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August 12, 2016

In the Matter of the Petition of
Public Service Electric and Gas Company
for Approval of the Construction of the Mason Substation
Damaged During Superstorm Sandy

BPU Docket No. _____

VIA ELECTRONIC MAIL & OVERNIGHT MAIL DELIVERY

Irene K. Asbury, Secretary
Board of Public Utilities
44 South Clinton Avenue, 9th Floor
Post Office Box 350
Trenton, New Jersey 08625-0350

Dear Secretary Asbury:

On behalf of Public Service Electric and Gas Company's (PSE&G, the Company) enclosed please find for filing an original and ten copies of a Verified Petition in the above-captioned matter.

As set forth in the Verified Petition, given the need for the timely disposition of this matter, PSE&G respectfully requests that the Board of Public Utilities retain this this matter and that a pre-hearing meeting be scheduled at the Board Staff's earliest convenience.

Thank you for your courtesy.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Hesser G. McBride, Jr.", written in a cursive style.

Attachment
C Attached Service List (E-Mail Only)

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**STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES**

IN THE MATTER OF THE PETITION OF)
PUBLIC SERVICE ELECTRIC AND GAS)
COMPANY FOR APPROVAL OF THE) BPU DOCKET NO. _____
CONSTRUCTION OF THE MASON)
SUBSTATION DAMAGED DURING)
SUPERSTORM SANDY)

I. VERIFIED PETITION

Public Service Electric and Gas Company (PSE&G, the Company, Petitioner), a corporation of the State of New Jersey, having its principal offices at 80 Park Plaza, Newark, New Jersey, respectfully petitions the New Jersey Board of Public Utilities (Board or BPU) pursuant to N.J.S.A. 48: 2-21 and -23, or any other statute the Board deems applicable, as follows:

II. INTRODUCTION

1. Petitioner is a public utility engaged in the distribution of electricity and the provision of Basic Generation Service (BGS), and the distribution of gas and the provision of Basic Gas Supply Service (BGSS), for residential, commercial and industrial purposes within the State of New Jersey. PSE&G provides service to approximately 2.2 million electric and 1.8 million gas customers in an area having a population in excess of 6.2 million persons and which extends from the Hudson River opposite New York City, southwest to the Delaware River at Trenton and south to Camden, New Jersey.

2. Petitioner is subject to regulation by the Board for the purposes of setting its retail distribution rates and to assure safe, adequate and reliable electric distribution service pursuant to N.J.S.A. 48:2-21 and 48:2-23.

3. On May 21, 2014, the Board issued an order approving a settlement of PSE&G's Energy Strong program (Energy Strong), a comprehensive investment program to harden the Company's electric and gas infrastructure to make them less susceptible to damage from wind, flying debris and water damage in anticipation of major storm events.¹ Energy Strong includes several subprograms, including an Electric Station Flood Mitigation subprogram designed to implement flood mitigation for identified electric substations that experienced water intrusion during Superstorm Sandy, Hurricane Irene, or other recent water intrusion events.

4. By way of this Petition, PSE&G is seeking various Board approvals in connection with the Petitioner's proposed re-construction and resiliency enhancement of the Mason and Building 9 substations located in Kearny, New Jersey. The current Mason and Building 9 substations are located adjacent to each other and are referred to hereafter as the Existing Mason Substation or the Existing Substation.

5. The Existing Substation serves as a flow-through facility for power transmitted by PSE&G throughout Northern New Jersey. The Existing Substation is currently configured as a flow-through 230 kV substation containing a single 230 kV high-side bus-tie circuit breaker that splits the 230 kV PSE&G transmission line that terminates at the PSE&G Athenia and Essex substations. The Existing Substation is critical to the reliable delivery of power to PSE&G customers because any failure at the Existing Substation would reduce the availability of power to the Athenia and Essex substations, and result in PSE&G's Cook Road and Kingsland substations being deprived of an alternate source of power. As currently configured, the Existing

¹ *In the Matter of the Petition of Public Service Electric and Gas Company for Approval of the Energy Strong Program*, Docket Nos. EO13020155 and GO130020156, Order Approving Stipulation of Settlement, (NJ B.P.U., May 21, 2014).

Substation presents a single point of failure risk that can only be eliminated through the construction of a new substation.

6. The Existing Substation, which is currently owned by New Jersey Transit Corporation (“NJ TRANSIT”), is also critical to the reliability of rail transportation service in Northern New Jersey. The Existing Substation is the source of traction power for a 14.5 mile segment of NJ Transit’s Morris & Essex Lines between Maplewood and Hoboken, including critical connection points for travel into and out of New York City. Like the substations that are being addressed in the Energy Strong program, the Existing Substation was severely damaged during Superstorm Sandy and requires replacement.

7. The newly constructed Substation (hereafter the “New Substation”), which would be owned by PSE&G and operated primarily but not exclusively by PSE&G, would enhance the reliability and resilience of PSE&G’s provision of energy service to the larger region — a benefit to consumers across PSE&G’s service territory. In addition, the New Substation would be capable of providing highly reliable, sufficient power to NJ TRANSIT’s electric traction system, maintenance facilities, and other related facilities and systems.

8. The New Substation will also serve a role in the operation of NJ TRANSIT’s nationally-recognized project, NJ TRANSITGRID, a proposed micro-grid system that will provide reliable power to support a core segment of NJ TRANSIT’s transportation service in Northern New Jersey and the Hudson River crossings in the event of an electrical system failure resulting in the interruption of electric delivery service to NJ TRANSIT. It is estimated that the New Substation will be first placed into service December 2020.

9. The Company requests that the Board find that PSE&G's proposed construction, ownership and operation of the New Substation is reasonable, prudent and recoverable in distribution rates. Further, the Petitioner requests that the Board approve PSE&G's proposed revision to the High Tension Service (HTS) tariff to include a special provision that describes the service provided via the New Substation. PSE&G also requests that the Board approve a cost-recovery mechanism for the New Substation consistent with the cost-recovery mechanism approved by the Board in PSE&G's Energy Strong infrastructure hardening and resiliency proceeding.

III. MASON SUBSTATION AND DAMAGE CAUSED BY SUPERSTORM SANDY

10. The Existing Station is important to the reliable delivery of power in PSE&G's service territory. As discussed above, the Substation is a 230 kV switching station located on the Essex to Athenia 230 kV transmission corridor. Both the Kingsland and Cook Rd 230 kV substations, which provide power to PSE&G customers, are also located on this corridor between the Substation and Athenia. Any failure of the facilities at the Existing Substation would reduce the availability of power to the Athenia and Essex Switching stations, and would result in both Cook Rd and Kingsland being deprived of an alternate source of power. The New Substation will be a breaker and a half design, thereby eliminating the single point of failure risk in the current facilities' design. In the existing station design, *any* outages (planned or unplanned) of the 230 kV main bus requires interruption of the power flow between Athenia and Essex. Modification of the Existing Substation from a straight-bus design to a breaker-and-a-half design will result in increased system reliability benefits to PSE&G customers.

11. Moreover, the Existing Mason Substation is critical to NJ Transit's operations. It provides traction power for approximately 74,200 weekday passenger trips and supports either a large portion, or all, of the power necessary to facilitate approximately 5,000,000 annual passenger boardings. PSE&G understands that the power delivered to the Mason Substation by PSE&G provides traction power for all electric trains traveling on the Morris & Essex Line (M&E) tracks between the Maplewood Switching Substation on the Maplewood/South Orange border, through to the Hoboken Terminal. This means that trains originating or terminating in Hoboken, as well as all Midtown Direct trains originating or terminating in Penn Station New York, are powered by the Mason Substation, at least for the portion of travel from the Maplewood Substation to the Kearny connection interface with the Northeast Corridor Line. The Mason Substation also provides traction power for the electrified portion of the Montclair/Boonton Line between Great Notch Yard in Little Falls and the Roseville Junction with the Morris & Essex Line in Newark. Thus, the Mason Substation serves to power a significant portion of the trains on the M&E mainline, the Gladstone Branch, and the most densely populated stretch of the Montclair-Boonton Line. In sum, PSE&G understands that the Mason Substation is considered the most important traction power substation facility on the NJ TRANSIT system.

