

## ATTACHMENT M-2 (BGE)

### Determination of Capacity Peak Load Contributions, Network Service Peak Load and Hourly Load Obligations

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#### PURPOSE

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This document outlines the process by which BGE determines Capacity Peak Load Contributions, or “PLCs”, Network Service Peak Loads, or “NSPLs”, and Final Hourly Load Obligations for customers and subsequently Load Serving Entities (“LSEs”) serving load within the BGE Electric Distribution Company (“EDC”) Zone (the “BGE Zone”), a zone located entirely within the PJM Regional Transmission Organization (RTO) footprint.

Attachment M-2 does not amend or replace any existing contracts or agreements between BGE and any LSE.

Capitalized terms used in the Attachment M-2 have the meaning given them under the provisions of the PJM Open Access Transmission Tariff unless otherwise defined herein.

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#### CAPACITY (PLC) AND TRANSMISSION (NSPL)

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#### OVERVIEW

On a monthly basis, BGE calculates and updates load profiles for each customer segment based on a continuous statistical sampling of hourly metered data. Also on a monthly basis, BGE calculates usage factors as the ratio of a customers’ monthly billed energy to the customer segment average profiled energy.

Once complete for the months containing peak hours, BGE then calculates PLCs and NSPLs for all accounts. BGE then scales these preliminary values up or down, when submitting to PJM, such that:

- **PLCs** – The sum of all individual customer PLCs equals the normalized peak load target allocated to the BGE zone as determined by PJM.
- **NSPLs** – The sum of all individual customer NSPLs equals BGE’s metered zonal load at the time of the zone’s highest transmission peak value (as determined by PJM).

BGE then aggregates the resulting PLC and NSPL values by LSE and transmits to PJM. BGE subsequently provides PJM with updated aggregations on a daily basis.

## **ANNUAL CALCULATION OF CAPACITY PEAK LOAD CONTRIBUTIONS (PLCS)**

BGE calculates individual PLCs based on normal peak load conditions and adjusts all values to include transmission and distribution losses. The PLCs calculated are effective from June 1st of the following calendar year through May 31st of the subsequent calendar year, in alignment with PJM planning periods. For the purposes of these procedures, BGE considers the first day of summer to be June 1st and the final day to be September 30th.

### **1. CALCULATE THE UNRECONCILED PEAK LOADS**

The initial peak load, for each of the five days coincident with the highest PJM system peak hours, based on each profiled customer class and interval metered account is determined. Loss factors are applied to determine the five hourly unreconciled system peak loads.

a. Interval Metered Accounts—peak load is the actual measured account data including an “add-back” of energy curtailed as a result of load management initiatives or restrictions as identified by PJM.

b. Non Interval Metered Accounts—the average peak load is determined using a BGE statistical sample for each profiled customer class. Peak load is allocated to each account in the customer class by applying an account-specific usage factor, represented by the ratio of metered usage to average profiled usage.

### **2. CALCULATE RECONCILED PEAK LOADS**

The unreconciled peak loads are then scaled to BGE’s total zonal load, as determined by PJM, for each of the five hours. The imbalance is computed and apportioned to each interval metered account and each profiled class in proportion to its unreconciled load.

### **3. CALCULATE THE PROFILED SEGMENT WEIGHT AND OBLIGATION FACTOR FOR EACH PROFILED CLASS**

The unreconciled peak loads are then scaled to BGE’s total zonal load, as determined by PJM, for each of the five hours. The imbalance is computed and apportioned to each interval metered account and each profiled class in proportion to its unreconciled load.

a. Profiled segment weight for monthly metered customers—the sum of the account specific usage factors for each monthly metered profiled class.

b. Profiled segment weight for demand metered customers—the sum of the account specific billed demands for each demand billed profiled class.

- c. Obligation factor—the reconciled peak load divided by the profiled segment weight for each profiled class
4. CALCULATE THE PRELIMINARY INDIVIDUAL ACCOUNT LEVEL PLCS
    - a. Interval Metered Accounts— average of the five hourly reconciled peak loads is the preliminary account PLC.
    - b. Non Interval Metered Accounts— the hourly PLC is the product of the obligation factor for the profiled class and account specific usage factor. The average of the five hourly PLCs is the preliminary account PLC.
  5. CALCULATE FINAL WEATHER ADJUSTED ACCOUNT PLC

Weather normalization scaling factors are determined for each customer class and applied to the preliminary PLCs.

New accounts, absent the availability of more certain load information, are assigned a PLC based on the average default value calculated for the associated customer’s rate class and load profile.

### **ANNUAL CALCULATION OF NETWORK SERVICE PEAK LOAD**

BGE uses the same PLC calculation method above (excluding step 5 for weather adjustment) for the NSPL calculations with a restriction adjustment to account for load impacts associated with Active Load Management (ALM). The NSPLs calculated will be effective from January 1st through December 31st of the following year.

