



Black Start PS/IC: Summary of IMM and PJM Proposals

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Operating Committee

October 8, 2020

- September 3 – Third first read of Black Start Problem Statement / Issue Charge
 - [Black Start Options Matrix](#)
 - [Black Start Options Matrix - Presentation](#)
- October 8 – There are two proposals - from IMM and PJM
 - Includes summary material of proposals
 - The OC will be asked to vote on the two proposals

Black Start Problem Statement / Issue Charge, [October 8, 2020 OC Meeting](#)

Black Start Testing

- All Black Start Units (including units not under Schedule 6A to black start test every 13 months)

Black Start Unit Termination

- Ability to terminate Black Start Service if Black Start Unit is unable to successfully black start test within 90 days following a failed test AND not working on enabling black start capability to successfully test within a one year period

Black Start Unit Substitution

- Add guidance and clarifying language for unit substitution
- Substitutions require units meet specific black start criteria

- Update Capital Recovery Factors
 - Reflect federal income tax and interest rate changes
 - Updates to Depreciation as applicable under the tax code
 - Provide for annual updates
 - Updates via PJM website (not hard coded in Schedule 6A)
 - Commitment period to reflect life of black start equipment

- Update Minimum Tank Suction Level Recovery
 - Revised Minimum Tank Suction Level to calculate a ratio based on the fuel burn needed to meet minimum run hours

Black Start Unit Testing

	PJM	IMM
Black Start Unit testing required every 13 months for Black Start Units under Schedule 6A or service agreement with Transmission Owner	X	X
Testing requirement update to be added to Schedule 6A and Manual 12	X	X

Black Start Unit Substitution

Clarifying language to address Black Start Unit substitution	X	X
Substitute unit must be connected to the same bus		X

Black Start Unit Substitution continued

	PJM	IMM
Substitutions only permitted under very specific circumstances and with defined conditions		X
Substitutions must be supported by documentation (for operational or technical reasons)	X	X
Substitution guidance to be added to Schedule 6A and Manual 12	X	X

Black Start Unit Termination

	PJM	IMM
Ability to terminate Black Start Service if Black Start Unit is unable to successfully black start test within 90 days following a failed test AND not working towards enabling black start capability / successful testing within a one year period	X	X
Termination updates to be added to Schedule 6A and Manual 12	X	X

Black Start Capital Recovery Factor (CRF)

	PJM	IMM
Remove CRF from Schedule 6A and add new Manual 15 Section documenting CRF methodology; and post annual CRF Tables (plus historical CRFs) via PJM website	X	X
CRF interest rate assumption: Moody's Utility index bond rate Baa1		X
CRF interest rate assumption: ATWACC from Quadrennial Net CONE review with "significant change protection" for major interest rate changes between Quadrennial Reviews	X	

Black Start Capital Recovery Factor (CRF)

	PJM	IMM
CRF Annual updates include changes in federal tax rate, average state tax rates and interest rate changes	X	X
Updated CRF rates apply to new/existing Black Start Units		X
Updated CRF rates, including annual updates, apply only to Black Start Units selected in RFPs after the effective date of Tariff changes	X	
CRF Recovery Periods - Status Quo (5; 10; 15; 20 years)	X	
CRF Recovery Periods – 10 and 20 year recovery periods		X

Black Start Capital Commitment Period

	PJM	IMM
<p>Black Start Unit starting on capital recovery rate to remain black start for life of unit unless:</p> <ul style="list-style-type: none"> • Unit retirement / deactivation with at least one year's advance notice • Expiration of a state, federal, or other governmental agency permit(s) required for Black Start Service with at least one year's advance notice • Additional capital is required to maintain Black Start Service (unit is required to bid into RFP process, and, if selected, will continue to provide Black Start Service) • PJM terminates Black Start Service with at least one year's advance notice 	X	X
Unit commitment periods removed from CRF table	X	X
Updated commitment periods apply to new/existing Black Start Units		X

Minimum Tank Suction Level (MTSL)		
	PJM	IMM
Black Start Unit eligible to recover Black Start Energy Tank Ratio of the MTSL in its fuel storage calculation	X	X
Black Start Energy Tank Ratio = $\{(Fuel\ Burn\ Rate \times Minimum\ Run\ Hours) / (Tank\ Capacity - MTSL)\}$	X	X

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