

Behind the Meter Generation Education Existing Business Rules on Status Changes

Theresa Esterly

Sr. Lead Engineer, Markets Automation &
Quality Assurance

Markets Implementation Committee

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- Provide background information on Behind the Meter Generation
- Educate on existing business rules on status changes from BTMG (netting against load) to PJM market resource (and vice versa)
- Highlight areas in business rules that need further clarification

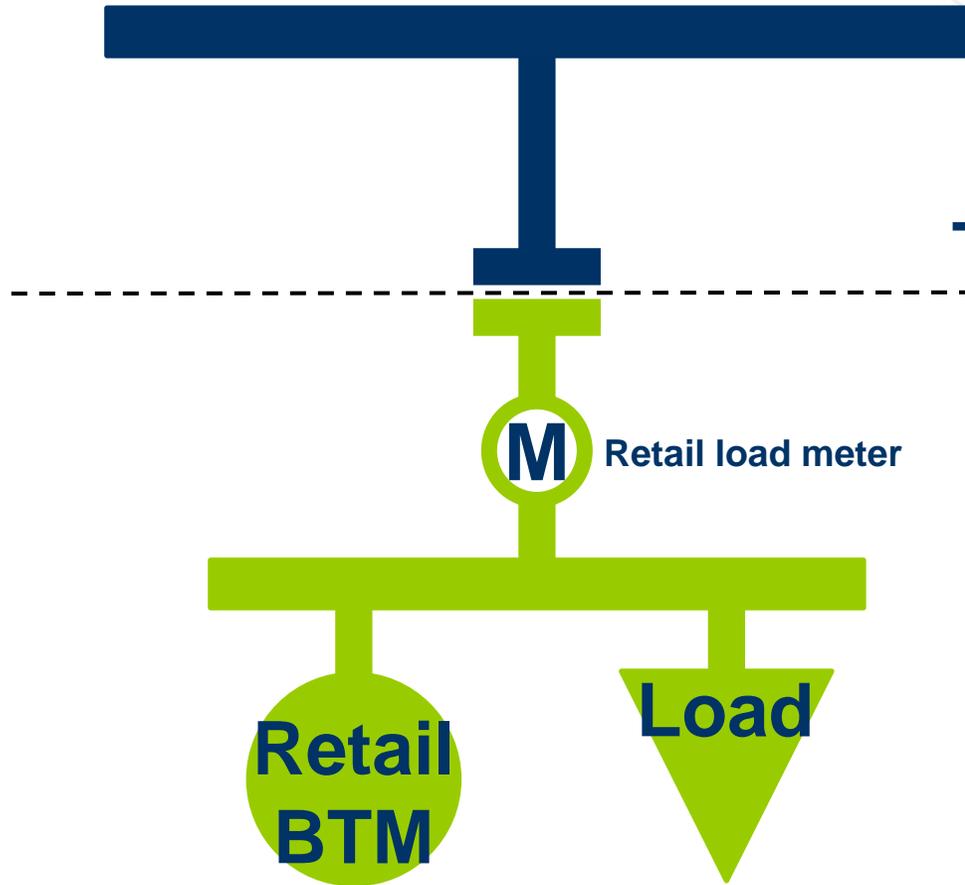
Generating unit that delivers energy to load without using the transmission system or any distribution facilities, unless permission to use such distribution facilities is granted from owner, lessee, or operator

At any time, does not include any portion of such unit's capacity designated as a Generation Capacity Resource

In any hour, does not include any portion of such unit's output that is sold to another entity for consumption at another electrical location or into the PJM Interchange Energy Market.

