

Black Start Service Task Force PJM Refurbishment Proposal

Revision 0

October 18, 2011



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Procedural Background

BSSTF charter was endorsed by the MIC in August 2010 to do the following: “Develop RFP processes similar to Black Start Replacement Process to accommodate unit restorations”. This white paper is intended to give a detailed overview of the process in which units can apply for restoration and how proposed compensation is developed for units under different conditions.

Current Process and Proposed Process Overview

Currently the Black Start Replacement process is covered in Manual 14D. The process includes submittal of notice of Deactivation or notice of termination from black start service. PJM and the Transmission Owner (“TO”) discuss feasible sites for replacement, and if replacement is necessary. If replacement is necessary, PJM will issue a Request for Proposal (“RFP”) for replacement black start. In the proposed black start refurbishment process there are two tracks, one for refurbishment of components of the plant directly related to black start (components that the unit would not have if not for the fact it provides black start), and one for complete refurbishment or unit would otherwise retire.

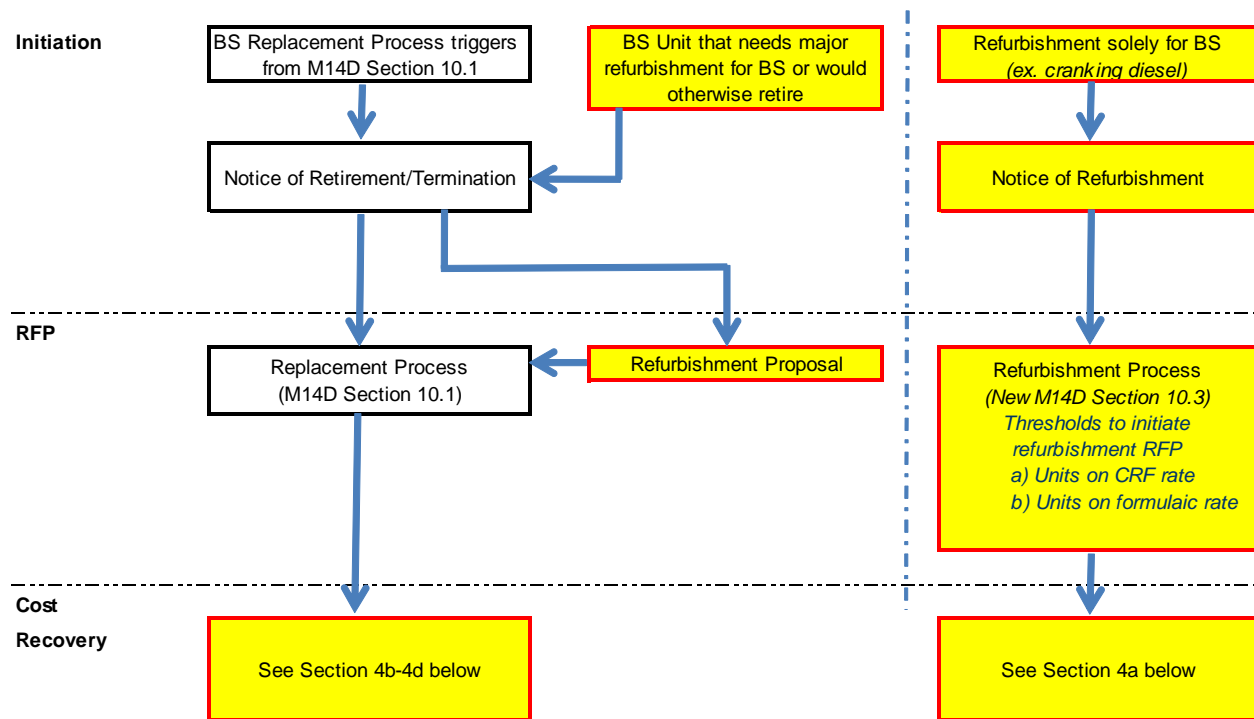


Figure 1: Current and Proposed Process *

* Proposed processes are highlighted yellow – details to be outlined in new Manual M14D Section 10.3 language.

