

Appendix A: Behind the Meter Generation Business Rules

Definition and Purpose of Behind-the-Meter Generation (BtMG)

1. The purpose of these rules is to permit market participants operating Behind-the-Meter Generation (BtMG) to receive the associated benefits. These benefits are 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 BtMG 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 PJM Region (“RAA”). 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 BtMG 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 BtMG, such that no transmission or distribution facilities are utilized to transmit energy from the BtMG 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. BtMG 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 existing retail service agreements or standby service agreements between an entity and its Load Serving Entity or the Electric Distribution Company to which the associated load is connected.

BtM Netting – General Rules

6. BtMG 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 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. Generation Owners subject to this rule shall cooperate with PJM in making any regulatory filings that may be required to implement this rule.

8. The need for metering for small BtMG will be treated on a case-by-case basis, depending on local operational security needs. For the purposes of this rule, small BtMG shall be individual generating units that are less than 10 MW, or multiple generating units that are collectively less than 10 MW. 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. BtMG 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. Single unit small BtM generators that collectively total more than 10 MW, 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). For telemetry and metering to be communicated to PJM the unit must be modeled in the PJM Energy Management System. For modeling rules to fulfill this requirement, please refer to Manual 3A, Section 1.2.1.

10. BtMG 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 BtMG 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 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.

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.

14. Requests for BtMG 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 BtMG changes for capacity obligations must be received by PJM by December 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 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.

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.

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 34 below, that generator is ineligible to change its behind the meter status until the full 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 230 of the PJM Tariff, generally, and Section 230.3.3 specifically with respect to rights that apply if a generation resource is deactivated.

Participation in Load Management Programs

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.

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.

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 BtMG 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 BtMG. For the purposes of this rule, the load not supplied by the BtMG shall include load normally supplied by the BtMG during periods when the BtMG is not operating.

- 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 BtMG, 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 BtMG, 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 BtMG, 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 BtMG and the load between day-ahead and real-time.
- 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 and/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 and both parties are required to cooperate to ensure PJM receives the information.

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 BtMG 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 BtMG 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 BtMG option must have a Network Integration Transmission Service agreement with PJM.

29. Non-Retail BtMG netting is subject to a threshold amount. The Non-Retail BtMG threshold is 1,500 MW for calendar year 2006 for transmission charges, black start service, and reactive service, and for the 2006/2007 Planning Period for capacity obligations. Each year thereafter, the Non-Retail BtMG 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 BtMG threshold will be rounded to the nearest whole MW, and that rounded number will be the Non-Retail BtMG threshold for that current year or Planning Period and the base amount for calculating the Non-Retail BtMG threshold for the succeeding year or Planning Period.

30. PJM shall communicate a change in the Non-Retail BtMG threshold through an email to all BtM generators and posting on the PJM website.

31. If the amount of Non-Retail BtMG netting exceeds the Non-Retail BtMG threshold, the amount of Non-Retail BtMG shall be prorated back to the threshold. In such instance, the amount of Non-Retail BtMG eligible for netting by an entity shall be the product of its total Non-Retail BtMG multiplied by the ratio of the Non-Retail BtMG threshold divided by the total amount of the Non-Retail BtMG in the PJM RTO (not to exceed 3,000 MW). [Example: if the Non-Retail BtMG threshold is 1,500 and the total amount of Non-Retail BtMG netting in the PJM RTO reaches 2,000, then 75 percent of an entity's Non-Retail BtMG would be eligible for netting.]

32. The total amount of Non-Retail BtMG eligible for netting under the BtMG provisions is capped at 3,000 MW. If this cap is reached, no additional Non-Retail BtMG 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 BtMG rules (including any expansion of the rules to include additional MW) or any change to the rules.

33. Each calendar year, netting Non-Retail BtMG 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 MEG condition in which netting Non-Retail BtMG 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, which is the product of the following calculation: $[(100 - 75) \times .10]$].

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 Period with regard to netting related to capacity obligations.

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 Rule 34 above has been rolled out.

37. Non-Retail BtMG may not schedule a unit outage in the months from June through September.

BtM Adjustment Process

38. Parties seeking a BtMG adjustment of any type must notify PJM at BTMG@pjm.com. The BtMG 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.

Transmission Owner BtMG Reporting and Communication Process

40. PJM will maintain a list of municipal electric systems, electric cooperatives and electric distribution companies by transmission zone which will be verified by Transmission Owners on an annual basis.

41. PJM will provide each Transmission Owner with a list of BtMG facilities greater than 1 MW located within the relevant transmission zone, delineated by municipal electric system, electric cooperative and/or electric distribution company as determined by PJM's examination of EIA forms or other available public information. To the extent that the Transmission Owner holds or after reasonable efforts can obtain information, the Transmission Owner will then provide PJM the necessary information, defined below in this section, to determine the impact of BtMG during a manual load dump event or other emergency situations on an annual basis. Municipal electric system, electric cooperative and/or electric distribution company will coordinate with Transmission Owner to provide the necessary information, defined below in this section, for BtMG located in their area upon request by the Transmission Owner.¹ If the Transmission Owner is unable after reasonable diligence to provide the information defined below in this section, the Transmission Owner will inform PJM. PJM will include the Transmission Owner verified BtMG information in the Post Contingency Local Load Relief Warning ("PCLLRW") tool or other tool as applicable. Transmission Owner will provide the following information² for each BtMG and as defined in Manual 3A, Appendix D:

- PJM Transmission Substation - Electrically connected Transmission Substation PJM 8 character EMS name.
- Voltage (kV) - Voltage (PJM EMS terminal voltage at high side of load transformer). If connected at distribution system then this should be the high side voltage at PJM interconnection facility.
- PJM equipment name – Official PJM name for equipment (transformer, line, loads) PJM 8 character.

42. To the extent that the Transmission Owner holds or after reasonable efforts can obtain information, Transmission Owner may provide additional or updated information for BtMG facilities (i.e., contact information, typical operational mode, start up time, etc.) on the list or add BtMG facilities to the list as appropriate. Transmission Owner may also review and update the BtMG information more frequently than on an annual basis. PJM will maintain confidentiality of all information provided by Transmission Owner and will only release such information under conditions governed by Operating Agreement, section 18.17.

43. Transmission Owner may coordinate with BtMG facility interconnected to the transmission system, or through the relevant electric distribution utility, during expected prolonged emergency load dump/shed or as otherwise necessary to help mitigate a grid emergency. As BtMG facilities do not participate in the wholesale energy market, any request to operate for the purpose of helping to mitigate a wholesale market issue is on a voluntary basis at the discretion of the BtMG

¹ If a Municipal electric system, electric cooperative, electric distribution company or affiliated transmission company is not a PJM member, and such company does not cooperate with the Transmission Owner's request to provide the information described above, the Transmission Owner will provide such information to the extent it is reasonably available.

² If BtMG is connected to more than one transmission substation then Transmission Owner will provide up to 3 connected transmission substations as needed.

owner. Any request to operate to mitigate a wholesale market issue will be communicated to the BtMG as a voluntary request at the discretion of the BtMG owner.