The restriction adjustments are as follows:

1. CALCULATE THE UNRECONCILED PEAK LOADS

Interval accounts do not have any energy curtailment “add-back”, the unreconciled load is the actual meter data.
2. CALCULATE THE RECONCILED PEAK LOADS—NO CHANGE
3. CALCULATE THE PROFILED SEGMENT WEIGHT AND OBLIGATION FACTOR FOR EACH PROFILED CLASS
  - a. Profiled segment weight for monthly metered customers—no change
  - b. Profiled segment weight for demand metered customers—no change
  - c. Obligation factor—the reconciled peak load plus the sum of the loss adjusted ALM impact divided by the profiled segment weight for each profiled class
4. CALCULATE THE INDIVIDUAL ACCOUNT LEVEL PLCS
  - a. Interval Metered Accounts—no change

- b. Non Interval Metered Accounts—the hourly PLC is the product of the obligation factor for the profiled class and account specific usage factor minus the hourly loss adjusted ALM load impact. The average of the five hourly PLCs is the account PLC.

Like the Capacity PLCs, new locations where individual data is not yet available are assigned a PLC based on the average default value calculated for the associated customer’s rate class and load profile.

## **DAILY UPDATES TO PLC AND NSPL**

Because the LSE responsible for a customer’s Capacity Peak Load Contribution and Network Service Peak Load is subject to change at points throughout the effective period, BGE aggregates PLC and NSPL values to LSEs serving load within the zone on a daily basis and transmits those updates to PJM in accordance with PJM procedural requirements and capacity market schedules.

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## **DETERMINATION OF HOURLY LOAD OBLIGATIONS**

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### **OVERVIEW**

BGE settles hourly load obligations with each LSE and PJM via a two-step process.

#### SETTLEMENT A

BGE determines the estimated “day after” (delivery day) hourly load responsibility by recreating the load characteristics of the delivery day in question using a combination of available known, preliminary, and historically-based information. BGE then submits the load responsibility for all LSEs serving load on the settled day(s) to PJM in accordance with PJM procedural requirements and energy market schedules.

#### SETTLEMENT B

BGE determines the final hourly load responsibility approximately 60 days after an energy delivery month by reconciling actual individual customer meter readings and applicable load profile data with the Settlement A data for that month. BGE then calculates and submits the energy variances from Settlement A hourly scheduling for all LSEs to PJM in accordance with PJM procedural requirements and energy market schedules.

All hourly load obligations are adjusted for transmission and distribution losses.

### **SETTLEMENT A (ESTIMATED “DAY AFTER” HOURLY LOAD OBLIGATIONS)**

#### **FOR INTERVAL-SETTLED CUSTOMERS**

1. For certain large customers, BGE receives previous day hourly loads for settlement use.

2. For all other interval customers, BGE calculates the estimated load responsibility for each individual customer based on prior energy delivery days of similar day-type and similar weather.

#### FOR ALL MONTHLY METERED CUSTOMERS

1. BGE aggregates customers by LSE and assigned load profiles respectively.
2. BGE calculates the estimated hourly load responsibility based on the customer's assigned load profile and the usage factor initially mentioned in Part I, Section 1 above.
  - a. BGE assigns new customers the default usage factors for their rate class and assigned load profile.
  - b. The load profiles used by BGE for this purpose are split into various customer segments, seasons, day-types, and hours.
3. BGE adjusts all calculations for losses and then aggregates the resulting estimated hourly load obligations by LSE and assigned load profile respectively.

BGE then scales all Settlement A load responsibilities such that the sum of all hourly energy obligations in the BGE zone for an energy delivery date matches the actual metered zone load for that date.

Finally, BGE aggregates the hourly energy obligations by LSE and reports the resulting energy schedules to PJM by the PJM defined Contract Number.

#### **SETTLEMENT B (“60 DAY SETTLEMENT—FINAL” HOURLY LOAD OBLIGATIONS)**

For interval-settled customers, BGE uses the customer's actual interval data to determine the associated hourly load obligations, and then adjusts for losses.

For monthly-metered customers, BGE converts the monthly aggregate consumption into hourly consumption values for the related billing periods. BGE accomplishes this by generating an hourly load shape for the periods based directly on the customer's assigned load shape and weather, then scaling that load shape to tie to the customer's actual usage, calculating the associated hourly load obligation values, and adjusting those values for losses.

For all customers, BGE then calculates a “bottom-up” load shape for the energy delivery month being reconciled and compares that shape with a load shape comprised of actual metered BGE zone load. BGE considers any resulting variance as being Unaccounted-For Energy for that hour and allocates it to hourly load obligations as appropriate.

BGE then calculates the hourly difference between the “day after” estimated load obligations previously determined in Settlement A and the final hourly load obligations for Settlement B, aggregating the resulting variances by LSE and PJM Contract Number. BGE then reports the

resulting energy variances to PJM. PJM incorporates the variances as adjustments within its market settlement processes with LSEs.

If adjustments are made to the Hourly Load of a LSE in the BGE Zone after this load reconciliation, BGE may calculate the financial value of the adjustment and report that value to PJM. BGE will also allocate the equal and opposite financial value to all LSEs in the BGE Zone, on a load-ratio share basis, and report the adjustments to PJM. PJM will include any adjustments in the next monthly billing statement issued by PJM to the affected LSE(s).