Proposed Manual M14D Section 10.3 language:

1. An Incumbent BSU that needs a major repair to equipment solely necessary for Black Start Service and wishes to continue in the service can request to recover the cost of the repair under Schedule 6A Paragraph 5 by submitting a refurbishment proposal to PJM for evaluation. The refurbishment proposal will be evaluated under thresholds below to determine if the incremental repair costs are sufficient to trigger an RFP or if it qualifies for inclusion under the units existing Black Start commitment as an incremental cost under Schedule 6A.
 - a. For an Incumbent BSU on a Capital Recovery Factor (CRF) rate: if refurbishment proposal is greater than the remaining CRF payments then an RFP is required. As the Incumbent BSU gets closer to the end of commitment the threshold reduces and the likelihood for an RFP will increase.
 - b. For Incumbent BSU on formulaic rate: if refurbishment cost proposal is 110 percent of current revenue requirement then RFP is required
2. The incumbent or currently in-service Black Start unit (“Incumbent BSU”) that needs major refurbishment, overhaul, or repair to continue in Black Start Service ***and*** as a Generation Resource in PJM, must submit a notice of termination of Black Start Service ***and a notice of Deactivation*** to trigger the Black Start Replacement Process. The Incumbent BSU may be able to submit its anticipated cost of refurbishment, overhaul, or repair as a bid in the Black Start Replacement Process Request for Proposal (RFP) as delineated in Paragraph 4 below.
3. An Incumbent BSU that has submitted a notice of termination of Black Start Service and/or a notice of Deactivation and/or whose bid was not selected in Black Start Replacement or Refurbishment Process may be needed to provide Black Start Service temporarily until the replacement black Start resource is available. Any additional capital investment and/or extended black start payments required for the Incumbent BSU to continue to provide temporary Black Start Service will addressed through an RMR.
4. Cost recovery methodologies for the following scenarios:
 - a. Incumbent BSU requests cost recovery for an incremental refurbishment, overhaul, or repair for equipment deemed solely necessary for the purpose of providing Black Start Service (e.g. existing cranking diesel):
 - 1) If the costs requested are less than the applicable RFP thresholds, the Incumbent BSU receives cost recovery for equipment refurbishment through Schedule 6A black start revenues. If the Incumbent BSU is also a Capacity Resource in RPM, it receives and retains RPM revenues as normal.
 - 2) If the costs requested are greater than the applicable RFP thresholds and the Incumbent BSU is the evaluated lowest bid in the RFP, the Incumbent BSU receives cost recovery for equipment refurbishment

through Schedule 6A black start revenues. If the Incumbent BSU is also a Capacity Resource in RPM, it receives and retains RPM revenues as normal.

- 3) If the costs requested are greater than the applicable RFP thresholds, the Incumbent BSU is not the evaluated lowest bid in the RFP and the unit is needed to temporarily provide Black Start Service, the incumbent BSU may seek cost recovery under an RMR.