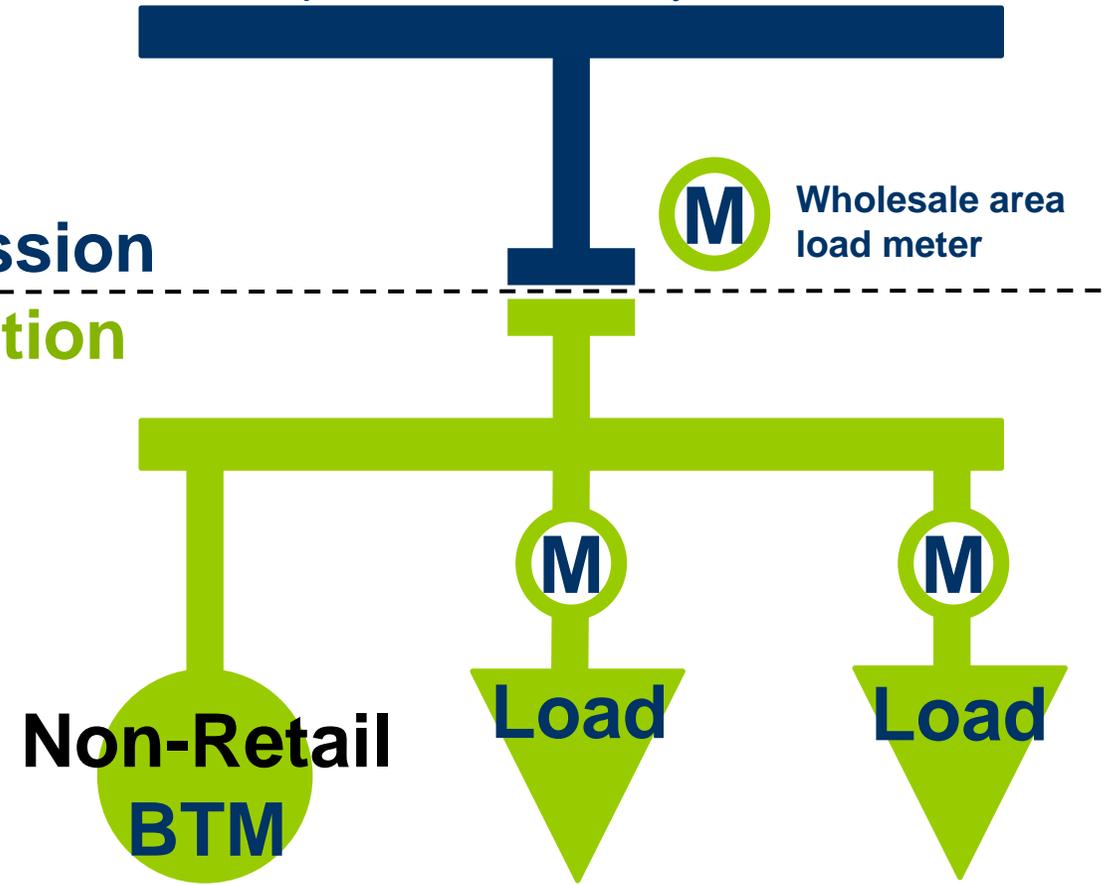
Retail BTM

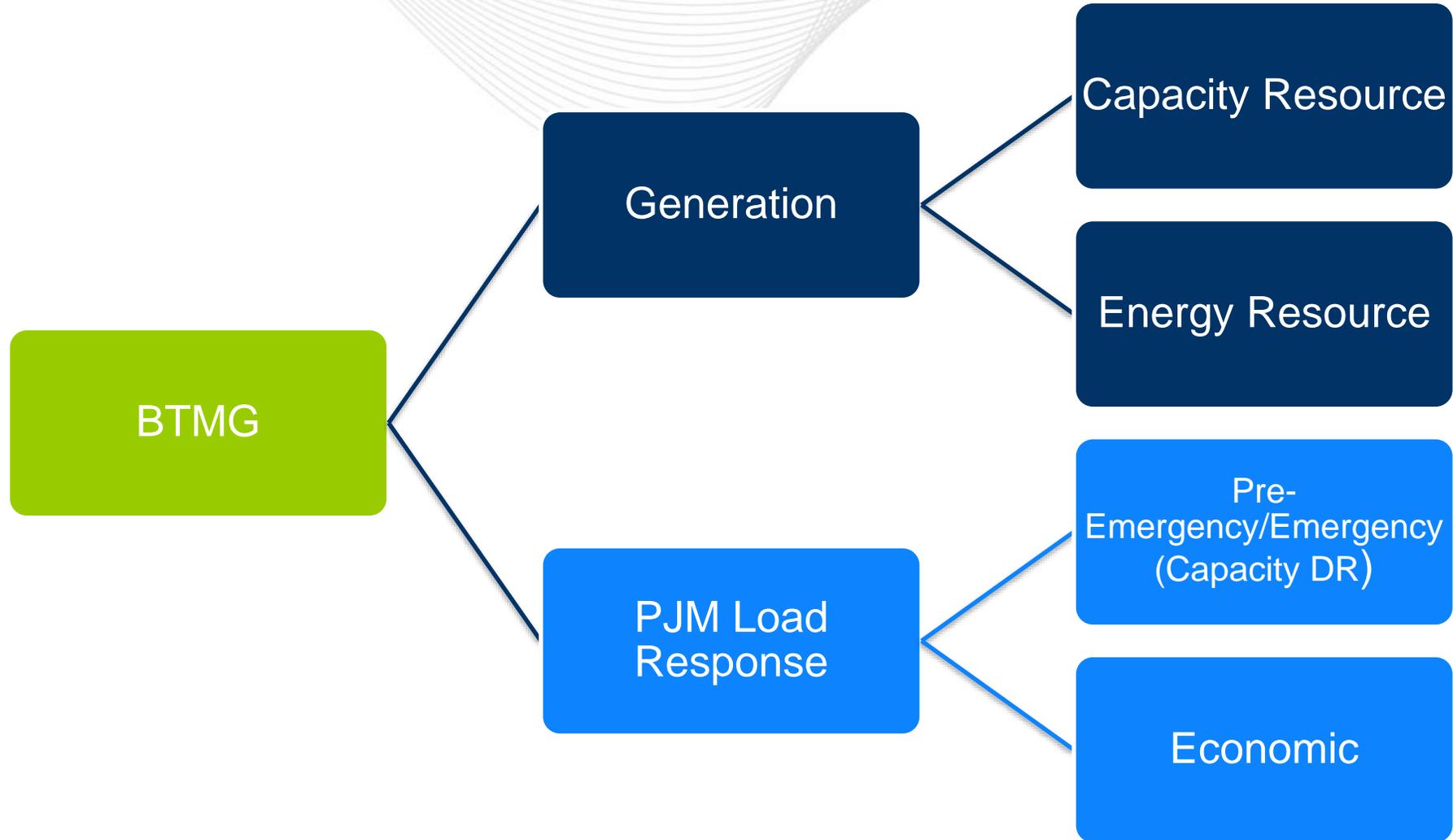
Serves load for one retail electricity customer.