12. The Building 9 section of Existing Substation supports the operations of the Meadows Maintenance Complex (MMC), which is NJ Transit's major maintenance facility servicing its entire fleet. The Building 9 Substation also provides power to the NJ Transit Rail Operations Center ("ROC"), which is the central command and control facility for all train movements statewide, including train control, signal and power dispatching operations. PSE&G

understands that NJ TRANSIT considers the ROC to be the most critical operations facility in the NJ TRANSIT system.

13. On October 29, 2012, Superstorm Sandy's storm surge substantially damaged the Existing Substation. PSE&G understands that the equipment, wiring, raceways, and structures were submerged in contaminated salt water for an extended period at elevations of 4 to 5 feet. Pressurized surge waters also penetrated the control building and equipment cabinets through underground conduits, causing damage to devices located above the flood elevation.

IV. NJ TRANSIT'S OWNERSHIP OF A FLOW THROUGH SUBSTATION THAT TRANSPORTS POWER TO THE PSE&G SERVICE TERRITORY IS UNIQUE

14. While NJ TRANSIT owns and operates various substations to support its transportation system, because the Existing Substation is directly, rather than radially connected to PSE&G's transmission lines and power running through the Substation is delivered to other customers in PSE&G's service territory, the Existing Substation is a unique configuration for NJ TRANSIT. The Existing Substation also differs from other substations in NJ TRANSIT's system, as discussed further below, due to operational constraints, combined with enhanced compliance responsibilities.

15. Because the operation of the substation impacts PSE&G's ability to deliver power to customers in its Northern New Jersey service area, PSE&G entered into an agreement with NJ TRANSIT in 1983 that confers upon PSE&G the right to operate, test, and adjust certain elements of the Existing Substation. While the 1983 Agreement contemplates NJ TRANSIT's performance of routine maintenance and repairs of certain elements, PSE&G understands that the existing equipment configuration and current operational constraints preclude outages

necessary to accomplish that maintenance and those repairs. The current arrangement limits PSE&G's ability to promptly access the Existing Substation to expeditiously perform necessary repairs.

16. Further, the Mason Substation is part of the Bulk Electric System, which under current NERC requirements will likely require registration with the North American Electric Reliability Corporation (NERC) and subject the owner to NERC's operational, physical and cyber security reliability standards. NJ TRANSIT does not have a NERC compliance program. Such compliance responsibilities are better suited to an electric utility company such as PSE&G, which has a well-established and comprehensive NERC compliance program that has been developed to handle NERC's technically complicated standards.

V. PSE&G'S CONSTRUCTION OF THE NEW SUBSTATION WILL INCREASE THE RELIABILITY OF PSE&G'S SERVICE IN ITS SERVICE TERRITORY AND TO NJ TRANSIT'S CRITICAL RAIL FACILITIES

17. PSE&G's construction and maintenance of a replacement Mason Substation is important from the standpoint of reliability for a substantial portion of PSE&G's Northern New Jersey electricity customers. Since 1983 PSE&G has been required to rely solely upon NJ TRANSIT for maintenance and operation of the Existing Station. PSE&G's ownership of the New Substation will ensure that PSE&G has control of the station to properly effectuate maintenance and repairs that will greatly reduce the likelihood of outages. Further, PSE&G's ownership will enable it to complete required inspections and coordinate scheduled outages as needed.

18. Given the complexity, importance, and unique direct connection configuration characteristics of the Existing Substation, PSE&G respectfully submits that it is reasonable and

prudent for PSE&G to design, construct, own and operate the New Substation. PSE&G has substantial experience, resources and expertise in the design, construction, operation, maintenance and emergency restoration of service to complex electric substations, particularly stations that use gas insulated switchgear (GIS) technology such as the proposed New Substation. The proposed restoration/construction work in particular has much in common with the extensive electric station flood mitigation work that PSE&G is currently conducting under the Energy Strong program. For these reasons, the construction of the new Substation, and the operation, maintenance and control of the Substation by PSE&G, will increase the reliability and resiliency of electric service in PSE&G's service territory.

19. In addition to providing enhanced redundancy to the PSE&G system, the New Substation will increase system resiliency since it is being designed to keep all critical infrastructure above the 500 year flood elevation at the site. This design will avoid the multiple-day loss of service experienced during Superstorm Sandy. During future storms, the potential for impacts, and the time for restoration of impacts, to the New Substation will be greatly improved, resulting in more reliable service.

20. PSE&G's construction and ownership of the New Substation is consistent with the Board's public policy of encouraging infrastructure improvements that enhance the reliability and resiliency of the electric grid in an economically efficient manner. The New Substation will complement PSE&G's ongoing Energy Strong program, which aims to proactively protect and strengthen PSE&G's electric and gas systems against severe weather conditions. The ownership and control of the New Substation by PSE&G would also be consistent with the utility infrastructure hardening objectives of the New Jersey 2015 Energy Master Plan, which

recommends that “[t]he State . . . increase the focus on energy assurance planning that ensures effective all-hazards response to all energy emergencies, emphasizing infrastructure resiliency measures and system hardening.”² The Energy Master Plan further concludes that “[t]he State as a matter of policy through the years has supported proposals, especially for infrastructure investment after recent storm events, to support infrastructure hardening as long as these measures were structured in a financially prudent fashion.”³

21. The New Substation will also play an important role in NJ TRANSIT’s ongoing efforts to design and construct NJ TRANSITGRID, a micro-grid capable of providing reliable power to support critical transportation operations under emergency conditions. For example, in the event of a PSE&G system outage, NJ TRANSITGRID would be able to deliver power to the New Substation. The New Substation will have 230kV line positions available for this purpose. Thus, the operational reliability and resiliency of the New Substation will be critical to the successful operation of NJ TRANSITGRID, which is being designed to ensure the uninterrupted delivery of electricity to critical rail facilities (including rail tunnels into New York City) in the event of a power outage or severe interruption of service. While the PSE&G system is highly reliable, the reconstructed Mason Substation, which will be connected to NJ TRANSITGRID, will support enhanced reliability of critical public infrastructure in case of extraordinary events. The NJ TRANSIT micro-grid project is consistent with policy objectives of the New Jersey Energy Master Plan, which describes the project as a “a first-of-its-kind electrical micro-grid capable of supplying highly-reliable power during storms, or other times when the traditional

² See *New Jersey Energy Mater Plan*, Plan Update, December 2015, p. 49.

³ *Id.* at 48.

centralized grid is compromised, and will serve as a model for other communities in the State and across the nation.”⁴

VI. OVERVIEW OF THE NEW SUBSTATION

22. The Existing Substation consists of two 230kV line terminals, with a 230kV sectionalizing circuit breaker, a tap with two 230kV circuit breakers feeding five 230/55/27kV, 20MVA transformers feeding 27.5kV supply station buses. The Existing Substation also includes an outdoor 26kV feed-through substation (Building 9) consisting of two line breakers feeding two 26.4/4.16kV, 12MVA transformers supplying Meadows Maintenance Complex. See Exhibit A attached.

23. The New Substation will continue to be served by the existing 230 kV facilities that have line capacity of 735 MVA. A drawing of the New Substation is attached as Exhibit B. It is estimated that the peak load of NJ TRANSIT at the Substation will be approximately 30 MVA. Thus, the majority of power that flows through the New Substation will continue to be delivered to other PSE&G customers in Northern New Jersey.