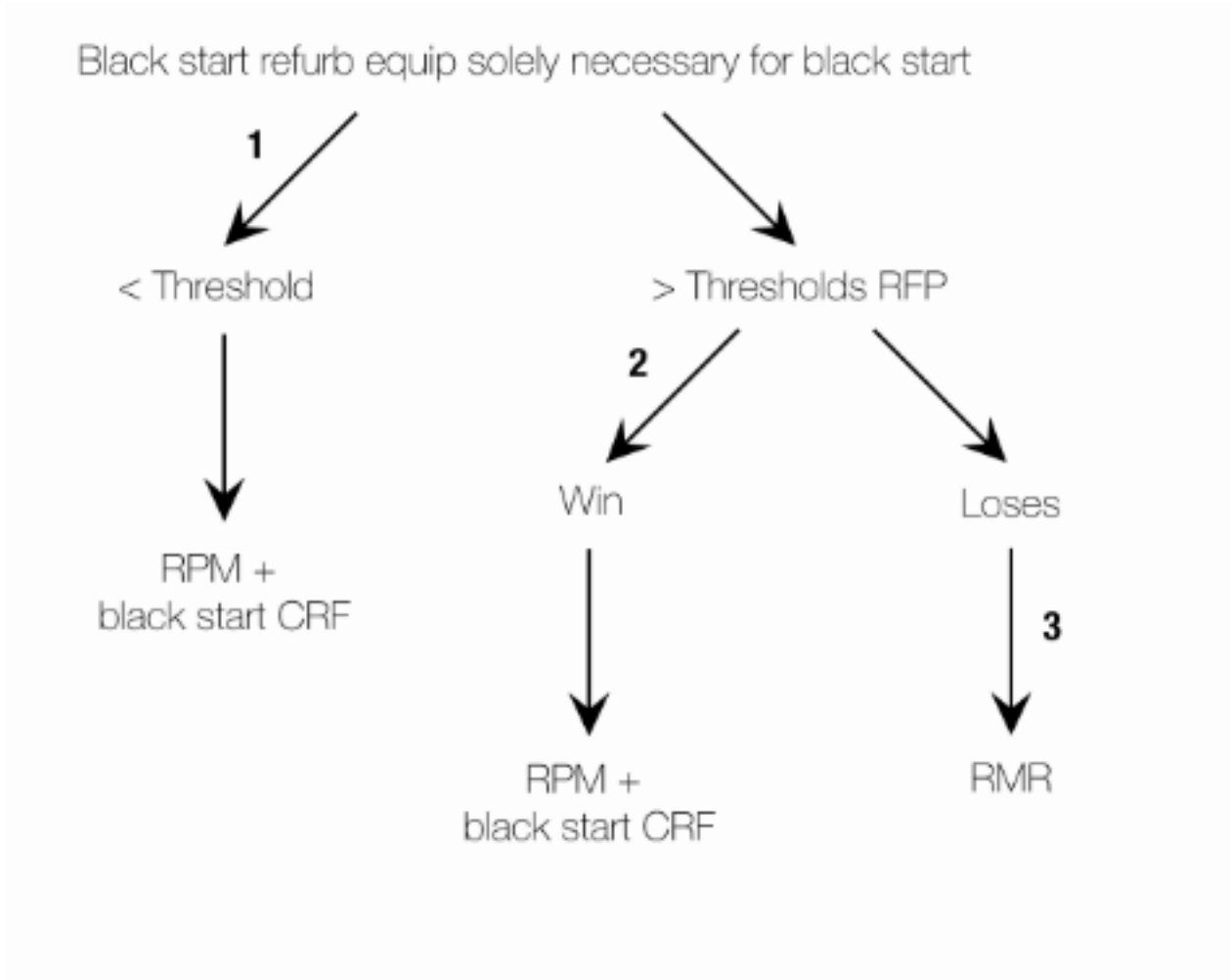


Figure 2: M14D Section 10.3.4a- Incumbent BSU requests cost recovery for an incremental refurbishment, overhaul, or repair for equipment deemed solely necessary for the purpose of providing Black Start Service (ie. existing cranking diesel)

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- b. Incumbent BSU that needs a major refurbishment, overhaul, or repair to continue providing Black Start Service and has submitted a Notice of Deactivation, chooses to submit its anticipated refurbishment, overhaul, or repair costs as a bid proposal in the Black Start Replacement RFP Process.
 - 1) If the Incumbent BSU's major refurbishment bid is selected through the RFP process (and by extension rescinding their Notice of Deactivation and pushing their Deactivation Date to beyond the required capital recovery period) and does not wish to participate as a Capacity Resource in the RPM market, it will be excused from the RPM must-offer requirement in Attachment DD for the length of their capital recovery period.
 - a. For any Delivery Years for which the Incumbent BSU did not clear an RPM Base Residual Auction (BRA) or Incremental Auction (IA) and is not already a committed Capacity Resource, refurbishment costs will be recovered under the appropriate CRF rate in schedule 6A as the entirety of these costs would be considered to be solely necessary for the purposes of Black Start Service.
 - b. Incumbent BSUs that are not Capacity Resources may recover any other incurred avoidable costs as defined in the Avoidable Cost Rate (ACR) in Section 6.8 of Attachment DD required to allow the Incumbent BSU to provide Black Start Service as these costs would then be considered solely necessary for the purposes of Black Start Service.
 - 2) If the Incumbent BSU's major refurbishment bid is selected through the RFP process, and they choose to voluntarily offer their capacity into a RPM BRAs or IAs, the refurbishment costs that will be recovered through the CRF provisions of schedule 6A shall not be included in APIR for RPM or VOM for energy market offers. However, the ACR as defined by Section 6.8 of Attachment DD, net of Expected Energy and Ancillary Service Revenues as defined in Attachment DD would be allowed in the Market Seller Offer Cap. If the Incumbent BSU clears in a RPM BRA or IA to become a Capacity Resource, or already has an existing obligations as a Capacity Resource:
 - a. If Incumbent BSU clears in a RPM auction to become a Capacity Resource, or already has an existing obligations as a Capacity Resource, it will receive the greater of Black Start Revenues under the CRF provisions of per Schedule 6A less any cleared RPM auction revenues net of the ACR during the recovery period.
 - i. By definition, since non-capitalized avoidable costs defined in the ACR are allowed in the RPM offer, an Incumbent BSU that clears in RPM will recover