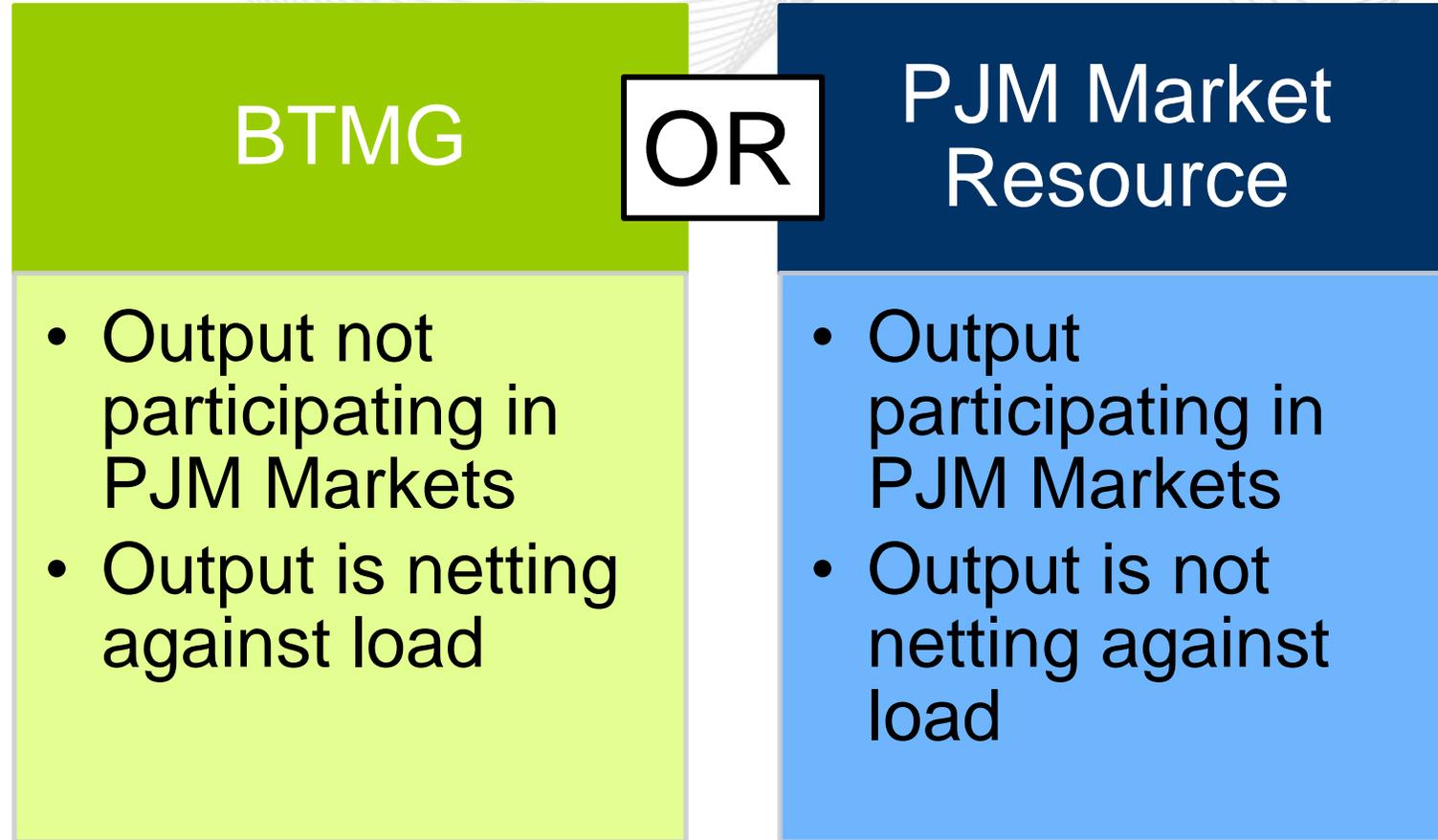


Non-Retail BTM

Used by EDC/Muni/Coop to serve load of multiple retail electricity customers.







