



FRR Entity Physical Option for Non-Performance Assessment

URMSTF Meeting
May 4, 2016

- FRR Entities have the option of electing financial or physical non-performance assessment prior to the Delivery Year
- An FRR Entity that elects the financial option will be subject to Non-Performance Assessment Charges/Bonus Performance Credits for resources committed to their FRR Capacity Plan
- An FRR Entity that elects the physical option will be required to update the subsequent Delivery Year's FRR Capacity Plan and commit additional Capacity Performance Resources beyond the amount required as a penalty for those committed resources that experienced Performance Shortfalls during the Delivery Year.
- Details on physical option are presented in the following slides.

CP implementation effective for FRR Entities starting with 2019/2020 Delivery Year.

- For each PAH, a Performance Shortfall or Bonus MWs will be determined separately for CP and Base commitments on each resource in FRR Capacity Plan.
 - Actual Performance first assigned to meet CP Expected Performance followed by an assignment to Base Expected Performance.
 - Any remaining actual performance assigned as CP Bonus MWs if CP commitment on unit; otherwise Bonus MWs assigned as Base Bonus MWs

- A Net Performance Shortfall by commitment type is determined
- Sum of CP Performance Shortfall less Sum of CP Bonus MWs establishes FRR Entity's Net Performance Shortfall related to CP commitments
- Sum of Base Performance Shortfall less Sum of Base Bonus MWs establishes FRR Entity's Net Performance Shortfall related to Base commitments.

- Negative Net Performance Shortfall related to CP commitments (over performance by CP) may be applied to offset positive Net Base Performance Shortfall (underperformance by Base).
- Negative Net Performance Shortfall related to Base Commitments (over performance by Base) may be applied to offset positive Net CP Performance Shortfall (underperformance by CP).

- Net Performance Shortfall multiplied by Physical Penalty Rate establishes the additional MW of capacity that FRR Entity must add to FRR Capacity Plan for subsequent Delivery Year.
 - Physical Penalty Rate applied to Net CP Performance Shortfall = 0.01667 MWs/PAH
 - Physical Penalty Rate applied to Net Base Performance Shortfall = $0.01667 * \text{Weighted Average Base RCP for LDA encompassing zone of FRR Entity/LDA Net CONE}$

- Additional MW required is incremental for each PAH with Net Performance Shortfall during the DY
- Maximum additional MW required as result of CP non-performance during delivery year = 50% of DY CP commitment
- Maximum additional MW required as result of Base non-performance during delivery year = 50% of DY Base commitment*Weighted Average Base RCP/LDA Net CONE



Example of FRR Entity's Physical Penalty for Non-Performance

Example assumes Summer Performance Assessment Hour, Balancing Ratio = 1

WARCP	\$ 150.00
Net CONE	\$ 300.00

Resource	CP Commitment = CP Expected Performance (MW)	Base Commitment = Base Expected Performance (MW)	Actual Performance (MW)	Actual MW used to meet CP Expected Performance	Actual MW used to meet Base Expected Performance	CP Shortfall MW	Base Shortfall MW	CP Bonus MW	Base Bonus MW
Gen A	100	-	90	90	-	10	-	-	-
Gen B	-	100	105	-	100	-	-	-	5
Gen C	50	50	80	50	30	-	20	-	-
Gen D	50	50	105	50	50	-	-	5	-
Totals						10	20	5	5

Physical Penalty Rate for CP = 0.01667 MW/PAH

Physical Penalty Rate for Base =
 $0.01667 * \$150 / \$300 = 0.008335$ MW/PAH

	Net Performance Shortfall MW	Physical Penalty Rate	Additional MW required for subsequent DY FRR Plan
CP	5	0.01667	0.1
Base	15	0.008335	0.1