

Operating Committee Special Session Black Start Compensation

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Oct. 21, 2020

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- PJM is appreciative of all of the dialogue and effort that has gone into consideration of certain targeted reforms to address elements of Black Start testing and Black Start compensation.
- Although fully developed packages have been put forward by PJM and the IMM for stakeholder consideration, PJM recognizes that there are certain remaining issues where additional consideration and discussion could be helpful to achieve consensus.



- This presentation outlines potential options associated with two key components of the two packages. The options represent a range of potential alternative approaches, along with the existing PJM and IMM packages, to two issues which have been flagged by stakeholders:
 - Black Start commitment period
 - Application of the Capital Recovery Factor (CRF) changes to units that have already received black start commitments from PJM



Purpose of This Presentation (cont'd)

- PJM presents this range of options for these two components in an effort to assist stakeholder discussion in an attempt to build consensus resolution.
- The range of alternative components outlined in this presentation are conceptual in nature and are not intended to represent fully developed alternative solution packages. Rather, if consensus can be reached, these alternatives could potentially be developed into a new package for voting at the November OC meeting.
- These alternatives are presented for purposes of helping to achieve consensus. They should not be read necessarily as PJM or IMM changes to the current solution packages already presented.



Present PJM Package

Commitment Period

Life of asset unless:

- 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

Applicability of CRF Changes

Going forward only. CRF changes only applicable to new Black Start solicitations. Already committed black start units remain on their current CRF schedule and current commitment period rules (can withdraw from Black Start on one year's notice. If prior to end of the CRF period, unit forfeits additional CRF revenues).



Present IMM Package

Commitment Period

Life of asset unless:

- Unit retirement/deactivation with at least one year's advance notice
- PJM terminates Black Start Service with at least one year's advance notice

This applies to existing units as well as new units.

Applicability of CRF Changes

CRF changes apply to new and existing Black Start units.

- The CRF rate modified for revised tax rate and depreciation rules to all units constructed since the new tax law in December 2017
- The CRF rate modified only for the lower tax rate to all other Black Start units, i.e., those constructed prior to December 2017



Alternative Commitment Period Component Options

Option #1: The 'Proration Option'

Unit owner selects commitment period in its original bid. Receives prorated share of capital recovery commensurate with its selected commitment period. Unit that seeks to leave before the end of its commitment period must provide two years' notice to PJM.

Example – Unit has 30-year expected life. Unit chooses to only commit to Black Start Service for 20 years and is selected by PJM. Unit received 20/30 (two-thirds) of its total capital costs. If unit wishes to exit Black Start Service before 20 years, it must provide two years' notice to PJM to allow PJM time to make alternative arrangement for Black Start.



Alternative Commitment Period Component Options (cont'd)

Option #2: 20-Year Minimum Commitment

Minimum commitment period is 20 years unless unit retires, loses permits, has major capital additions needed or is released by PJM on one year's notice (see PJM package). Unit recovers its capital costs consistent with existing CRF schedules. If qualifies to leave early, it must provide two years' notice to PJM. Unit may offer a longer commitment period in RFP process.

Example – Unit is 15 years old. Unit has 10-year capital recovery period based on existing CRF schedule. Unit must commit to provide Black Start Service for 20 years (subject to 'outs' listed above). Unit recovers 100% of its capital costs over the 10-year period and receives base formula rate over remaining 10 years.

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Alternative Commitment Period Component Options (cont'd)

Option #3: Add an Option for Release From the Commitment Period if Economic Distress Demonstrated

The commitment period would remain for the life of the asset, but in addition to the 'outs' presently listed in the PJM package, there would be an out if the unit owner can demonstrate to PJM's satisfaction (and after input from the IMM) that the unit is facing economic distress in recovering its Black Start costs. One year's advance notice would be required.

Example – Unit has a 10-year period to recover all of its capital costs. Unit owner can depart and forfeit remaining revenues without retiring if it proves economic distress in recovering its Black Start costs.



Applicability of CRF Changes to 'Transition' Units

- PJM not proposing changes to CRF for transition and existing units
- IMM is proposing changing CRF for transition and existing units
- Stakeholder options?

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- Stakeholder consideration of options and potential 'mix and match' within the options presented
- Stakeholder presentation of additional options
- Stakeholder consideration of polling or other next steps leading up to November OC meeting