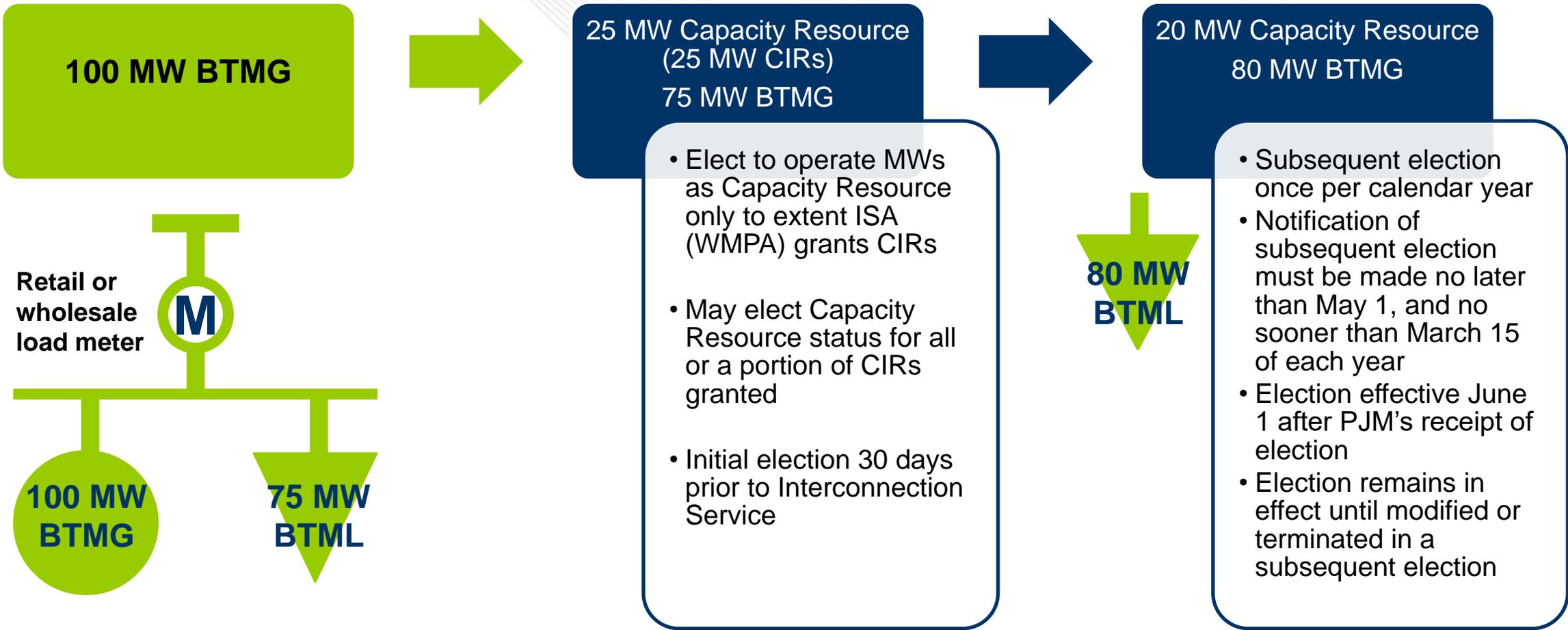
A MW of output is either operating as BTMG (netting against load) or as a PJM Market Resource.
A MW of output cannot be both operating statuses simultaneously.

Designate MWs as Generation Capacity Resource or Energy Resource

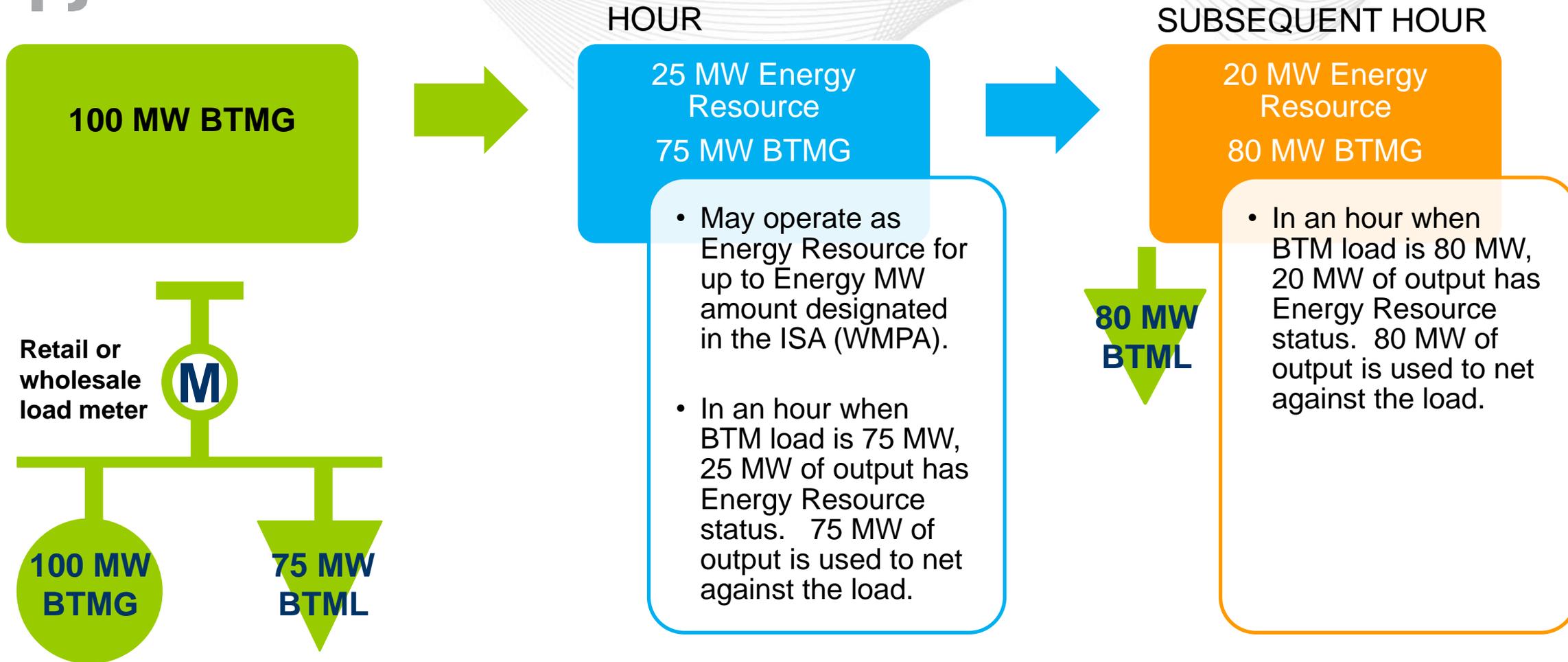
- All or portion of BTMG unit's capability may be designated in whole or part as Generation Capacity Resource or Energy Resource
- Must submit Generation Interconnection Request for portion of unit's output that will participate in PJM Markets
- Output of unit that is claimed as BTMG must stay behind the meter and cannot participate as Generation Capacity Resource or Energy Resource in PJM Markets
- Equipment must prevent power flow claimed as BTMG past the the Point of Interconnection meter or power flow claimed as Non-Retail BTMG onto the Transmission system

