



# Behind-the-Meter Generation Business Rules

*Effective February 1, 2006*

## **Definition and Purpose of Behind-the-Meter Generation (BtM)**

1. The purpose of these rules is to permit market participants operating Behind-the-Meter Generation (BtM) to receive the benefit such generation provides. This benefit is recognized by allowing such generation to net for the purposes of calculating transmission, capacity, ancillary services, and administrative fee charges.
2. The netting rules for behind the meter generation are set forth in the PJM Open Access Transmission Tariff ("PJM Tariff"), the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. ("Operating Agreement"), and the Reliability Assurance Agreement Among Load Serving Entities in the MAAC Control Zone ("RAA"), PJM West Reliability Assurance Agreement Among Load Serving Entities In the PJM West Region ("West RAA"), and Reliability Assurance Agreement Among Load Serving Entities In the PJM South Region ("RAA South"). These documents filed with the Federal Energy Regulatory Commission will take precedence in the event of any conflict or ambiguity between these rules and the filed documents.

## **Eligibility for BtM Netting**

3. These rules apply to behind-the-meter generation used by end-use customers, municipal electric systems, electric cooperatives, and electric distribution companies to serve load. The load must be located at the same electrical location as the BtM Generation, such that no transmission or distribution facilities are utilized to transmit energy from the BtM generation to the load. An exception to the prohibition on use of distribution facilities rule is allowed, in cases where permission to use the requisite distribution facilities has been obtained from the owner, lessee, or operator of such facilities. Such permission must be submitted in writing to PJM from the owner, lessee or operator of such distribution facilities.
4. BtM netting is only available to entities that have Network Integration Transmission Service agreements with PJM.
5. These business rules do not supersede any elements of an existing retail service agreement or standby service agreement between a party and either the party's Load Serving Entity or the Electric Distribution Company to which the associated load is connected.

## **BtM Netting – General Rules**

6. BtM does not include at any time, any portion of a generating unit's capacity that is designated as a Capacity Resource; or in any hour, any portion of the output of



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such generating unit that is sold to another entity for consumption at another electrical location or into the PJM Interchange Energy Market.

7. Generation Owners shall not be eligible to receive payments, pursuant to Schedule 2 of the PJM Tariff, for reactive service for portions of generating units upon becoming a BtM Generator. A BtM Generator of this sort will cooperate with PJM in making any regulatory filings that may be required to implement this rule.
8. The need for metering for small BtM generators that are either less than 10 MW for a single unit, or that total less than 10 MW when the units are added together, will be treated on a case-by-case basis, depending on local operational security needs. Generally, these units will not require metering for operational security purposes. Rules for metering are detailed in the *PJM Manual for Generator Operational Requirements (M-14D)*.
9. BtM that is 10 MW or greater (or has been identified as requiring metering for operational security reasons) must have both revenue metering and telemetering for operational security purposes. Small BtM generators (generators that are individually rated less than 10 MW) on the same site, that total more than 10 MW when added together, may be aggregated behind the meter and metered as a single unit to meet this requirement should PJM require metering for the aggregate generation. . Rules for metering are detailed in the *PJM Manual for Generator Operational Requirements (M-14D)*.
10. BtM Generation will be recognized in PJM transmission and generation adequacy planning models. Load and generation will be modeled separately where practicable.
11. If multiple generation units are located behind the meter, each unit can be designated as either a Capacity Resource or as a BtM generator on a unit specific basis or on a partial unit basis.
12. A party may change all or a portion of a unit's capability from Capacity and/or Energy Resource status to BtM status, or from BtM 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 behind the meter status, this change can be accommodated one time per year and pursuant to the timing schedule set forth below.