24. The New Substation will supply power for multiple NJ TRANSIT traction and facility power needs. Two existing 230kV high voltage transmission circuits will be connected to a 230kV breaker-and-a-half design gas-insulated switchgear (GIS) switching station in place of the existing 230kV straight bus design. The GIS facility will be comprised of six (6) bays including three (3) breakers and two (2) line positions each, totaling 18 breakers and 12 line positions of GIS equipment as well as a protective GIS hall building, control room, station light

⁴ *Id.* at 51-52.

and power transformers, and a backup generator. The entire 230kV yard will be raised to required 500 year flood elevations to mitigate damage from future storms.

25. The New Substation is proposed to be located north of the current Mason Substation location (see Exhibit B). The location is subject to securing relevant property rights and obtaining all required approvals. PSE&G and NJ TRANSIT intend to enter into a long-term easement that will provide access rights to PSE&G for the majority of the property upon which the New Substation will be constructed.⁵

VII. OVERVIEW OF THE FUNCTIONALITY OF AND OPERATIONAL RESPONSIBILITY FOR THE NEW SUBSTATION

26. The equipment at the New Substation will step down power from 230 kV to various voltage levels to be used at the Substation to power the rail system. The voltage levels include conversions from 230/55kV, 230/13kV, 55/27kV, 55/12kV and 13/4kV.

27. Because of the unique nature of the rail traction service to be provided by PSE&G at the New Substation, Petitioner is requesting that the Board approve the amendment of the High Tension Service (HTS) Tariff to include a special provision describing the service provided at the Substation. Attached as Exhibit C is the special provision language that PSE&G proposes to include in the HTS Tariff, subject to the Board's review and approval. The proposed tariff amendment provides that service to NJ TRANSIT at the New Substation will be metered at the 230 kV demarcation point and that NJ TRANSIT will be billed for power delivered to the Substation at the 230 kV HTS tariff rate applicable to rail traction service as set forth in *Public Service Electric & Gas Company Tariff B.P.U.N.J. No.15*, Rate Schedule HTS, except for the power delivered to the

⁵ Although not anticipated, if PSE&G is unable to secure the required approvals for the proposed location, it would be necessary to locate the New Substation on other adjacent NJ TRANSIT property.

13kV substation that is replacing the current 26kV feed to Building 9. The 13kV substation will be metered at the 13kV demarcation point and NJ TRANSIT will be billed for power delivered to this substation under the Large Power and Light Service at Primary Distribution Voltage (LPL-P) rate schedule.

28. PSE&G will be primarily responsible for the operations and maintenance of the New Substation. PSE&G intends to enter into an operational protocols agreement with NJ TRANSIT that specifically delineates the responsibilities and obligations of the parties regarding operation, maintenance, and repair of the New Substation. PSE&G and NJ TRANSIT also intend to enter into an implementing agreement that addresses issues associated with construction at the site, including property access, lay down areas, and design review. For purposes of defining operational responsibilities at the New Substation, PSE&G and NJ TRANSIT have jointly determined that the Substation should be segregated into eight (8) different functional categories.

(1) 230kV GIS Substation

29. PSE&G will be responsible for operating and maintaining the 230kV components of the New Substation, which consist of 230kV GIS station equipment that provides the connection to two PSE&G 230kV transmission circuits. This section of the New Substation provides switching for 230kV feeds to the 230/55kV transformers and 230/13kV transformers.

(2) 230/55kV Transformers

30. PSE&G will be responsible for operating and maintaining the 230/55kV transformers component of the New Substation, which will consist of two-phase transformers and high/low side isolation equipment (breakers and disconnects) that convert five 230kV feeds into 55kV feeds to power the 55/27kV section of the New Substation.

(3) 55/27kV Substation

31. NJ TRANSIT will operate and primarily maintain the 55/27kV portion of the New Substation, which consists of a 55kV system that takes feeds from 230/55kV transformers and sends power to various feeds used to supply power to rail facilities.

(4) 55/12kV Transformers

32. NJ TRANSIT will operate and primarily maintain the 55/12kV transformers, which will take power from the 55/27kV section of the New Substation for NJ TRANSIT's maintenance facilities.

(5) 230/13.2kV Transformers

33. PSE&G will be responsible for operating and maintaining the 230/13.2kV transformers component of the New Substation, which will consist of transformers and high/low side equipment that will provide power from the 230 kV GIS Substation to the 13.2kV switchgear.

(6) 13.2kV Switchgear

34. PSE&G will be responsible for operating and maintaining the 13.2kV switchgear components of the New Substation, which will be the primary distribution source for NJ TRANSIT's buildings and maintenance facilities at the site. The 13.2kV switchgear will have 24 feeders to hold a future full buildout and replacement of all current 4kV equipment used at NJ TRANSIT's facilities on site.

(7) 13.2/4.16kV Transformers

35. NJ TRANSIT will operate and primarily maintain the 13.2/4.16kV transformers portion of the New Substation, which will consist of equipment that connects the 13kV feeds to the 4kV NJ TRANSIT facilities.

(8) Station Light & Power 13kV/208V

36. While NJ TRANSIT will be responsible for purchasing all Station Light & Power, PSE&G will be responsible for operating and maintaining the multiple Station Light & Power transformers that provide the normal operational power for lighting and equipment at the 230 kV and 13 kV yards. NJ Transit will be responsible for operating and maintaining the Station Light & Power transformers at the 55kV yards.

VIII. ESTIMATED COST OF THE PRUDENT CONSTRUCTION OF THE NEW SUBSTATION

37. PSE&G estimates that the base cost to construct the proposed substation is \$226 million excluding Allowance for Funds Used During Construction (AFUDC).⁶ The cost estimate has been prepared jointly by PSE&G's and its engineering consultant Gannett Fleming (with consultation from NJ TRANSIT). In fact, NJ TRANSIT, after working with Gannett Fleming, provided preliminary engineering and design work that has been utilized by PSE&G in connection with its cost estimate. A summary of the cost estimate is attached as Exhibit D.

38. PSE&G notes that the estimate is subject to change and that PSE&G is seeking approval to recover all prudently incurred capital expenditures to be incurred in connection with the design and construction of the New Substation. The New Substation project cost estimate includes

⁶ In addition to the base cost estimate, the cost estimate provides for a risk and contingency allowance of \$42 million, resulting in a \$268 million estimate with the risk and contingency included.

costs to be incurred by PSE&G to demolish the Existing Mason Substation. Because NJ TRANSIT has provided to PSE&G engineering plans, permitting, environmental analysis, and NJ TRANSIT will be involved in design reviews for various segments of the Substation, part of the project costs that PSE&G seeks approval to recover are costs that NJ TRANSIT has identified that it has incurred to date and expects to incur, which will be reimbursed by PSE&G. The reasonableness of these costs will be reviewed in detail by PSE&G prior to their proposed inclusion in any future rate recovery filings resulting from this docket.

39. As noted above, it will be necessary that PSE&G obtain easements for the property on which the Substation will be constructed. It is PSE&G's intent to acquire those easements at Fair Market Value, which acquisition cost is not included in the cost estimate but will be included in PSE&G's overall investment cost to be recovered through rates.

40. It is anticipated that NJ TRANSIT will make a contribution toward the project in an amount to be determined.

IX. THE BOARD SHOULD APPROVE A COST RECOVERY MECHANISM FOR THE SUBSTATION CONSISTENT WITH THE MECHANISM APPROVED IN THE ENERGY STRONG PROCEEDING

41. On February 20, 2013, PSE&G petitioned the Board for approval of a program and for the recovery of costs to harden its electric and gas infrastructure to make them less susceptible to damage from wind, flying debris and water damage in anticipation of future Major Storm Events, and to increase the resiliency of PSE&G's electric delivery system (i.e., "Energy Strong"). In an Order dated May 21, 2014, the Board approved a Stipulation to authorize the Energy Strong Program, which includes an investment level of up to \$820 million intended to harden electric infrastructure and to protect it from future storms. The Board-approved electric

infrastructure portion of the Energy Strong Program consists of three segments: Electric Station Flood Mitigation; Contingency Reconfiguration Strategies; and deployment of Advanced Technologies. Like the Energy Strong investments, and particularly like the Electric Station Flood Mitigation subprogram projects, the proposed Substation will increase system resiliency and reliability in general, and focus on repairing, upgrading and elevating significant electric substations in particular.