Manual 14G, Section 1.6

Operate MWs as Capacity Resource



Output MW has either Capacity Resource or BTMG status. Cannot have both statuses simultaneously.



Output MW has either Energy Resource or BTMG status. Cannot have both statuses simultaneously.

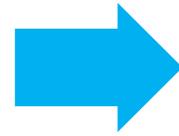
- Register in PJM Load Response program(s) under terms and conditions in effect at time the unit requests to participate in the program
- Delivery Year Pre-Emergency/Emergency registration submitted in advance of Delivery Year
- Economic registration can be submitted at any time
- Cannot inject output past the retail or wholesale area load meter

Operate MWs as PJM Load Response

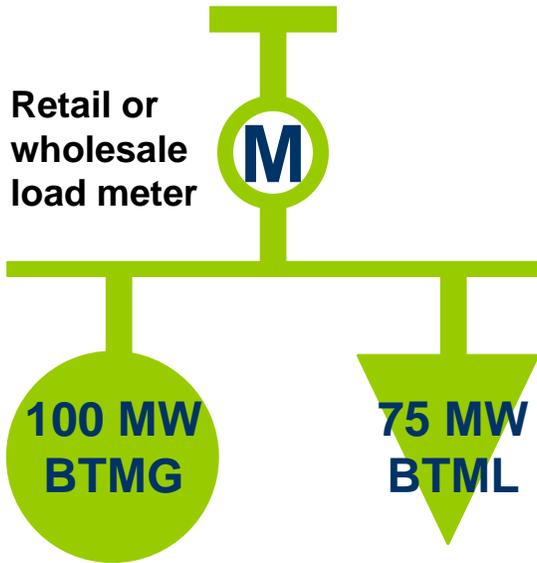
100 MW BTMG
(Normally outputs 50 MW)



HOUR
25 MW Load Response
50 MW BMTG
25 MW Not Operating



SUBSEQUENT HOUR
0 MW Load Response
75 BTMG
25 MW Not Operating



- May operate MWs as PJM Load Response if registered in PJM Load response program(s)
- Provide load response when dispatched for an emergency event or for economics.

- In hour when not dispatched for an emergency event or for economics, output may be used to net against load.

Output MW is either PJM Load Response or BTMG status. Cannot have both statuses simultaneously.

OATT, Part VI, Attachment O, Appendix 2, Section 2.5

- Generation Capacity Resource Election

Manual 14-D Generator Operational Requirements, Appendix A

- Behind the Meter Generation Business Rules, #11-23

- May elect all or a portion of a BTMG unit as Capacity Resource to extent Interconnection Service Agreement (Wholesale Market Power Agreement) grants CIRs
- Initial election no later than 30 days prior to commencement of Interconnection Service
- Subsequent elections may be made only once per calendar year
- Notify PJM of subsequent election no later than May 1, and no sooner than March 15, of each year
- Election effective June 1 following PJM's receipt of election
- Election remains in effect until the Generation Interconnection Customer modifies or terminates it in a subsequent election



- Clarify details of the election process in a PJM Manual
- Address if there is limit on amount of Capacity MWs (CIRs) or Energy MWs requested in a Generation Interconnection Request based on the BTM load claimed in such request.
- Address conflicts with subsequent election deadline and business rules on Removal of Generation Capacity Resource Status (M-18, Section 5.4.7)

11. If multiple generation units are located behind the meter, each unit can be designated as either a Capacity Resource or as BTMG on a unit specific basis or on a partial unit basis.