those avoidable costs through RPM rather than in Schedule 6A

- ii. Recovery of refurbishment costs under the CRF provisions of Schedule 6A will be offset by the “Net RPM Revenues” defined as RPM revenues less the Market Seller Offer Cap.
 - b. To the extent RPM revenues exceed Black Start revenues that cover refurbishment and avoidable costs, the Incumbent BSU would then be compensated under the non-CRF provisions of Schedule 6A for Black Start and retain all RPM revenues.
- 3) If the Incumbent BSU's major refurbishment bid is selected through the RFP process, and they choose to voluntarily offer their capacity into a RPM BRAs or IAs, and it does not clear in a RPM BRA or IA to become a Capacity Resource:
- a. For any Delivery Years for which the Incumbent BSU did not clear an RPM Base Residual Auction (BRA) or Incremental Auction (IA) and is not already a committed Capacity Resource, refurbishment costs will be recovered under the appropriate CRF rate in schedule 6A as the entirety of these costs would be considered to be solely necessary for the purposes of Black Start Service.
 - b. Incumbent BSUs that are not Capacity Resources may recover any other incurred avoidable costs as defined in the ACR in Section 6.8 of Attachment DD required to allow the Incumbent BSU to provide Black Start Service as these costs would then be considered solely necessary for the purposes of Black Start Service.
- 4) If the Incumbent BSU is not the evaluated lowest bid in the RFP and the unit is needed to temporarily provide Black Start Service, the incumbent BSU may seek cost recovery under an RMR.

