EnerNOC Proposed Packaged Solution – 9.8.16 SCRSTF

Topics For Discussion

- **Objective**
- **Proposal**
- **Balancing Ratio**

- **Objective**
- Proposal
- Balancing Ratio

Objectives of proposal

- Avoid stranding of reliable, cost effective resources
- Achieve stability for next year’s BRA
- Preserve customer investments
- Pursue comparability

- Objective
- **Proposal**
- Balancing Ratio

Proposal - Basics

- Adopt PJM packaged solution A as is
- Add the following design components:

1. Apply the Balancing Ratio to all committed capacity for the purposes of determining Expected Performance

2. Amend Balancing Ratio equation to be:

$$BR = \frac{(\text{All Resource Performance}) + (\text{Net Energy Imports})}{\text{All Committed Capacity (UCAP)}}$$

Proposal - Options

- Open to considering other changes/additions to other design elements, for example:
  - Aggregation rules (commercial bilateral & seasonal offers)
  - M&V
  - Balancing Ratio
    - Proposals in the URMSTF:

      *BR * committed capacity for all CP Resources** (needs further discussion to address differences between value assigned to Gen and DR/EE (*FPR))*

      *** 8/31 matrix package G, 8/17 matrix E & G 7/29 matrix packages E & F*

- Objective
- Proposal
- **Balancing Ratio**

Balancing Ratio

What Is It?

The balancing ratio, is defined to be the ratio of load plus reserves to total UCAP cleared in the capacity market

It's a ratio comparing the system's need for capacity versus committed capacity

$$\frac{\text{(Actual Generation and Storage Performance) + (Net Energy Imports) + (Demand Response Bonus Performance)}}{\text{All Generation and Storage Committed UCAP}}$$

Balancing Ratio

What is it used for?

- Non-Performance Assessments (Penalties) during Performance Assessment Hours (PAHs) are determined by comparing "*each Capacity Resource's* ***Expected Performance against its Actual Performance*** *for each Performance Assessment Hour*" (M18, 8.4A)

- Expected Performance Determinations (M18, 8.4A)
  - Generation: (UCAP) * (**Balancing Ratio**)
  - Demand Response: ICAP value (the actual load reduction quantity the resource committed to provide)

Balancing Ratio

Why Does It Matter?

- Applying the BR to Generation and not DR *reduces the Expected Performance levels for Generation but not DR* in a PAH when system levels are lower than the committed amount
    - Typically the winter has lower ratio

- Point of Reference – Balancing Ratio applies to all resources in ISO NE

Balancing Ratio

Why Does It Matter?

Example

	Physical Commitment	PAH Occurs	Physical Delivery	Balancing Ratio	Expected Performance	Actual Performance	IMPACT
Gen A	100 MW		85 MWs	0.8	80	85	Over-Performance Payment 5 MWs
DR A	100 MW		88 MWs	0.8	100	88	Under Performance Penalty 12 MWs

Balancing Ratio

Why Does It Matter?

- This lack of comparability between DR and Generation creates an unreasonable barrier to participation for DR

- This Task Force has certain Key Work Activities
  - “Determine whether barriers to entry for seasonal resources exist in the 2020/2021 Delivery Year and beyond, and identify whether any such identified barriers may be removed while maintaining the commitment of 100% CP resources for the entire Delivery Year.”

- This design component removes the barrier while maintaining the commitment of 100% CP