- Clarify that each unit can be designated to operate as either a Generation Capacity Resource or Energy Resource on a unit specific or partial unit basis
- Clarify that unit must submit a Generation Interconnection Request if it desires to be designated in whole or part as a Generation Capacity Resource or Energy Resource

12. A party may change all or a portion of a unit's capability from Capacity and/or Energy Resource status to BTMG status, or from BTMG status to Capacity and/or Energy Resource status (provided the generator has met the applicable requirements for Capacity Resource status), but cannot be used for both purposes simultaneously for a designated portion of a unit's capability. Any portion of a unit that has been qualified as a Capacity Resource is subject to the same requirements as any other PJM Capacity Resource. Because of the number of procedural requirements associated with changing to or from BTMG status, such changes shall be limited to once per year in accordance with the schedule set forth below.



- Clarify responsible "party"
- Clarity that Capacity Resource is "Generation Capacity Resource"

13. A Capacity Resource that changes to BTMG, or a new generator that requests BTMG status will be able to net its full installed capacity value for the first calendar year for transmission and the first Planning Period for capacity. The netting value for all succeeding years will be based on actual generator performance over the 5 CP and 1 CP days.



- Address if “Capacity Resource” was intended to apply to both “Generation Capacity Resource” and “Capacity Demand Resource”
- Address if rule was intended to apply to both retail and Non-retail BTMG
- Clarify the ability of unit to net its full installed capacity value applies in the determination of LSE’s NSPL or OPL value
- Clarify that full installed capacity value means full summer rated ICAP value
- Clarify any unit criteria that needs to be satisfied for a NSPL or OPL adjustment to be warranted

NSPL Adjustment

- Unit operated as Generation Capacity Resource during zonal 1CP hour
- New, in-service unit was not in-service during zonal 1CP hour

OPL Adjustment

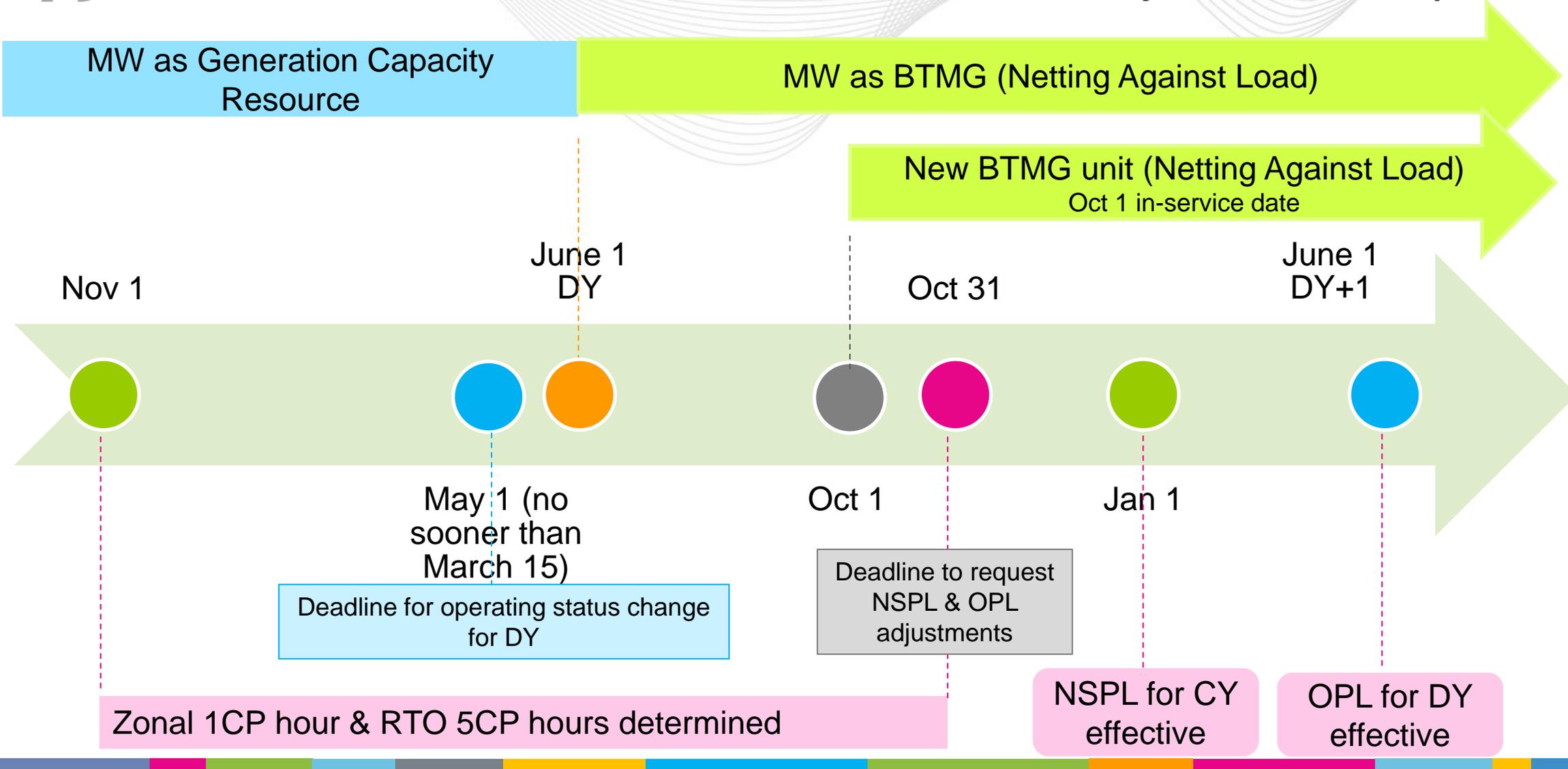
- Unit operated as Generation Capacity Resource during RTO 5CP hours
- New, in-service unit was not in-service during RTO 5CP hours