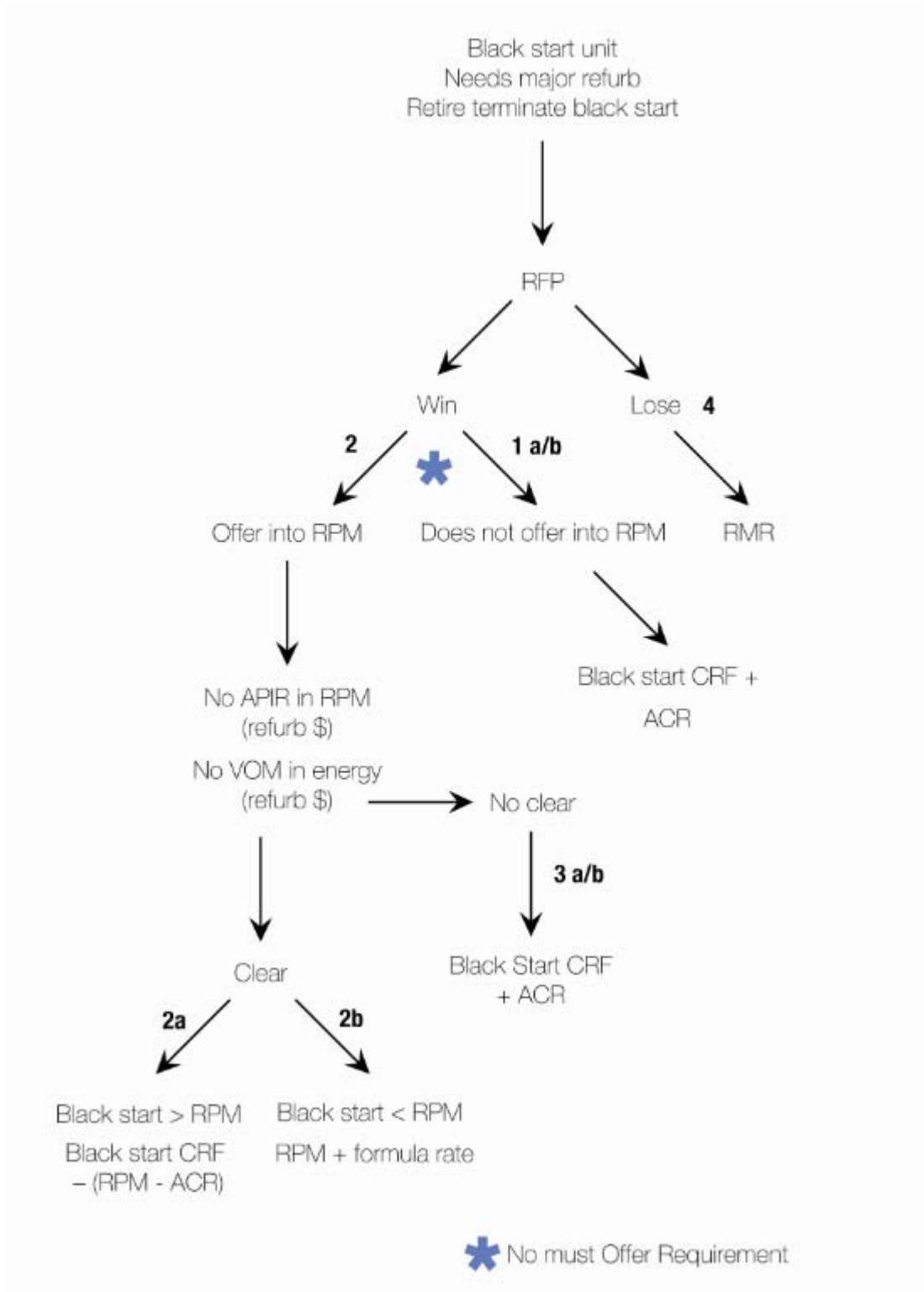


Figure 3: M14D Section 10.3.4b - Incumbent BSU submits Notice of Deactivation and requires major refurbishment to remain in service and provide black start service.

- c. An existing Non-Black Start Unit (i.e. CT or Diesel) submits the cost for incremental upgrades solely necessary to become a black start unit and is the lowest evaluated bid in the Black Start Replacement RFP process:
 - 1) The upgraded Non-Black Start unit receives cost recovery for incremental black start equipment through Schedule 6A black start revenues. If the Non-Black Start Unit is also a Capacity Resource in RPM, it receives and retains RPM revenues as normal. Incremental black start equipment costs that are recovered through schedule 6A shall not be included in APIR for RPM.