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13. A Capacity Resource that moves behind the meter or a new generator that requests behind the meter 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.
14. Requests for BtM changes for transmission charges, black start service, and reactive service must be received by PJM by December 1 and will become effective the following January 1. The change shall remain in effect for a period no less than one calendar year.
15. Requests for BtM changes for capacity obligations must be received by PJM by May 1 and will become effective the following June 1. The change shall remain in effect for a period no less than one planning period.
16. Requests for BtM 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.
17. If a generator is granted BtM status for one purpose (such as capacity), it must be or proceed to become BtM for all other purposes according to the timetable described in Rules 14, 15 and 16 above. A generator that changes its status to BtM for purposes described either in Rules 14 and 16 above will be deemed, on the next May 1<sup>st</sup> to have re-given notice of its desire to become a BtM resource for capacity purposes, under Rule 15 above, so as to comply with the notice requirements provided in Section 52.5.2 of the PJM Tariff.
18. A generator's behind the meter status is not eligible to change due to a transfer of ownership. BtM status changes are only permitted according to the timetable described in Rules 14, 15 and 16 above.
19. If a non-retail BtM generator is subject to a reduced netting credit as described in Rule 34 below, that generator is ineligible to change its behind the meter status until the effect of that reduction has been fully rolled out.
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 45.3 of the PJM Tariff.



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## **Participation in Load Management Programs**

21. A BtM generator may participate in other Demand Side Response/Management Programs that may be developed by PJM under the terms and conditions in effect at the time the BtM generator requests participation in the program.
22. A generator may be used for Active Load Management (ALM) 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 ALM status must remain in effect for an entire planning period.
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.

## **Generation Netted Against Load**

24. The load associated with BtM generation must have a Load Serving Entity (LSE). The LSE will be responsible for supplying energy, capacity, ancillary services and transmission for that portion of the load not supplied by the BtM, including load normally supplied by the generator when the generator is not running.
  - a. The capacity obligation for the load will be based on the average of the net load at the site(s) (gross load minus operating BtM, not to be less than zero) at the time of the Zone's transmission peak (1CP) during the five (5) coincident peak hours, in accordance with the 5CP methodology in effect for the Zone.
  - b. Network Integration Transmission Service charges will be calculated as the net load at the site(s) (gross load minus operating BtM, not to be less than zero) at the time of the Zone's transmission peak (1CP).
  - c. Regulation and Spinning Reserve obligations will be calculated based on the net MWh of load at the site (hourly gross load minus operating BtM Generation, not to be less than zero) in real time.
  - d. Day-Ahead Operating Reserves will be charged based on the net amount of load at the site(s) that clear(s) in the PJM Day-Ahead energy market.
  - e. Balancing Operating Reserve deviations will be measured based on the net change of both the BtM Generator and the load between day-ahead and real-time.



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- f. PJM Schedule 9 administrative fees based on real time load and generation will be charged on the net value of load or generation as measured in real time.
- 25. Under this “netting” arrangement, the EDC or LSE will be responsible for reporting both the load and generation information to PJM for use in the load forecast for generators for which metering is required for operational security purposes. The EDC may need to obtain this information from the LSE.
- 26. For wholesale market participation, the interconnection requirements will be publicly available and, in cases where parallel operation will exist with the distribution or transmission system, determined by the EDC in accordance with applicable state or other jurisdictional requirements. The generator will be evaluated using the PJM interconnection process only if it is involved in a wholesale transaction.

## **BtM Netting – Non-Retail Participation**

- 27. Non-Retail BtM Generation netting provisions apply to behind the meter generation used by municipal electric systems, electric cooperatives, and EDCs to serve load, provided that, if distribution facilities are used to deliver energy from Non-Retail BtM to load, then permission to use such distribution facilities has been obtained from the owner, lessee, or operator of such distribution facilities. Such permission shall be submitted to PJM in writing from the owner, lessee or operator.
- 28. All entities using the Non-Retail BtM option must have a Network Integration Transmission Service agreement with PJM.
- 29. Non-Retail BtM netting is subject to a threshold amount. The Non-Retail Threshold is 1,500 MW for calendar year 2006 for transmission charges, black start service, and reactive service, and for the planning year 2006/2007 for capacity obligations. Each year thereafter, the Non-Retail Threshold will be increased based on PJM RTO load growth. PJM RTO load growth will be determined based on the most recent forecasted weather-adjusted coincident summer peak divided by the weather-adjusted coincident peak for the previous summer. After applying the load growth factor, the Non-Retail Threshold will be rounded to the nearest whole MW, and that rounded number will be the Non-Retail Threshold for that current year or Planning Period and the base amount for calculating the Non-Retail Threshold for the succeeding year or Planning Period.