14. Requests for BTMG changes for transmission charges, black start service, and reactive service must be received by PJM by October 31. If the request is for a new BTMG with a scheduled in-service date from November 1 to November 30, documentation to support the in-service date must also be received by PJM by October 31. The related Network Service Peak Load adjustment will become effective the following January 1. The change shall remain in effect for a period no less than one calendar year.



- Add more details on the request process
- Document Member and PJM roles and responsibilities

Timetable requirements NSPL & OPL Adjustment Requests



15. Requests for BTMG changes for capacity obligations must be received by PJM by October 31. If the request is for a new BTMG with a scheduled in-service date from November 1 to November 30, documentation to support the in-service date must also be received by PJM by October 31. The related Obligation Peak Load adjustment will become effective the following June 1. The change shall remain in effect for a period no less than one Planning Period.



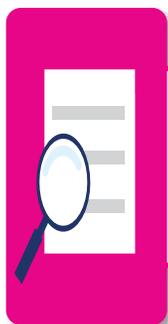
- Add more details on the request process
- Document Member and PJM roles and responsibilities

16. Requests for BTMG changes for energy-based ancillary service charges (i.e., those ancillary services charged on a MWh basis such as regulation, spinning and operating reserves) and for administrative fee charges can be made anytime. The change will become effective on the first of the month following PJM's communication that all logistical modifications (as may be required, for example, to metering or billing/settlement records) have been completed. The change shall remain in effect for a period no less than 12 months from the month the change becomes effective.



- Clarify the specific case(s) when this type of request is applicable
- Add more details on the request process
- Document Member and PJM roles and responsibilities
- Clarify the logistical modifications that need to be completed in PJM tools (e.g., InSchedule or Power Meter)

17. If a generator is granted BTMG status for one purpose (such as capacity), it must become BTMG for all other purposes described in Rules 14, 15 and 16 above, and in accordance with the timetables established in those rules. A generator that changes its status to BTMG pursuant to Rules 14 and 16 will be deemed to have given notice pursuant to Rule 15 to request BTMG status for capacity obligations for the Planning Period immediately following the Planning Period in which the Rule 14 and/or 15 BTMG request was made/effective, so as to comply with the notice requirements provided in Section 2.5.2 of the PJM Tariff.



Ensure correct business rule numbers are referenced and no deadline date conflicts exist

18. The timing requirements established in Rules 14, 15 and 16 are not affected by a transfer of ownership; BTMG status changes are only permitted according to the timetable described in Rules 14, 15 and 16 above.

19. If Non-Retail BTMG is subject to a reduced netting credit as described in Rule 63 below, that generator is ineligible to change its behind the meter status until the full effect of that reduction has been fully rolled out.



- Clarify the restriction in terms of a LSE being ineligible to request a downward adjustment to OPL or NSPL for a new Non-Retail BTMG unit when the LSE's wholesale area is subject to a reduced netting credit due to performance failure of other Non-Retail BTMG units in area
- Clarify the impact of an status change on Non-Retail BTMG performance obligations

20. If a Capacity Resource moves behind the meter, its injection rights will be treated the same as if the unit had been deactivated. Those injection rights are defined in Section 230 of the PJM Tariff, generally, and Section 230.3.3 specifically with respect to rights that apply if a generation resource is deactivated.



- Clarify that if unit changes status from Generation Capacity Resource to BTMG the unit's CIRs should be treated as if the unit was removed from Capacity Resource status as described in Section 230.3.3

21. BTMG may participate in all relevant PJM demand side response programs (e.g. the PJM Interchange Energy Market and the PJM Capacity Market (RPM)) under the terms and conditions in effect at the time the BTMG requests participation in the program, subject to Rule 22 below.



- Clarify the options for a “retail” and Non-Retail BTMG to participate as PJM load response
- Clarify any relevant limitations or restrictions on BTMG participating in PJM load response programs
- Clarify that a portion of the unit’s capability may participate as PJM load response
- Clarify impact of PJM load response participation on the unit’s ability to net against load
- Clarify the impact a status change may have on LSE load obligations or any Non-Retail BTMG resource obligations

22. A generator may be used for Load Management (LM) credit or it can be used to net against load as a BTM generator, but cannot be used for both purposes simultaneously. The election of BTM or LM status must remain in effect for an entire planning period.