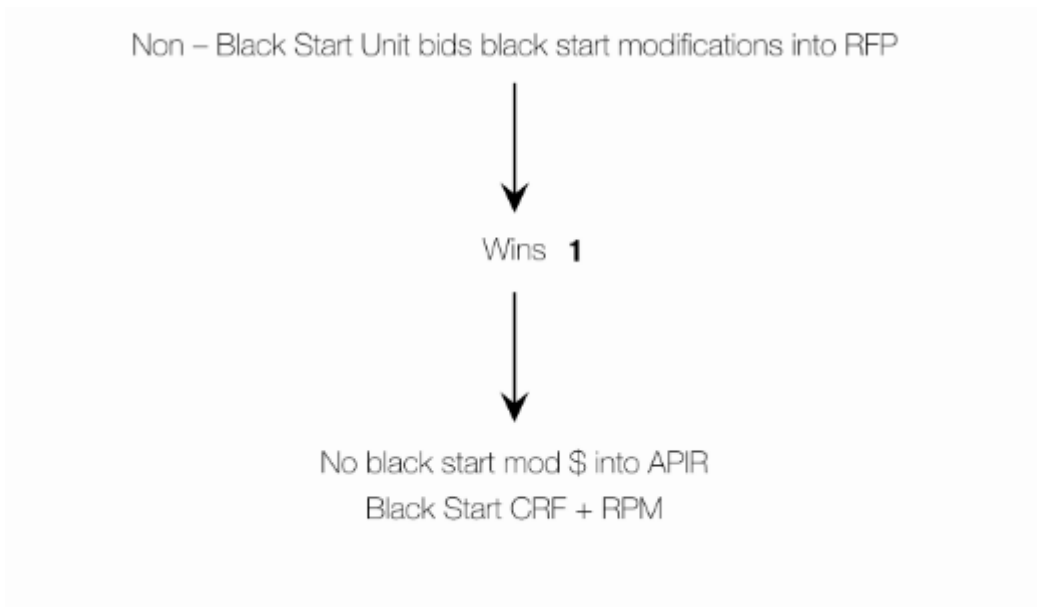


Figure 4: M14D Section 10.3.4c - Non BSU submits incremental costs to become Black Start and wins RFP.

- d. A new Black Start Capable Unit submits its construction costs and is the lowest evaluated bid Black Start Replacement RFP process:
- 1) If the new Black Start Capable Unit does not wish to participate as a Capacity Resource in the RPM market, it will be excused from the RPM must-offer requirement in Attachment DD for the length of their capital recovery period.
 - a. Construction costs will be recovered under the appropriate CRF rate in schedule 6A as the entirety of these costs would be considered to be solely necessary for the purposes of Black Start Service.
 - b. The new Black Start Capable unit that is not a Capacity Resources may recover any other incurred avoidable costs as defined in the ACR in Section 6.8 of Attachment DD required to allow the Incumbent BSU to provide Black Start Service as these costs would then be considered solely necessary for the purposes of Black Start Service.
 - 2) If the new Black Start Capable Unit chooses to voluntarily offer their capacity into a RPM BRAs or IAs, the construction costs that will be recovered through the CRF provisions of schedule 6A shall not be included in APIR for RPM or VOM for energy market offers. However, avoidable costs, as defined by Section 6.8 of Attachment DD, net of Expected Energy and Ancillary Service Revenues as defined in Attachment DD would be allowed in the Market Seller Offer Cap. If the new Black Start Capable unit clears in a RPM BRA or IA to become a Capacity Resource, or already has an existing obligations as a Capacity Resource:
 - a. If new Black Start Capable Unit clears in a RPM auction to become a Capacity Resource, or already has an existing obligations as a Capacity Resource, it will receive the greater of Black Start Revenues under the CRF provisions of per Schedule 6A less any cleared RPM auction revenues net of the ACR during the recovery period.
 - i. By definition, since non-capitalized avoidable costs are allowed in the RPM offer, the new Black Start Capable unit that clears in RPM will recover those avoidable costs through RPM rather than in Schedule 6A
 - ii. Recovery of construction costs under the CRF provisions of Schedule 6A will be offset by the “Net RPM Revenues” defined as RPM revenues less the Market Seller Offer Cap.

- b. To the extent RPM revenues exceed Black Start revenues that cover construction and avoidable costs, the new Black Start Capable unit would then be compensated under the non-CRF provisions of Schedule 6A for Black Start and retains all RPM revenues.
- 3) If the new Black Start Capable Unit chooses to voluntarily offer their capacity into a RPM BRAs or IAs, and it does not clear in a RPM BRA or IA to become a Capacity Resource:
 - a. For any Delivery Years for which the new Black Start Capable Unit does not clear an RPM Base Residual Auction (BRA) or Incremental Auction (IA) and is not already a committed Capacity Resource, construction costs will be recovered under the appropriate CRF rate in schedule 6A as the entirety of these costs would be considered to be solely necessary for the purposes of Black Start Service.
 - b. New Black Start Capable units that are not Capacity Resources may recover any other incurred avoidable costs as defined in the ACR in Section 6.8 of Attachment DD required to allow the new Black Start Capable Unit to provide Black Start Service as these costs would then be considered solely necessary for the purposes of Black Start Service.