42. The Board-approved Energy Strong Program provides for periodic rate adjustments, with fixed dates for filing for and receiving those adjustments. Under the Energy Strong Program costs are recovered through an “Energy Strong Adjustment Mechanism.” This Petition requests that PSE&G be permitted to recover its prudently incurred capital expenditures to construct the New Substation utilizing the same type of cost recovery mechanism approved under the 2014 Energy Strong Order. More specifically, PSE&G requests that the Board establish a Substation Adjustment Mechanism (“SAM”) that permits the recovery of capital expenditures in the New Substation as it is placed in service, plus associated AFUDC. PSE&G does not at this time intend to seek recovery of operations and maintenance costs

43. PSE&G proposes that the cost recovery will occur for the New Substation investment through three (3) “rate roll-ins” based on the procedures described herein. Costs to be recovered will include the return on net plant in service as described in the rate roll-in schedule described herein. Multiple rate roll-ins are appropriate for the New Substation investment because portions of the New Substation will be placed into service over time. Net plant will be calculated as gross plant in service less accumulated depreciation less accumulated deferred income taxes. The revenue requirement associated with the New Substation will also

include depreciation expense, income taxes, return on rate base, and BPU/Rate Counsel assessments. The revenue requirement will not include an expense for the recovery of the Cost of Removal (unless embedded in the depreciation rates) for PSE&G distribution assets; however, the revenue requirement will include a return on the Cost of Removal investment for any PSE&G assets removed during construction. Depreciation will be included at the rates in effect at the time the plant is put in service. The Company will begin to depreciate an asset once it goes into service.

44. Petitioner requests that the review of the prudence of all expenditures undertaken in connection with the New Substation take place during the final base rate roll-in, as described below. PSE&G understands that the rate adjustments established in the “roll-in” electric rate filing proceedings proposed herein shall be provisional and subject to refund based upon a Board finding that PSE&G imprudently incurred capital expenditures for the New Substation.

45. In order to effectuate the cost recovery process for the New Substation investment, PSE&G proposes required rate roll-ins based upon the schedule below. The schedule anticipates notice, public hearings, and rate adjustments to cover the three rate roll-in submissions:

- a. 1st Rate Roll-In: Once the Company determines the anticipated initial in-service date for the New Substation, the Company will make its initial filing for a base rate adjustment no later than 60 days prior to the last day of the month in which the initial program investments are to be placed into service. PSE&G shall update that filing for actual investment placed in service no later than the 15th of the month following the month the investments are actually placed in service. PSE&G proposes that the Revenue Requirements associated with the New Substation investments placed into service shall go into base rates effective no later than the 1st day of the 4th month after being placed into service.

- b. 2nd Rate Roll-In: Approximately one year after the 1st Rate Roll-In, the Company proposes that it will make a 2nd filing to recover a majority of the remaining New Substation investment. The Company will make this filing for base rates no later than 60 days prior to the last day of the month in which the substation investments are to be placed into service. PSE&G shall update that filing for actual investment placed in service no later than the 15th of the month following the month the investments are actually placed in service. The Revenue Requirements associated with the New Substation investment that is placed into service shall go into base rates effective no later than the 1st day of the 4th month after being placed into service.
 - c. Final Rate Roll-In: Once the New Substation project is completed and all trailing charges are accounted for, the Company proposes that it will make a final filing to recover in base rates the final Revenue Requirements associated with New Substation investments that are placed into service and not recovered in the 1st or 2nd Rate Roll-In filing. At this time, the New Substation project costs will be reviewed by the Board solely for the purpose of determining whether PSE&G prudently incurred the costs claimed. PSE&G proposes that at the conclusion of that review, the Board approve the final base rate adjustments and all rates associated with the New Substation be deemed final and effective upon an issuance of a Board order approving such rates.
46. The revenue requirement shall be calculated as summarized below.

New Substation Investment Costs - All capital expenditures, including actual costs of engineering, design and construction, and property acquisition, including actual labor, materials, overhead, and capitalized AFUDC associated with the New Substation (“Substation Investment Costs”), will be recovered through base rate roll-ins for each of the time periods described above. These Substation Investment Costs will be recorded, during construction, in an associated Construction Work In Progress (“CWIP”) account or in a Plant in Service account upon the Substation investment being deemed used and useful.

Net Investment - Is equal to the Substation Investment Costs that have been placed into service less the associated accumulated depreciation less accumulated deferred income taxes.

Weighted Average Cost of Capital (“WACC”) – PSE&G proposes that, with the

exception of long-term debt, the WACC components be the WACC authorized by the Board in the Company's most recent base rate case preceding the first rate roll-in. The Company intends to file a base rate case no later than November 2017 and it is anticipated that the case will be completed prior to the in-service date for the Substation.

The rate base roll-ins will be calculated using the following formula:

Revenue Requirement = ((Substation Rate Base * After Tax WACC) + Depreciation Expense (net of tax) + Tax Adjustments)* Revenue Factor

- i. Substation Rate Base – The Substation Rate Base will be calculated as Plant in Service, including CWIP transferred into service and associated AFUDC, less accumulated depreciation and less associated accumulated deferred income taxes.
- ii. Depreciation Expense – Depreciation expense will be calculated as the Substation Investment Costs by asset class multiplied by the associated depreciation rate applied to the same asset in base rates and then calculated net of tax.
- iii. Tax Adjustments - Includes the effects of any flow through items and any tax law changes codified by the Internal Revenue Service, the State of New Jersey or any other taxing authority.
- iv. Revenue Factor – The Revenue Factor adjusts the Revenue Requirement Net of Tax for federal and state income taxes and the costs associated with the BPU and Rate Counsel (RC) Annual Assessments.

47. The rate design for the electric roll-ins will be structured similarly to the rate design methodology used to set rates in the most recent base rate case and will utilize the latest available calendar year weather normalized annualized billing determinants. The weather normalization process for electric will be consistent with the methodology used to set rates in the latest base rate case. To the extent the Company seeks to utilize more current weather normalized billing determinants for future SAM rate changes or to change the methodology used

to weather normalize, PSE&G shall provide such updated billing determinants and supporting data to Board Staff and Rate Counsel sixty days prior to any SAM rate change filing.

48. In future electric base rate cases, PSE&G proposes that revenue requirements associated with the New Substation be recovered through base rates from all customer rate classes. For cost of service and rate design purposes, the revenue requirements associated with these specific assets will be allocated to all rate classes based upon total targeted revenue and revenue changes for each rate class.

49. This Petition does not propose any rate increase and, for that reason, no public comment hearings are required. Nevertheless, PSE&G proposes public comment hearings similar to those that are held when rate increases are proposed. Thus, PSE&G proposes that the Form of Notice attached as Exhibit E be placed in newspapers having a circulation within the Company's electric service territory upon receipt, scheduling and publication of public hearing dates. The Notice includes estimated rate impacts based upon the current New Substation base cost estimate. Additionally, the Notice includes an additional rate impact estimate that is based upon the base cost estimate plus the risk and contingency assumption amount of \$42 million. The rate impact analyses do not account for a yet to be determined contribution from NJ TRANSIT that will serve to reduce the overall costs of the project. As with petitions that propose rate increases, PSE&G proposes that public hearings will be held in each geographic area within the Company's service territory, i.e., Northern, Central, and Southern. A Notice will be served on the County Executives and Clerks of all municipalities within the Company's electric service territories upon receipt, scheduling and publication of public hearing dates.

50. Given the need for prompt reconstruction of the Substation, it is important to receive Board approval no later than the end of the fourth quarter of 2016. Therefore, the Company respectfully requests that the Board retain this matter and promptly hold a pre-hearing conference to establish a procedural schedule.

