



# Regulation Up/Down Cost Offer Formation

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- FERC Order 755 requires performance based regulation compensation hence the capability and performance components of Regulation offers and settlements.
- This will not change as a result of the outcomes of this task force without a change of FERC precedent.
- As a result, under the proposed Reg. Up/Down framework the two products would require different offer formation due to the operational differences of the two products.
- Also, updates are proposed to better reflect market conditions since this offer formation was last reviewed.
- Relevant Language is in Manual 15, Section 2.8

- Status Quo from M15 (Bi-directional)
  - Regulation Capability costs to provide Regulation Service from a unit shall include the following components up to but not exceeding:

$$\text{RegulationCapabilityCosts} (\$/MWh) \leq$$

*(Fuel Cost Increase and UnitSpecific Heat Rate Degradation due to Operating at Lower Loads)*  
*+MarginRisk Adder*

- Since the current Margin Risk Adder of \$12/MWh applies for bidirectional resources, the Margin Risk Adder would be split and broken out as follows.
- Status Quo:
  - Margin Risk Adder shall not exceed \$12.00 per MWh of Regulation Service provided.
- Proposal:
  - Margin Risk Adder shall not exceed \$6.00 per MWh of Reg. Up Regulation Service provided and \$6.00 per MWh of Reg. Down Regulation Service for a total of \$12.00 per MWh if providing both services.

- Proposal (Under Up/Down Framework) would be to eliminate some eligible costs from the Reg. Up and Reg. Down products.
- For example, the "Fuel Cost Increase and Unit Specific Heat Rate Degradation due to Operating at Lower Loads" portion could not be applicable to capture in a Reg. Up product since the concept of "operating at lower loads" would only apply to the Reg. Down product.



# Regulation Performance Offer Formation

- Proposal (Under Up/Down Framework) is to eliminate the “Cost Increase in VOM” portion for all unit types except Reg. Only Energy Storage since the concept of VOM is a form of “double-counting” for these other unit types from their energy offer.
- No proposed change to other portions of formula.

- Status Quo:

$$\text{Regulation Performance Costs } \left( \frac{\$}{\Delta MW} \right) \leq$$

$$\frac{\{ \text{Cost Increase in VOM} + \text{Cost Increase due to Heat Rate Increase during nonsteady state operation} \\ \text{(above heat rate factor not to exceed 0.35\%)} + \text{(Energy Storage Unit Losses)} \}}{\Delta MW / MW}$$

- Proposal: Change “Cost Increase in VOM” to “Cost Increase in VOM (for ESR Only)”

- Energy Storage Unit Losses would be unchanged.
- Account for the increase (in \$/MWh of Regulation) of VOM cost resulting from operating the resource at lower MW output incurred from the provision of Regulation only for Energy Storage devices.
- VOM costs shall not exceed the level based on OEM estimates initially and actual as history is available for all Reg. Only Energy Storage Units providing service for less than 10 years.
- Energy storage units that participate only in Regulation Service shall include all their VOM Cost increase in VOM adder in Regulation cost offers.

- Proposed change to Up/Down construct does not inherently mean that cost of Regulation would be double or even more expensive.
- Limiting VOM costs and potentially removing portions of the "Fuel Cost Increase and Unit Specific Heat Rate Degradation due to Operating at Lower Loads" portion of the Capability Offer will lower cost offers.
- Splitting of Margin Adder will balance costs between two products.
- Performance based costs will be unchanged in other areas than VOM due to the appropriation of mileage.



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