 - Change in price based schedules cannot exceed change in cost based schedules**



MMU Proposal

3. Fuel cost policy must be updated

- **Must be filed with the MMU and approved prior to having the ability to update offers in RT or submitting hourly offers in DA**
- **Must specify reproducible algorithm for determining fuel cost including the source(s) of fuel costs and any appropriate delivery adders**
- **Goal is to permit flexible offers and after the fact documentation and verification**
- **Must submit data on heat rates, VOM, start costs and no load costs and any other components of cost based offers**

MMU Proposal

4. Operating parameters may not be changed hourly

- Minimum Run Time
- Minimum Down Time
- Max Daily Starts
- Max Weekly Starts
- Turn Down Ratio (Economic Max/Economic Min)
- Start Time

Example

- **Sample cost based offer data:** (terms defined in M15)
 - Performance Factor (PF) = 1.04 (Actual fuel consumed/theoretical fuel consumed)
 - Total fuel related costs (TFRC) (\$/MBtu) = fuel cost + delivery cost + emissions cost + maintenance adder*
 - Cost based offer(\$/MWh) = Incremental Heat Rate x TFRC x PF
 - Due to an increase in gas costs only (not other components), TFRC increases from \$2.00/MBtu to \$2.50/MBtu.

Offer curve MW points	Incremental Heat Rate (MBtu/MWh)	Original Cost based Incremental Offer (\$/MWh)	Updated Cost based Incremental Offer (\$/MWh)	Difference (\$/MWh)
20	7	14.6	18.2	3.6
40	7.6	15.8	19.8	4.0
60	8.2	17.1	21.3	4.2
80	9	18.7	23.4	4.7
100	10.6	22.0	27.6	5.6

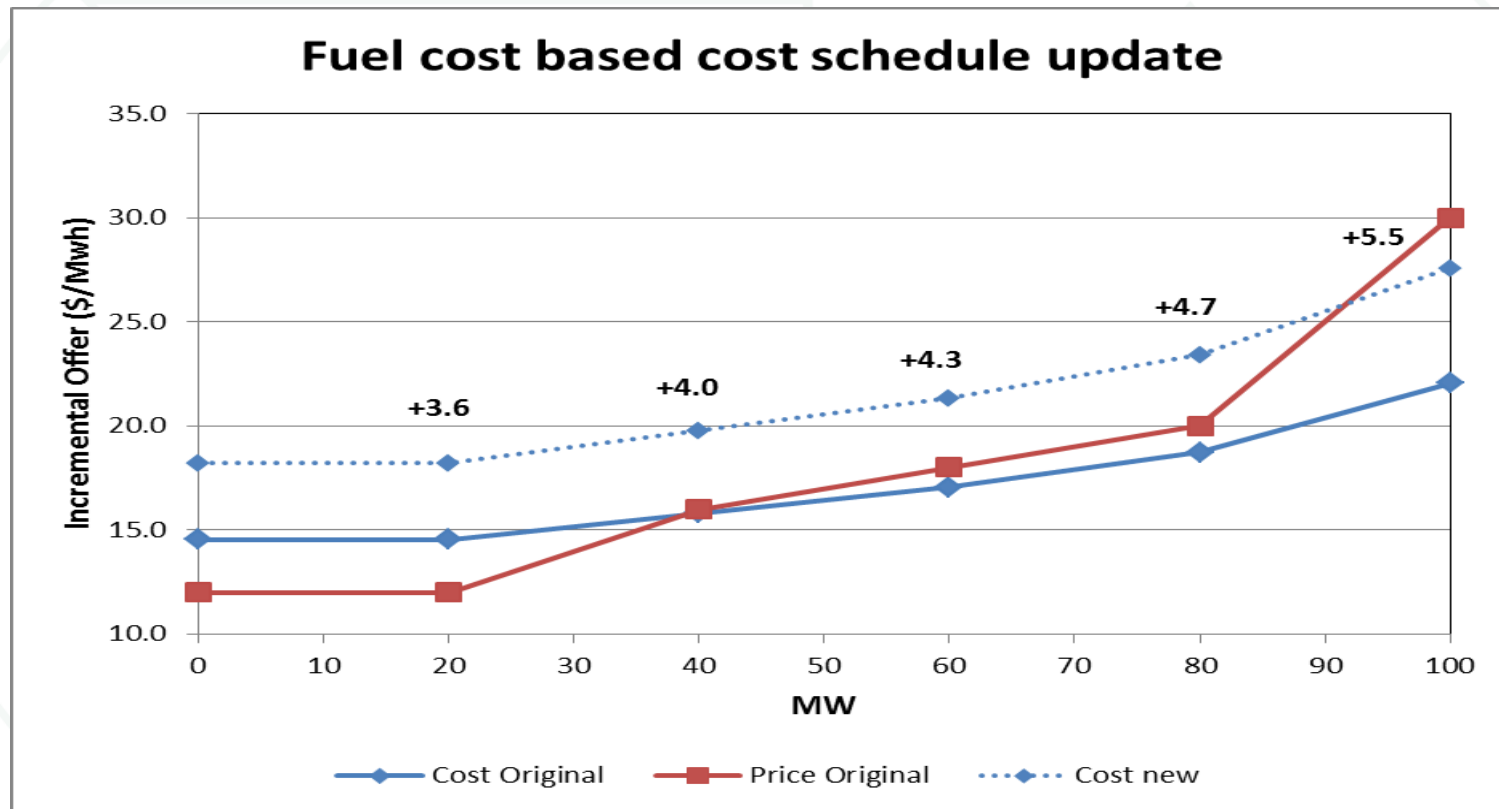
*Maintenance adder included in TFRC only for certain technology types; refer to M15