X. COMMUNICATIONS

51. Communications and correspondence related to the Petition should be sent as follows:

Matthew M. Weissman, Esq.
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Fax: (973) 430-5983
Hesser.Mcbride@pseg.com

Connie Lembo (**E-Mail ONLY**)
Regulatory Filings Supervisor
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Michele Falcao (**E-Mail ONLY**)
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Newark, New Jersey 07101
Telephone No. (973) 430-6119
Fax No. (973) 430-5983
michele.falcao@pseg.com

XI. REQUEST FOR APPROVAL

52. Petitioner respectfully submits that it is reasonable and prudent to authorize the Petitioner to design, own and operate the New Substation based upon the conditions proposed herein. For the foregoing reasons, PSE&G respectfully requests that the Board issue an Order approving this Petition no later than the fourth quarter of 2016 and specifically finding that:

- (1) The construction and operation of the New Substation by PSE&G is in the public interest;
- (2) The construction, ownership and operation of the New Substation by PSE&G as described hereinabove is reasonable and prudent;

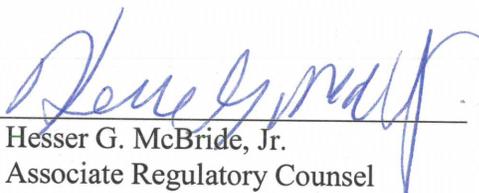
- (3) The proposed amendment to the HTS Tariff authorizing applicability of the 230 kV HTS traction power service rate for service at the New Substation is just and reasonable;
- (4) PSE&G shall be authorized to recover all prudently incurred capital expenditures for the New Substation from all customer classes under the terms of the cost-recovery proposal and mechanism set forth in this Petition; and

The cost-recovery mechanism set forth herein will provide for implementation of just and reasonable rates.

Respectfully submitted,

PUBLIC SERVICE ELECTRIC AND GAS COMPANY

By: _____


Hesser G. McBride, Jr.
Associate Regulatory Counsel
Public Service Electric and Gas Company
80 Park Plaza, T-5
P. O. Box 570
Newark, New Jersey 07101
Phone (973) 430-5333
Fax (973) 430-5983

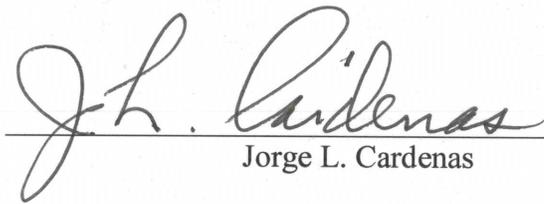
DATED: August 12, 2016
Newark, New Jersey

VERIFICATION OF PETITION

STATE OF NEW JERSEY)
 :
COUNTY OF ESSEX)

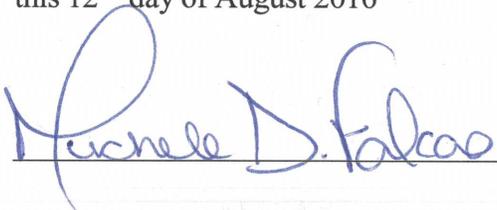
Jorge L. Cardenas, of full age, being duly sworn according to law, on his oath deposes and says:

1. I am the Vice President Asset Management & Centralized Services for Public Service Electric and Gas Company, the Petitioner in the foregoing Petition.
2. I have read the annexed Petition, and the matters and things contained therein in paragraphs 1 through 37 and 50 are true to the best of my knowledge and belief.



Jorge L. Cardenas

Sworn and subscribed to before me
this 12th day of August 2016



Michele D. Falcao

MICHELE D. FALCAO
Commission # 2414516
Notary Public, State of New Jersey
My Commission Expires
November 14, 2016



VERIFICATION OF PETITION

STATE OF NEW JERSEY)
 :
COUNTY OF ESSEX)

Stephen Swetz, of full age, being duly sworn according to law, on his oath deposes and says:

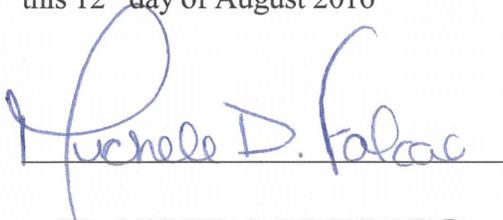
1. I am the Senior Director Corporate Rates & Revenue Requirement for Public Service Electric and Gas Company, the Petitioner in the foregoing Petition.

2. I have read the annexed Petition, and the matters and things contained therein in paragraphs 1-4, 9, and 38-50 are true to the best of my knowledge and belief.



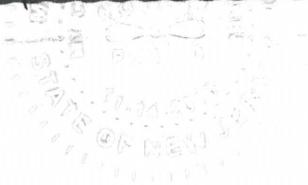
Stephen Swetz

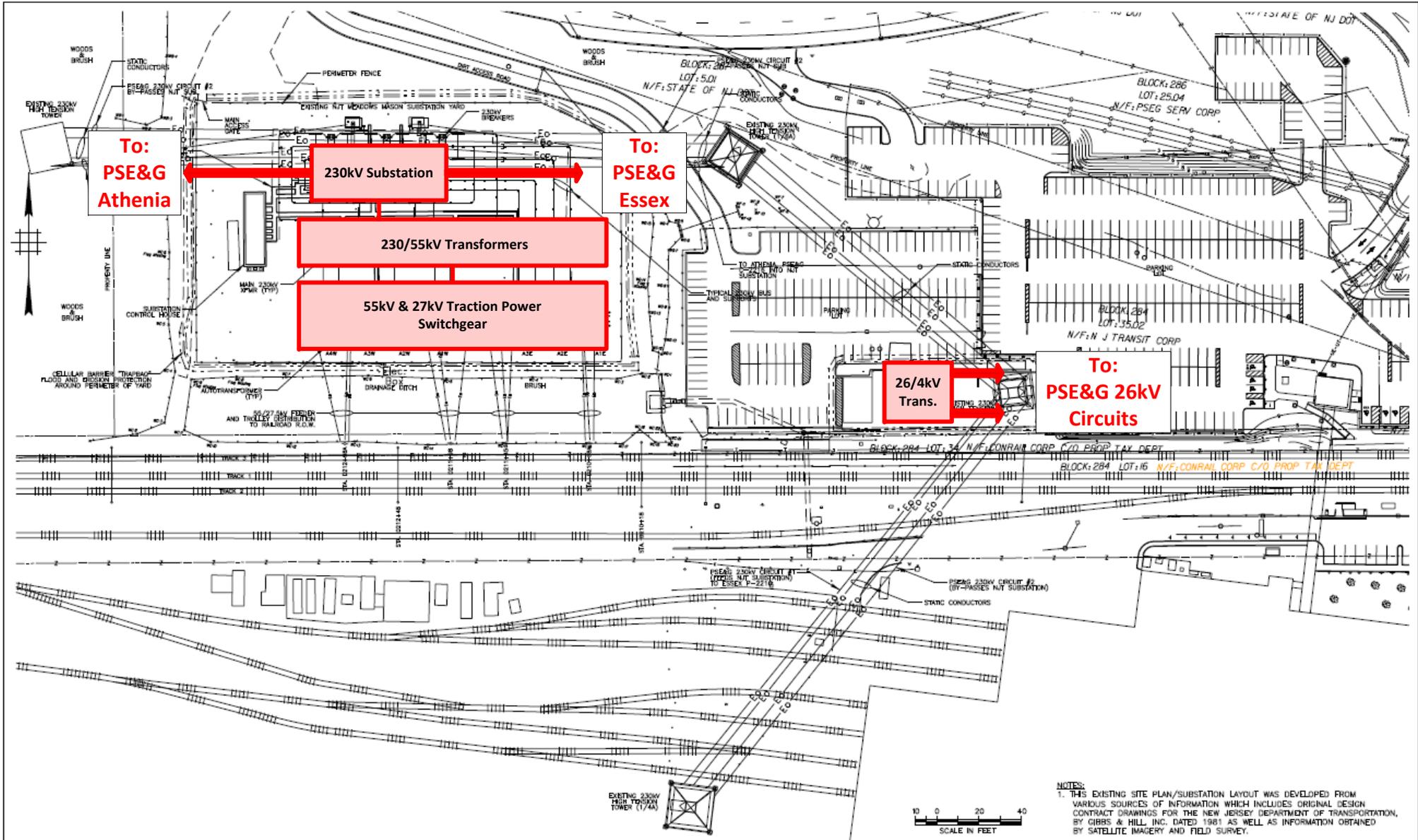
Sworn and subscribed to before me
this 12th day of August 2016