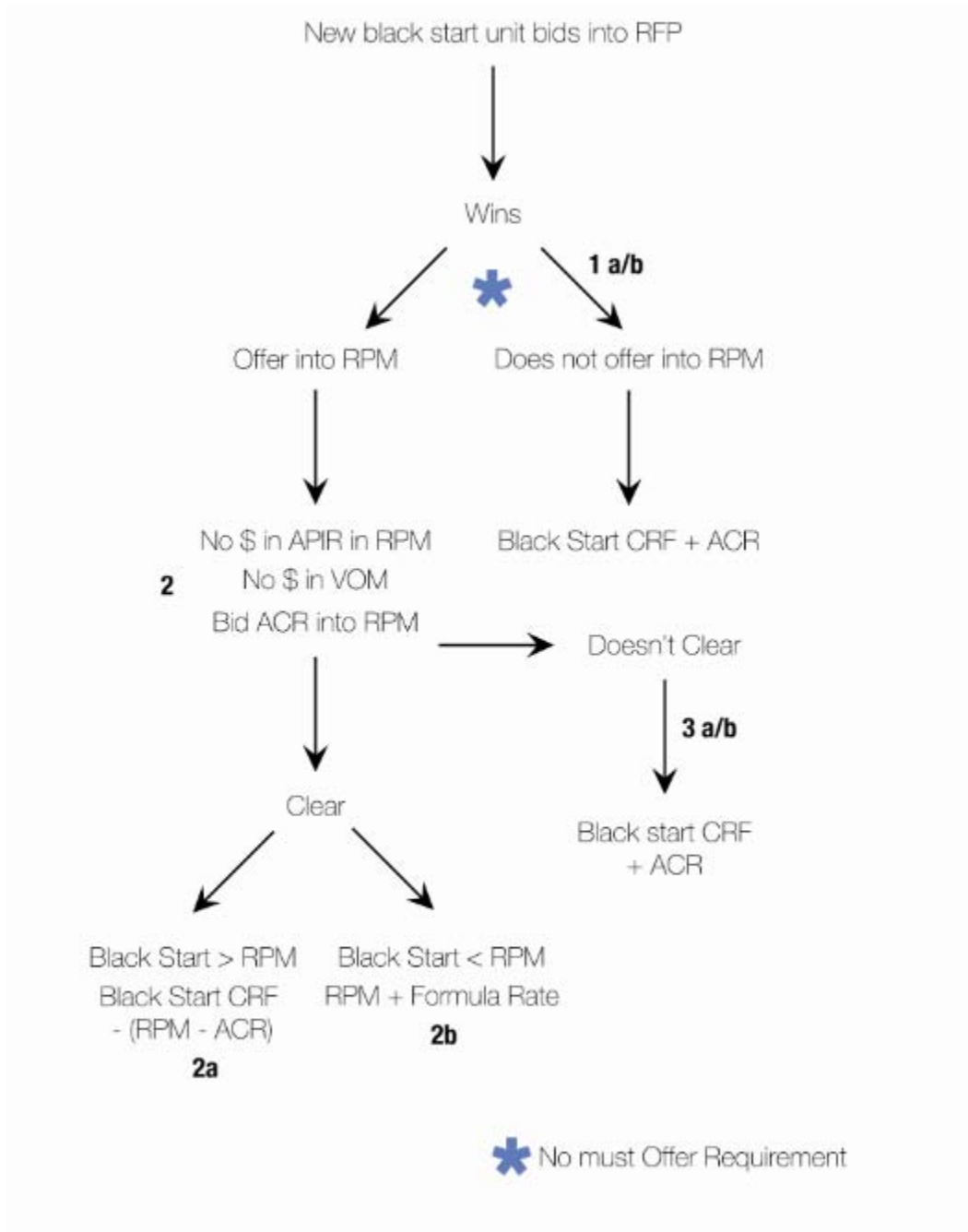


Figure 5: M14D Section 10.3.4d - Non BSU submits incremental costs to become Black Start and wins RFP.