- Clarify that BTMG unit may elect to participate as a Capacity Demand Resource in the PJM Capacity Market for a Delivery Year
- Clarify the add-back rules that prevent the unit from netting against the load in the determination of a LSE's OPL and receiving a credit in the PJM Capacity Market as a supply resource

23. A BTM generator may participate in the PJM Load Response programs under the terms and conditions in effect at the time the BTM generator requests to participate in the program.



Rule #23 is a duplicate of rule #21.

Appendix

“Behind The Meter Generation” shall refer to a generating unit that delivers energy to load without using the Transmission System or any distribution facilities (unless the entity that owns or leases the distribution facilities has consented to such use of the distribution facilities and such consent has been demonstrated to the satisfaction of the Office of the Interconnection); provided, however, that Behind The Meter Generation does not include (i) at any time, any portion of such generating unit’s capacity that is designated as a Generation Capacity Resource, or (ii) in any hour, any portion of the output of such generating unit that is sold to another entity for consumption at another electrical location or into the PJM Interchange Energy Market.

“Non-Retail Behind The Meter Generation” shall mean Behind the Meter Generation that is used by municipal electric systems, electric cooperatives, and electric distribution companies to serve load.

2.5 Election by Behind The Meter Generation: In the event that a Generation Interconnection Customer's Customer Facility is Behind The Meter Generation, the Generation Interconnection Customer may elect from time to time, subject to the terms of this section, whether to operate all or a portion of its Customer Facility's generating capacity as a Capacity Resource under the Tariff and the Operating Agreement.

2.5.1 Capacity Resource Election: The Generation Interconnection Customer may elect to operate all or a portion of its Customer Facility as a Capacity Resource only to the extent that the Interconnection Service Agreement grants Capacity Interconnection Rights. Such an election may include all or any portion of the Customer Facility's capacity for which Capacity Interconnection Rights have been granted.

2.5.2 Timing and Duration of Election: The Generation Interconnection Customer shall make an initial election under this section no later than 30 days prior to the commencement of Interconnection Service. Thereafter, the Generation Interconnection Customer may make the election authorized by this Section 2.5 only once in each calendar year and must notify Transmission Provider of such an election no later than May 1, and no sooner than March 15, of each year. Each such election shall be effective commencing on June 1 following Transmission Provider's receipt of notice of the election. An election under this Section 2.5 shall remain in effect unless and until the Generation Interconnection Customer modifies or terminates it in a subsequent election made in accordance with the terms of this section.

5.4.7 Removal of Generation Capacity Resource Status

A Capacity Market Seller seeking to remove Capacity Resource status from a Generation Capacity Resource shall submit a preliminary and final written request to PJM and the IMM, along with supporting data and documentation, in accordance with Tariff, Attachment DD, section 6.6(g).

- Requests shall be submitted to PJM via email to the rpm_hotline@pjm.com and to the IMM through the MIRA application.
- Preliminary requests must be submitted no later than September 1 prior to a BRA, and 240 days prior to an IA. Final requests must be submitted no later than December 1 prior to a BRA, and 120 days prior to an IA.
- The preliminary request must provide the following information:
 - Identification of the Generation Capacity Resource and MW
 - The beginning Delivery Year in which the Seller is seeking to remove Capacity Resource status from the resource
 - Supporting data and documentation indicating the reasons and conditions upon which the Seller is relying in its analysis to remove Capacity Resource status from the resource

- PJM will post the preliminary and final requested MW of Capacity Resource status changes on an aggregate basis by Zone and LDA that comprises a subset of a Zone.

A request will not be accepted for a resource that holds a capacity commitment during the time period in which it seeks to no longer be a Capacity Resource.

The IMM will analyze the effects of removing Capacity Resource status with respect to potential market power concerns and notify the Seller and PJM of its determination no later than 90 days prior to the applicable RPM auction. Subsequently, PJM shall provide its final determination no later than 65 days prior to the applicable RPM auction.

PJM Planning will be notified of requests and final approvals to incorporate the loss of Capacity Resource status in the appropriate planning models and reliability studies.

Once the Capacity Resource status is removed from a Generation Capacity Resource:

- The generation unit will no longer qualify as an Existing Generation Capacity Resource, and as such, will be removed from the Capacity Resource model and no longer eligible to offer in RPM auctions or take on a capacity commitment.
- The Capacity Interconnection Rights associated with the resource shall be subject to termination in accordance with the rules described in Tariff, Part VI, section 230.3.3.
 - The relevant ISA or WMPA of a Generation Capacity Resource that is removed of its Capacity Resource status will be amended to reflect any such removal of Capacity Interconnection Rights.

Facilitator:

Lisa Morelli,
Lisa.Morelli@pjm.com

Secretary:

Nick DiSciullo,
Nicholas.DiSciullo@pjm.com

SME/Presenter:

Theresa Esterly,
Theresa.Esterly@pjm.com

Market Suspension



Member Hotline

(610) 666 – 8980

(866) 400 – 8980

custsvc@pjm.com