Michele D. Falcao

MICHELE D. FALCAO
Commission # 2414516
Notary Public, State of New Jersey
My Commission Expires
November 14, 2016





NOTES:
 1. THIS EXISTING SITE PLAN/SUBSTATION LAYOUT WAS DEVELOPED FROM VARIOUS SOURCES OF INFORMATION WHICH INCLUDES ORIGINAL DESIGN CONTRACT DRAWINGS FOR THE NEW JERSEY DEPARTMENT OF TRANSPORTATION, BY GIBBS & HILL, INC. DATED 1981 AS WELL AS INFORMATION OBTAINED BY SATELLITE IMAGERY AND FIELD SURVEY.



NO.	DATE	DESCRIPTION
B	11-13-15	60% - ISSUED FOR REVIEW
A	08-05-14	30% - ISSUED FOR REVIEW

NO.	DATE	DESCRIPTION

Date	11-13-15
Des.	TPB
Dwn.	SJB
Chks.	WJC
Apprvd.	TPB
Scale	1"=40'
DATE	

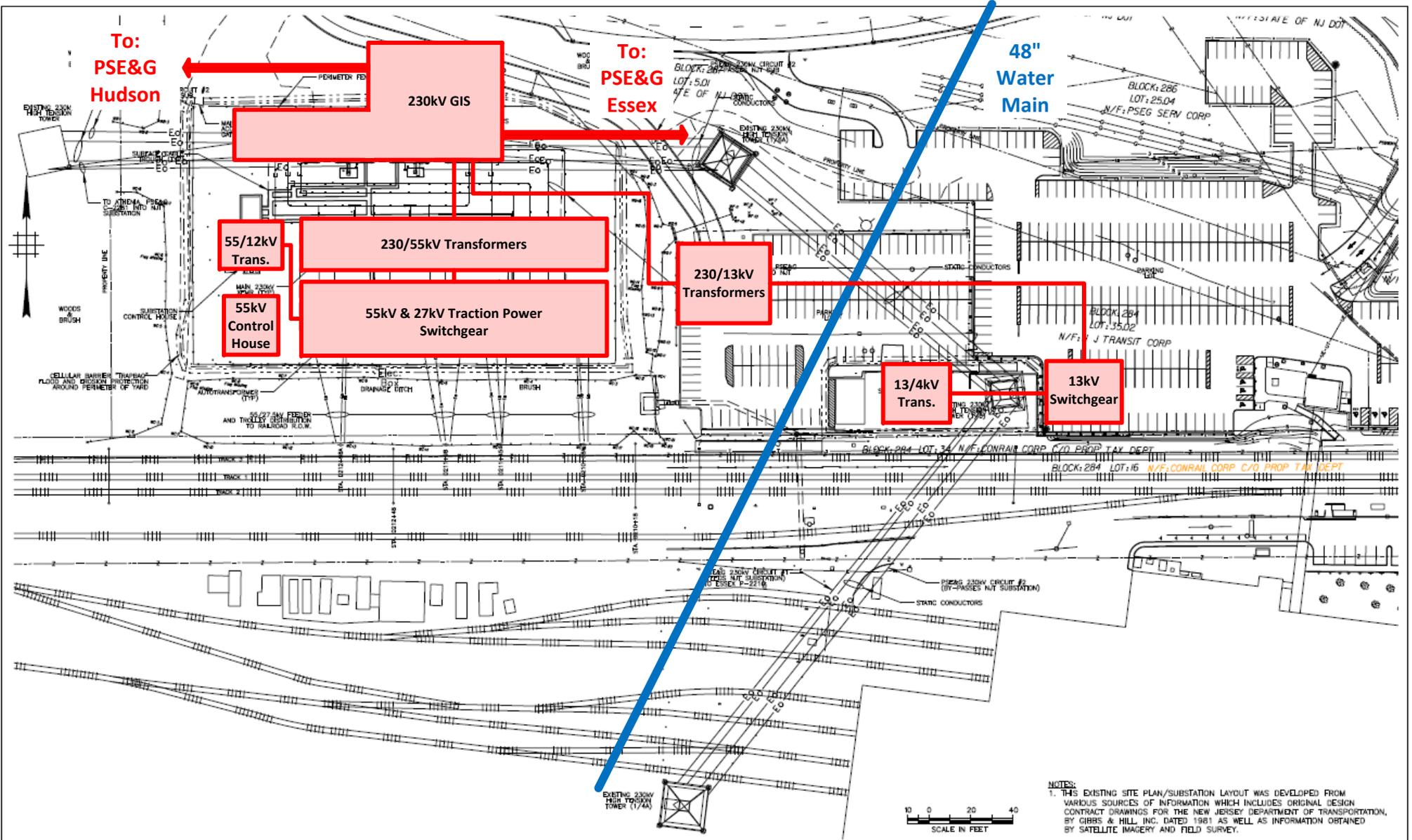
GANNETT FLEMING, INC.
 5 EVES DRIVE, SUITE 200 MARLTON, NJ 08053
 CERTIFICATE OF AUTHORIZATION NO. 346A2802000



MEADOWS MAINTENANCE COMPLEX
 MASON/BUILDING 9 SUBSTATION

EXISTING
 SITE ELECTRICAL PLAN

Contract No.
 13-006
 Drawing
 E-0100
 Sheet
 XX of XXX



NOTES:
 1. THIS EXISTING SITE PLAN/SUBSTATION LAYOUT WAS DEVELOPED FROM VARIOUS SOURCES OF INFORMATION WHICH INCLUDES ORIGINAL DESIGN CONTRACT DRAWINGS FOR THE NEW JERSEY DEPARTMENT OF TRANSPORTATION, BY GIBBS & HILL, INC. DATED 1981 AS WELL AS INFORMATION OBTAINED BY SATELLITE IMAGERY AND FIELD SURVEY.



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GANNETT FLEMING, INC.
 2 EVIDENCE SUITE 200 HANLTON, NJ 08053
 CERTIFICATE OF AUTHORIZATION NO. 240238052900



MEADOWS MAINTENANCE COMPLEX
 MASON/BUILDING 9 SUBSTATION

EXISTING
 SITE ELECTRICAL PLAN

Contract No.
 13-006
 Drawing
 E-0100
 Sheet
 XX of XXX

PUBLIC SERVICE ELECTRIC AND GAS COMPANY**B.P.U.N.J No. 15 ELECTRIC****Special Provision Proposed Language To Be Added To High Tension Service Tariff Upon Review and Approval of the Board of Public Utilities**

Eligibility for Service: This provision of the HTS tariff applies to substation-related service provided to a rail-rapid transit traction power customer that currently subscribes to High Tension Service (HTS) traction power service delivered at 230 kV to an existing substation facility that has been rebuilt by Public Service based upon the approval of the Board of Public Utilities where such approval permits Public Service to own and operate the substation facility and recover the costs of the substation through rates. In addition, the substation shall be designed to be capable of being connected to a microgrid that can operate in isolation from the electric system in the event of a disaster or extreme weather event.

