

MSOC

RASTF

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IMM



Monitoring Analytics

Definition of MSOC

- **MSOC is the competitive offer for a capacity resource**
- **MSOC is net going forward costs**
- **CPQR is part of going forward costs**



Competitive Offer

- **Unit specific competitive offer for a CP resource:**
 $p = \text{Net ACR} + \text{Net (Expected Penalties} - \text{Expected Bonuses)}$

$$\text{or, } p = \begin{cases} \text{Net ACR} + \text{CPBR} \times H \times (\bar{B} - \bar{A}), & \text{if } \bar{B} < \bar{A} \\ \text{Net ACR} + \text{PPR} \times H \times (\bar{B} - \bar{A}), & \text{if } \bar{A} < \bar{B} \end{cases}$$

- **Where:**
 - Net ACR = Other components of ACR – Net E&AS revenues
 - CPBR is the average bonus payment rate during PAI
 - PPR is the average nonperformance charge rate during PAI (tariff defined).
 - H is the expected number of PAI divided by 12
 - \bar{A} is the expected unit performance during PAI
 - \bar{B} is the expected balancing ratio during PAI

Capacity Performance Quantifiable Risk (CPQR)

- **CPQR is the cost of mitigating the risk of nonperformance.**
 - **Risk that net nonperformance charges could be greater than the expected value.**
- **Energy market risks not includable in CPQR.**

CPQR

- **CPQR includes both the expected net nonperformance charges and the cost to mitigate the risk associated with the estimated net nonperformance charges.**
- **Net nonperformance charges can be simulated to account for uncertainty in the inputs to calculation (A, B, H and bonus ratio).**
- **The MMU framework for evaluating the simulation approach was presented on March 24, 2022.**

CPQR

- **The MMU will use the simulation approach to evaluate the inputs, assumptions and risk of nonperformance charges in participant CPQR values.**
- **Probabilistic modeling with inputs and assumptions will be evaluated.**
- **Third party insurance quotes, with terms adequately specified, are another approach to defining the risk of paying nonperformance penalties.**

CPQR

CPQR = B(net penalties) + Cost of mitigating risk

Where:

- ***E(net penalties):*** expected value (mean) from distribution of simulated outcome
 - Can be positive, negative, or zero.
- ***Cost of mitigating risk = Risk Cost x (Extreme Value - Mean)***
- **Extreme Value:** for example 30th percentile or 95th percentile or distribution of simulated outcomes.
- **Risk Cost:**
 - Cost of incurring risk of nonperformance penalties
 - Affected by factors including portfolio

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