

Section 10: Black Start Replacement Process

10.1 BLACK START REPLACEMENT PROCESS

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10.2 COST-BASED COMPONENTS FOR BLACK START REPLACEMENT

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10.3 Black Start Refurbishment Process

This Black Start Refurbishment process applies when a resource providing Black Start service, requests additional compensation under its Black Start Service ancillary service payment which meet the threshold limits listed below. Costs may include investment to either, i). continue operating the unit to provide black start service or ii).to continue operating the components of the unit that allows such unit to black start. Approved costs accepted under this refurbishment process shall be recovered under Schedule 6A of the Tariff.

Thresholds for a black start unit to become eligible under these provisions include the following;

1. A unit that, without refurbishment would retire and would no longer be available to provide black start service.
2. A unit that without refurbishment of its black start components can no longer operate and meet black start qualifications and such refurbishments exceed the following levels:

0 – 20 MW	\$200,000
21 – 35 MW	\$300,000
35 – 50 MW	\$400,000
51 MW & Above	\$500,000

Costs that are less than these thresholds are considered deminimus and the resource owner may apply for capital recovery under the black start service provisions of Schedule 6A of the tariff and is not subject to the replacement process provided herein.

10.3.1 Notification of Planned Refurbishment

The Generator Owner shall notify PJM of the planned refurbishment of a black start unit where Black Start Capital Costs are being requested to be recovered through Schedule 6A and which exceed the threshold requirements for evaluation under this refurbishment process. The notification shall be one year in advance of the planned investment. In case of a forced event

causing damage and requiring refurbishment, the unit owner shall notify PJM as soon as practical. The notification shall include the following information:

- Estimated total cost and a breakdown of cost components. The estimated cost must be within +/- 25% of the actual cost. These costs are to be used for the threshold evaluation only.
- Proposed start date and end date of the project

10.3.2 Refurbishment Process Step 1 – Notification of TO

Upon receiving such refurbishment notification from a GO, PJM shall notify the Transmission Owner (TO) within 10 business days, identifying the affected resource and schedule. The Transmission Owner would not be provided any of the refurbishment cost details.

10.3.3 Refurbishment Process Step 2 – Consideration of Impacts

Within 90 days, PJM and the TO will jointly consider the impacts the refurbishment unit imposes to their restoration plan. This impact study should identify potential alternatives to meet the current black start restoration requirements in addition to maintaining the current resource.

10.3.4 Refurbishment Process Step 3 – Competitive Evaluation

Based on the impact analysis, PJM shall implement a process to identify replacement black start resources, on a competitive basis to potentially offset the refurbishment unit following the process outlined below;

- A. PJM shall post online a notification about the need for a black start resource along with the location and capability requirements. Please refer to Attachment A of the ***PJM Manual for System Restoration*** for more details on the selection criteria for black start resources. The online notification will also advise that all bids submitted for the black start resource must be consistent with Schedule 6A of the PJM OATT. Details of the required cost components for each prospective black start replacement bid are provided in the subsection labeled *“Cost-Based Components for Black Start Replacement.”*
- B. To be considered, the owner of the refurbishing unit must submit a bid for the unit to continue as a black start resource. The bid must contain the estimated refurbishing cost. In the event the owner of the refurbishing unit decides not to submit a bid, the owner must then provide a notice to PJM of the unit’s termination from black start service. The actual cost recoverable will be capped at +25% of the estimate for all bids.
- C. The black start resource posting should be made within 90 calendar days of receiving a notification to refurbish the existing black start resource, and will mark the beginning of a “Market Window” which will last 90 calendar days from the date of the posting. The posting will also advise that PJM will be reviewing pending generator interconnection projects and other projects that are received within the Market Window. This process also allows for

owners to propose a capital plan for conversion of existing units to Black Start capable units.

- D. PJM will review each Generation Interconnection Request pending under Part IV of the PJM Tariff at the time a Market Window is opened (as described above) and each request from Black Start Units and each Interconnection Request it receives during such Market Window, to evaluate whether the project proposed in the request could meet the black start replacement criteria for which the Market Window was established.

- E. If PJM determines that more than one of the proposed projects (including the existing black start unit proposed for refurbishment) within the 90 day market window meets the black start resource criteria, the most cost-effective resource will be chosen, provided the identified resource accepts and maintains designation as a market solution under Sections 36A or 41A of the PJM Tariff and executes the agreement(s) required there under. Submitted projects costs must be consistent with Schedule 6A of the PJM OATT

If no additional resources are received during the 90-day market window (other than the existing unit proposed for refurbishment), PJM will select the refurbishing unit as the most cost effective solution.

After PJM identifies the most cost-effective black start resource, PJM and the TO will coordinate with the GO for the GO's acceptance and continuance as a black start unit under the PJM tariff.

The selected black start unit will be compensated for provision of the black start service in accordance with Schedule 6A. However a black start resource that is being refurbished in lieu of retirement to continue providing black start service shall have the entirety of those refurbishment costs included in its black start service compensation. **{{CMT: You need to add words in 6A on this, it would be a CRF rate under paragraph 6/18}}**

10.3.5 Refurbishment Process Step 4 – Coordination

If another unit is selected as a replacement black start resource PJM shall notify the original resource and its replacement resource of the outcome with an effective date at least 30 days in advance. The effective date shall be the date provided by the original black start resource in its notice of withdrawal or as mutually agreed by PJM and the original black start resource owner.

If another unit is selected as a replacement black start resource but will not be available prior to the proposed refurbishment date of the existing black start unit or the proposed date of withdrawal of the existing black start unit from providing black start service, PJM, will use the following process:

- A. PJM will identify if the “proposed refurbishing” unit is necessary to provide black start service for an interim period until the replacement black start unit is available for black start service. This notice shall provide an estimate of the time period that the black start unit is needed to operate beyond the proposed withdrawal date.

B. In the event that the black start unit proposed for refurbishment is withdrawing from black start service but not deactivating PJM shall request that such unit voluntarily fulfill its two-year rolling commitment to provide black start service. If the black start unit voluntarily agrees to operate on an interim basis the unit shall continue to receive black start service revenues pursuant to Schedule 6A of the PJM Tariff, in addition to any avoidable costs associated with maintaining the black start capability through the interim period that the generator would not have incurred if it were withdrawn from the black start service as requested.

C. In the event that the black start unit is deactivating PJM shall request that such unit voluntarily fulfill its two-year rolling commitment to provide black start service. If the black start unit voluntarily agrees to continue operating on an interim basis the unit shall continue to receive black start service revenues pursuant to Schedule 6A of the PJM Tariff, in addition to any avoidable costs associated with maintaining the black start capability through the interim period that the generator would not have incurred if it were withdrawn from the black start service as requested.

D. Within 30 calendar days of such notice by PJM, the GO shall notify PJM whether the black start unit will continue operating beyond its proposed withdrawal date.

Exhibit 14-2: Black Start Refurbishment Process Flow Diagram