Description of Service: The service provided herein shall be the provision of power to a substation facility (meeting the eligibility requirement described herein) owned by Public Service that transforms and delivers power for a traction service HTS customer at voltage levels from 230 kV to 55kV, 27kV, and 12kV. Public Service and the customer will be required to enter into a protocols and operational responsibility agreement that addresses the maintenance and operational responsibilities for the substation. Unless the protocols and operational agreement specifically state otherwise, the terms and conditions of Public Service's tariff shall apply.

Rate Schedule: A customer that is provided this service shall be subject to the requirements of this service tariff as applicable for service delivered at the 230 kV level. All service provided to the substation shall be metered at 230 kV and billed at the 230 kV service rate for traction power service as set forth in the HTS service tariff, except for power delivered at 13kV which will be billed under the LPL-P tariff.

Summary of Cost Estimate for Construction of Mason Substation

COMPONENT	ESTIMATED COST (\$K)
Major Equipment	\$45,000
General Conditions, Civil and Architectural Materials and Construction	\$67,000
Electrical Materials and Construction	\$48,000
Detailed Engineering, Licensing & Permitting, Procurement and Construction Management (includes certain NJ Transit cost subject to PSE&G review)	\$12,000
Project Management Costs (includes certain NJ Transit estimated costs, subject to PSE&G review, for field support and design review)	\$36,000
Water Line Reinforcement	\$2,000
Sales Tax	\$2,000
Cost Escalation Estimate	\$14,000
TOTAL BASE COST ESTIMATE	\$226,000
Project Risk & Contingency Assumption	\$42,000

Assumptions for Estimate:

1. The estimate is based on conceptual design drawings dated July 29, 2016.
2. Sales tax has been applied to all underground materials and non-permanent equipment.
3. Escalation of 3.25% per year has been applied to the project.
4. The estimate is based on prevailing wages for Hudson County, NJ.
5. The estimate assumes single 12" diameter concrete filled pipe piles, 100' long for buildings, and 80' for equipment. Pile quantities are based on a 5' x 5' grid for all buildings.
6. The estimate assumes that all construction activities will be performed during regular work hours.
7. Dewatering operation is based on a site filtration recycling system.
8. Backfill is assumed to be Dense Graded Aggregate.
9. The costs of Rail Operations Center feeder 1 and 2 are included.
10. 12KV/25Hz MMC shop feeders are not included.
11. All equipment and materials demolished are assumed to be removed from site and sold for scrap.
12. Estimate assumes all major equipment to be procured by PSE&G. All other materials and equipment will be procured by contractor.
13. Existing Building-9 and the 4 kV gear inside will remain as is.
14. A \$2M allowance is included in the estimate for all expenses incurred for crossing the water line, such as re-lining.
15. All necessary permits are attainable in a timely manner.
16. NJ Transit electrical outages will be available when needed.
17. No environmental remediation is required, NJ Transit assumes all liability for pre-existing environmental conditions, and no contaminated soil and/or water will be encountered during construction.
18. No endangered or threatened species are within the footprint.
19. No work stoppages due to union actions will occur and labor harmony will be maintained.
20. NJ Transit will provide adequate access to the site and other NJ Transit facilities required to construct the project.
21. NJ Transit will provide the required operations personnel necessary to construct the project.
22. Material and major equipment will be available when the job requires.
23. Outside support agencies will be available when needed (e.g., municipalities, police, railroad, New Jersey Department of Transportation (NJ DOT))
24. Hackensack Meadowlands Development Commission will have permitting authority over this project.

25. Driving piles in close proximity to the water main and rail road tracks will be allowed by the water company and the railroad.
26. NJ Transit has identified and mitigated underground utility interferences around the parking deck.
27. All existing equipment does not have PCB oil and there is no material containing asbestos on site.
28. The utility, water companies and NJ DOT will be notified, their utility interferences will be accurately identified, and required easements will be granted.
29. Vendor budgetary estimates were used where equipment specifications were available.
30. An allowance has been made for a leased parcel for laydown and logistics support during project execution.
31. Necessary spare parts are included in the estimate.
32. The installation of the NJ Transit Micro-grid will be coordinated with PSE&G's design and construction team and will not interfere with the substation's plan of execution and in service date.
33. The site will not require any new storm water management, retention or detention.
34. PSE&G will be granted all necessary real estate property rights and acquisitions.
35. Property easements will be acquired at fair market value and the cost for easements is not included in the current cost estimate.
36. Assumes NJ DOT easements will be granted as well as USACOE and Meadowlands Commission.

NOTICE TO PUBLIC SERVICE ELECTRIC AND GAS COMPANY ELECTRIC CUSTOMERS

In The Matter Of The Petition Of Public Service Electric And Gas Company for Approval of the Construction of the Mason Substation Damaged During Superstorm Sandy

Notice of Filing And Notice of Public Hearings

BPU Docket No.: XXXXXXXXXX

TAKE NOTICE that, on August 12, 2016 Public Service Electric and Gas Company (Public Service, PSE&G, the Company) filed a Petition and supporting documentation with the New Jersey Board of Public Utilities (Board, BPU). PSE&G is seeking various Board approvals in connection with the Petitioner's proposed re-construction and resiliency enhancement of the Mason and Building 9 substations located in Kearny, New Jersey (Mason Substation or Substation). The Substation which is currently owned by NJ Transit, serves as a flow-through facility for power transmitted by PSE&G throughout Northern New Jersey, and also provides electricity supply to critical rail transportation facilities owned and operated by New Jersey Transit (NJ Transit)., PSE&G seeks Board approval to make prudently incurred capital expenditures in connection with the design, construction and operation of the new Substation. PSE&G currently estimates that the base capital expenditures will be approximately \$226 million. PSE&G estimates that a risk and contingency allowance of \$42 million should be assumed for purposes of estimating possible project costs. The reconstructed station is anticipated to go into service no sooner than December 2020.

With Board approval of the Company's request, each electric base rate charge is proposed to be adjusted. For illustrative purposes, the estimated range of base rates including New Jersey Sales and Use Tax (SUT) for Residential Rate Schedule RS effective upon the final roll-in is shown in Table #1. Table #2 provides customers with the approximate effect of the estimated range of changes in base rates relating to the construction of the Substation, if approved by the Board, effective upon the final roll-in. The annual percentage increase applicable to specific customers will vary according to the final approved capital expenditures as well as the applicable rate schedule and the level of the customer's usage.

Under the Company's proposal, a residential electric customer using 750 kilowatt-hours per month during the summer months and 7,200 kilowatt-hours on an annual basis would see an estimated cumulative increase in the annual bill from \$1,286.16 to \$1,294.24, or \$8.08 or approximately 0.63% for \$226

million of capital expenditures. A residential electric customer using 750 kilowatt-hours per month during the summer months and 7,200 kilowatt-hours on an annual basis would see an estimated cumulative increase in the annual bill from \$1,286.16 to \$1,295.76, or \$9.60 or approximately 0.75% for \$268 million of capital expenditures. The approximate effect of the proposed electric base rate change on typical electric residential monthly bills, if approved by the Board at each level of capital expenditures, is illustrated in Tables #3 and #4.

Tables #5 and #6 provide customers with the estimated cumulative rate impacts of the construction at each level of capital expenditures to typical and class average customers for Residential, Commercial, and Industrial classes, respectively. The percentage increase applicable to specific customers will vary according to the final approved capital expenditures as well as the applicable rate schedule and the level of the customer's usage. It is anticipated that the Company will make a series of three filings to request the Board's approval to implement revenue requests based upon actual prudently incurred costs as the Substation is brought into service. The Board's decision may increase or decrease the percentages shown.

Any rate adjustments with resulting changes in bill impacts found by the Board to be just and reasonable as the result of the Company's filing may be modified and/or allocated by the Board in accordance with the provisions of N.J.S.A 48:2-21 and for other good and legally sufficient reasons to any class or classes of customers of the Company. Therefore, the described charges may increase or decrease based upon the Board's decision.