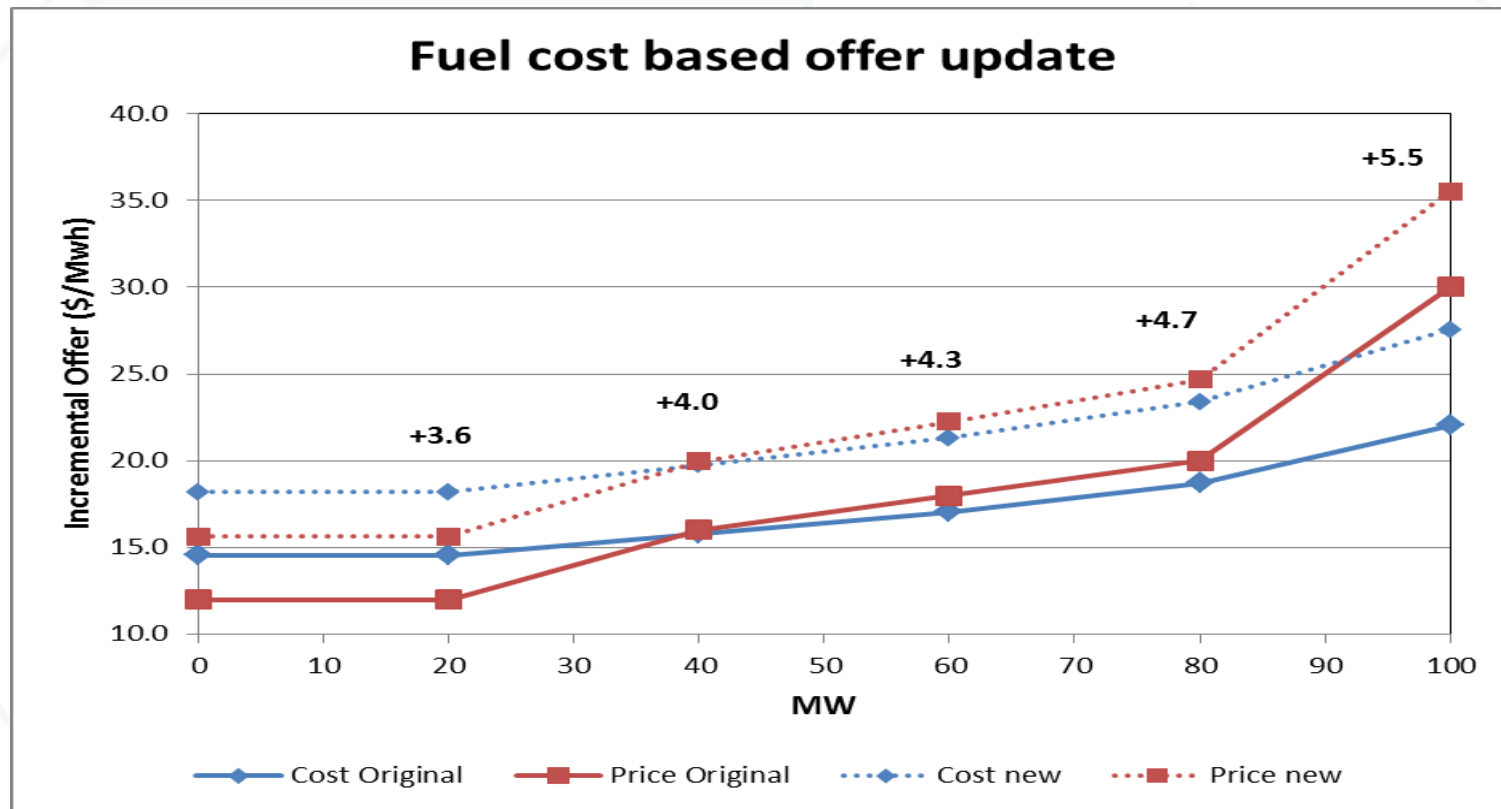
Example



Fuel Cost Increase – Cost Schedule Update



Price Schedule Update



DA Market Power Mitigation Issues

- **Current:**
 - **If an owner fails TPS test, lower cost schedule (of the one cost and one price schedule for the day) selected based on the total cost of commitment**
- **Proposed:**
 - **TPS calculation needs to be updated to:**
 - **Use schedules for each hour for total cost of commitment calculation**
 - **Commit resources based on evaluation of lower cost schedules by hour to minimize commitment cost.**
 - **If a resource owner fails TPS test, then lower cost schedule selected by hour**

RT Market Power Mitigation Issues

- **Current:**
 - **Resources ramped up for transmission relief, that are already committed (in DA or RT), are not offer capped when owner fails TPS test**
 - **Fixed daily offers are part of mitigation mechanism**
 - **Offer capping in RT only for units that can start quickly enough**
- **Proposed:**
 - **All resources offered by owners that fail TPS test should be offer capped if they update offers, regardless of prior status**
 - **TPS test results should be based on effective schedules for relevant time period**

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