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30. PJM shall communicate a change in the Non-Retail Threshold through an email to all BtM generators and posting on the PJM website.
31. If the amount of Non-Retail BtM netting exceeds the Non-Retail Threshold, the Non-Retail BtM eligible for netting shall be prorated back to the Non-Retail Threshold. In such instance, the amount of Non-Retail BtM Generation eligible for netting by an entity shall be the product of its total Non-Retail BtM Generation multiplied by the ratio of the Non-Retail Threshold divided by the total amount of the Non-Retail BtM Generation in the PJM RTO (not to exceed 3,000 MW). [Example: if the Non-Retail Threshold is 1,500 and the total amount of Non-Retail BtM netting in the PJM RTO reaches 2,000, then 75 percent of an entity's Non-Retail BtM Generation would be eligible for netting.]
32. The total amount of Non-Retail BtM Generation that will be eligible for netting under the BtM provisions is capped at 3,000 MW. If this cap is reached, no additional Non-Retail BtM Generation will be eligible for netting. Furthermore, within six months of reaching the cap, PJM shall file with the FERC to justify either continuation of the existing BtM rules (including any expansion of the rules to include additional MW) or any change to the rules.
33. Each calendar year, netting Non-Retail BtM Generation resources shall be required to operate during the first ten occurrences of Maximum Emergency Generation (MEG) conditions in the zone in which the resource is located. This obligation applies to an MEG condition called for either generation or transmission emergencies. Notice of an MEG event shall be communicated through the PJM all-call system.
34. For each Maximum Emergency Generation condition in which a netting Non-Retail BtM resource is not on a scheduled outage but fails to operate, in whole or in part, the netting associated with that resource for purposes of charges for transmission service, reactive service, black start service, and capacity obligations will be reduced by ten percent of the amount of megawatts the resource failed to produce. The amount of megawatts that the resource failed to produce will be the difference between its full netting credit and its megawatt average output over the MEG period. [Example: if a netting Non-Retail BtM resource is required to operate with an output of 100 MW during a Maximum Emergency Generation condition, but only operates to a level of 75 MW, in the next year, the eligible netting from that resource will be reduced by 2.5 MW  $[(100 - 75) \times .10]$ ].
35. Any reductions in netting will be applied in the succeeding calendar year with regard to transmission service, reactive service, and black start service, and the succeeding planning year with regard to netting related to capacity obligations.



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36. A generator that moved behind the meter is not eligible to move back in front of the meter until the impact of the reduced netting penalty described in Business Rule 34 above has been rolled out.
37. Non-Retail BtM generation may not schedule a unit outage in the months from June through September.

## **BtM Adjustment Process**

38. Parties seeking a BtM adjustment of any type must notify PJM at [BTMG@pjm.com](mailto:BTMG@pjm.com). The BtM request must contain the following information:
  - Contact name, company, email address and phone number
  - Name of generation unit(s) and EIA plant and unit identification numbers
  - Summer net dependable rating of the unit(s)
  - Name of the applicable Load Serving Entity and Electric Distribution Company
  - If applicable, written approval from the owner, lessee or operator of a distribution facility used to deliver energy from the BtM generator to load
  - For non-retail BtM generation, the phone number to be added to the PJM all-call list
39. PJM will respond to the request and coordinate data and information flow between all affected parties (customer, LSE, EDC, etc.) to determine eligibility, peak load adjustments, etc.