Copies of the Company's filing are available for review by the public at the Company's Customer Service Centers, online at the PSEG Web site at <http://www.pseg.com/pseandgfilings> and at the Board of Public Utilities at 44 South Clinton Avenue, Seventh Floor, Trenton, New Jersey 08625-0350.

The following dates, times and locations for public hearings have been scheduled on the Company's filing so that members of the public may present their views. Information provided at the public hearings will

become part of the record of this case and will be considered by the Board in making its decision.

Date 1, 2016	Date 2, 2016	Date 3, 2016
Time 1	Time 2	Time 3
Location 1	Location 2	Location 3
Location 1 Overflow	Location 2 Overflow	Location 3 Overflow
Room 1	Room 2	Room 3
Room 1 Overflow	Room 2 Overflow	Room 3 Overflow
Address 1	Address 1	Address 1
City 1, New Jersey Zip 1	City 2, New Jersey Zip 2	City 3, New Jersey Zip 3

In order to encourage full participation in this opportunity for public comment, please submit any requests for needed accommodations, such as interpreters, listening devices or mobility assistance, no less than 48 hours prior to the above hearings to the Board's Secretary at the following address.

Customers may also file written comments with the Secretary of the Board of Public Utilities at 44 South Clinton Avenue, Third Floor, Suite 314, P.O. Box 350, Trenton, New Jersey 08625-0350 ATTN: Secretary Irene Kim Asbury whether or not they attend the public hearings. To review PSE&G's rate filing, visit <http://www.pseg.com/pseandgfiling>.

Table #1
ESTIMATED BASE RATES
For Residential RS Customers
Rates Effective Upon Final Roll-In

Rate Schedule			Base Rates		
			Charges in Effect June 1, 2016 Including SUT	Estimated Charges Including SUT at \$226 Million Of Capital Expenditures	Estimated Charges Including SUT at \$268 Million Of Capital Expenditures
RS	Service Charge	per month	\$2.43	\$2.43	\$2.43
	Distribution 0-600, June-September	\$/kWh	0.038529	0.041224	0.041727
	Distribution 0-600, October-May	\$/kWh	0.035678	0.035678	0.035678
	Distribution over 600, June-September	\$/kWh	0.042617	0.045312	0.045815
	Distribution over 600, October-May	\$/kWh	0.035678	0.035678	0.035678

Table #2
Estimated Percentage Change in Revenue
by Customer Class For Electric Service
For Rates Effective Upon Final Roll-In

	Rate Class	Percent Change at \$226 million of Capital Expenditures	Percent Change at \$268 million of Capital Expenditures
Residential	RS	0.63	0.75
Residential Heating	RHS	0.63	0.75
Residential Load Management	RLM	0.52	0.61
Water Heating	WH	1.12	1.33
Water Heating Storage	WHS	0.19	0.23
Building Heating	HS	0.81	0.97
General Lighting & Power	GLP	0.56	0.66
Large Power & Lighting - Sec	LPL-S	0.40	0.47
Large Power & Lighting - Primary	LPL-P	0.30	0.35
High Tension - Subtr	HTS-S	0.19	0.22
High Tension – HV	HTS-HV	0.17	0.20
Body Politic Lighting	BPL	2.05	2.43
Body Politic Lighting – POF	BPL-POF	0.73	0.86
Private Street & Area Lighting	PSAL	2.02	2.40
Overall		0.53	0.63

The percent increases noted above are based upon August 1, 2016 Delivery Rates, the applicable Basic Generation Service (BGS) charges, and assumes that customers receive commodity service from Public Service Electric and Gas Company.

Table #3
Residential Electric Service for Rates Effective Upon Final Roll-in
\$226 million of Capital Expenditures

If Your Annual Kilowatt-hour Use Is:	And Your Monthly Summer Kilowatt-hour Use Is:	Then Your Present Monthly Summer Bill (1) Would Be:	And Your Proposed Monthly Summer Bill (2) Would Be:	Your Monthly Summer Bill Increase Would Be:	And Your Monthly Percent Increase Would Be:
1,920	200	\$37.69	\$38.22	\$0.53	1.41%
4,320	450	81.73	82.94	1.21	1.48
7,200	750	136.68	138.70	2.02	1.48
7,800	803	146.76	148.92	2.16	1.47
13,160	1,360	252.64	256.30	3.66	1.45

- (1) Based upon Delivery Rates and Basic Generation Service Residential Small Commercial Pricing (BGS-RSCP) charges in effect August 1, 2016 and assumes that the customer receives BGS-RSCP service from Public Service Electric and Gas Company.
- (2) Same as (1) except includes change for the construction of the Mason Substation.

Table #4
Residential Electric Service for Rates Effective Upon Final Roll-in
\$268 million of Capital Expenditures

If Your Annual Kilowatt-hour Use Is:	And Your Monthly Summer Kilowatt-hour Use Is:	Then Your Present Monthly Summer Bill (1) Would Be:	And Your Proposed Monthly Summer Bill (2) Would Be:	Your Monthly Summer Bill Increase Would Be:	And Your Monthly Percent Increase Would Be:
1,920	200	\$37.69	\$38.33	\$0.64	1.70%
4,320	450	81.73	83.17	1.44	1.76
7,200	750	136.68	139.08	2.40	1.76
7,800	803	146.76	149.33	2.57	1.75
13,160	1,360	252.64	256.99	4.35	1.72

- (1) Based upon Delivery Rates and Basic Generation Service Residential Small Commercial Pricing (BGS-RSCP) charges in effect August 1, 2016 and assumes that the customer receives BGS-RSCP service from Public Service Electric and Gas Company.
- (2) Same as (1) except includes change for the construction of the Mason Substation.

Table #5
Projected Cumulative Percent Change
From Annual Bills Effective Upon Final Roll-in
\$226 of Capital Expenditures

Rate Class	Current Bill As of June 1, 2016	Estimated Bill Upon Final Roll-in	Estimated Increase (\$)	Estimated % Increase
RS	\$1,286.16	\$1,294.24	\$8.08	0.63%
RHS	1,898.76	1,910.56	11.80	0.62
RLM	3,305.65	3,322.01	16.36	0.49
GLP	5,076.52	5,104.88	28.36	0.56
LPL-S	182,261.24	182,985.04	723.80	0.40
LPL-P	492,751.88	494,228.24	1,476.36	0.30
HTS-S	2,431,063.44	2,435,578.32	4,514.88	0.19

The percent increases noted above are based upon Delivery Rates in effect August 1, 2016 and the applicable Basic Generation Service (BGS) charges and assumes that customers receive commodity service from Public Service Electric and Gas Company. It is anticipated that the Company will, after the Mason Substation is placed in service, make filings to request the Board's approval to implement the requested revenue adjustment. The Board's decision may increase or decrease the percentages shown above.

Table #6
Projected Cumulative Percent Change
From Annual Bills Effective Upon Final Roll-in
\$268 of Capital Expenditures

Rate Class	Current Bill As of June 1, 2016	Estimated Bill Upon Final Roll-in	Estimated Increase (\$)	Estimated % Increase
RS	\$1,286.16	\$1,295.76	\$9.60	0.75%
RHS	1,898.76	1,912.76	14.00	0.74
RLM	3,305.65	3,325.12	19.47	0.59
GLP	5,076.52	5,110.24	33.72	0.66
LPL-S	182,261.24	183,120.08	858.84	0.47
LPL-P	492,751.88	494,503.80	1,751.92	0.36
HTS-S	2,431,063.44	2,436,416.12	5,352.68	0.22

The percent increases noted above are based upon Delivery Rates in effect August 1, 2016 and the applicable Basic Generation Service (BGS) charges and assumes that customers receive commodity service from Public Service Electric and Gas Company. It is anticipated that the Company will, after the Mason Substation is placed in service, make filings to request the Board's approval to implement the requested revenue adjustment.. The Board's decision may increase or decrease the percentages shown above.

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PUBLIC SERVICE ELECTRIC AND GAS COMPANY