TO: NEPOOL Markets Committee Membership DATE: February 26, 2019

FROM: Joel Gordon, PSEG Energy Resources & Trade LLC

RE: Proposed Amendments to ISO-NE Proposal Interim Winter Energy Security Program – Chapter 2B

**Overview:**

PSEG will offer two amendments to the ISO-NE proposal on Chapter 2B – the Interim Compensation Treatment of the Winter Energy Security Proposal as presented to the MC over the last several committee meetings. Specifically, the amendments will address one direct component of the program – the timing of when the actual payment rate is set. The second will address how the program is incorporated into the Internal Market Monitor’s treatment of revenues associated with the program when the IMM conducts its Static Delist Bids reviews during the qualification process under the Forward Capacity Auction.

Together, the amendments will act to create greater efficiency in the implementation of the proposed design by using market-based information in a timelier manner enhancing the success of the interim program and resulting in greater levels of contracting of LNG-based supply contracts. These amendments will improve fuel security across the pool during the FCM delivery period. In addition, it will also improve the competitiveness of the FCA itself, by better reflecting the expected market conditions faced by suppliers in the auction over that same delivery period.

**Amendment I**: Set the Inventoried Energy Base Payment rate on April 30, prior to the Delivery Period.

**Argument:**

It is widely recognized that setting the Energy Base Payment rate for the Winter delivery period over four years prior to when the contracts are expected to be obtained increases the likelihood that the rate will be inconsistent with market conditions when resources are expected to go to market to obtain those contracts. If the rate is too low, the program will fail to procure the additional fuel security needs of the system. Conversely, if the rate is too high, the overall cost of the program will be greater than otherwise required to achieve its objectives. Thus, setting the rate closer to the contract period will better align the program with the market conditions – a valuable condition necessary to ensure its success at the most efficient cost.

Failure to better align market conditions with the program rate would undermine LNG contracting and would result in a violation of two of the four objectives of the program:

* Objective A: Not all fuel secure capable resources would be compensated for the fuel security service currently being paid to the Mystic Units.
* Objective B: Resources unable to procure an LNG contract due to insufficient rates would be subjected to lower net capacity revenues resulting in a higher likelihood of early retirements.

While it has been suggested that setting the rate four years in advance provides a level of certainty regarding the program costs to wholesale suppliers (those who are allocated the cost of the program) and revenue streams to resources, that is not the entire picture.. One could just as easily claim that setting the rate so far in advance increases the level of uncertainty as relates to resources ability to participate in the program (rate is too low) and thus adds uncertainty as to net market revenues to resources. In addition, it raises the uncertainty as to the impact on the capacity auction outcomes depending upon the type of resource that is the marginal unit in the auction and its projected contribution to revenues. This uncertainty impacts both load as well as suppliers. PSEG contends that the uncertainties created by such forward rate setting of a volatile commodity product significantly outweigh any benefits obtained from the forward rate setting.

**Proposed Tariff Language Redlines:**

III.K.2 Inventoried Energy Base Payments

A Market Participant participating in the forward and spot components of the inventoried energy program shall receive a base payment for each day of the months of December, January, and February. Each such base payment shall be equal to the Market Participant’s Forward Energy Inventory Election (adjusted as described in Section III.K.1.1) multiplied by the rate set on April 30 prior to the delivery period as calculated under Section III.K.2.A below delineated on a per MWh and divided by the total number of days in those three months.

III.K.2.A. The Inventoried Energy Base Payment will be determined consistent with the methodology presented by the Analysis Group “Calculation of Rate for Interim Compensation Program” dated January 30, 2019 which uses the ten contracted call options for LNG over the three winter period months methodology. This methodology will be applied in April prior to the delivery period so that the most up-to-date market based inputs to the model can be incorporated into the rate. This updated rate will be filed with the FERC in April prior to the delivery period. Specifically those updated inputs will include, but not limited to, the following market based values:

* The Commodity Price of the LNG call option will be determined using the average of the forward prices for the winter period over the first quarter of the calendar year prior to the delivery period. (i.e.: The average of the forward prices in January, February and March 2022 for the cost of LNG delivered in December 2022, and in January and February 2023). Ref: Page 2 of Analysis “Commodity Price of $10/MMBtu”)
* The Henry Hub price will be simulated using a starting price equal to the average of the three monthly forward rates for each of the winter delivery months during the first quarter of the year prior to the delivery period. (i.e.: The average of the Henry Hub forward prices in January, February and March 2022 for the cost of natural gas delivered in December 2022, and in January and February 2023). Ref: Page 3 of Analysis “Henry Hub price’)
* The Locational Marginal Price (LMP) used for determining incremental revenues will be updated to reflect most recent historical values using DA values. Ref: Page 6 of Analysis “Locational Marginal Price.”
* Natural gas prices will be updated to reflect average prices during certain past peak winter conditions, including the most recent winter periods. Ref: Page 6 of Analysis “Locational Marginal Price” for Natural gas price estimates”

**Amendment II:** Revise the language of how the IMM evaluates Static Delist Bids to incorporate forward looking revenue streams, consistent with existing language for Retirement Delist Bids, Permanent Delist Bids, CASPR Test Price Submissions, and New Supply Offer MOPR reviews.

**Argument:**

With the addition of this new program, the IMM has indicated that it will incorporate projected net revenues resulting from this program (both program net revenues and energy market impacts) into all Retirement and Permanent Delist Bids, CASPR Test Price Submissions, New Supply Offers, and Static Delist Bids participating in the FCA during the interim period: “The Internal Market Monitor (IMM) will account for expectations of ICT revenue and costs in its administration of the FCM and energy market mitigation rules.” Ref: Page 1 IMM Memo to MC February 1, 2019.

Under existing capacity market mitigation rules, resource owners provide to the IMM their own projected revenues and costs of participating in the market for all but Static Delist Bids. The language from the existing tariff is for those resource types are shown below. The relevant excerpts are italicized for emphasis.

**III.13.1.2.3.2.1.2.B Permanent De-List Bid and Retirement De-List Bid Net Present Value of Expected Cash Flows**.

The net present value of the *Existing Capacity Resource’s expected cash flows* is equal to (i) the net present value of *the Existing Capacity Resource’s net annual expected cash flows over the resource’s remaining economic life*.

**Expected net operating profit**, in dollars, *is the Lead Market Participant’s expected annual profit* that might otherwise be avoided or not accrued if the resource were not subject to the obligations of a listed capacity resource during the Capacity Commitment Period.

**Retirement or Permanent Delist Bid Model User Guide – Line 50:** *The Market Participant shall provide the source of the energy revenue forecast and explain any adjustments to expected revenues over the forecast period in the Project Assumptions tab.*

**Expected capacity revenues**, in dollars, *are the forecasted annual expected capacity revenues based on the Lead Market Participant’s forecasted expected capacity prices* for each of the subsequent Capacity Commitment Periods of the resource’s remaining economic life.

(NOTE: The methodology is the same for CASPR Test Price Submissions and New Supply Offers:

CASPR Test Price Submission: Under Section III.13.2.8.3.1A(b), the IMM will review the participant-submitted test price *using the same cost-review framework that is utilized for Retirement De-List Bids*.

New Supply Offers: “Line 57 – Energy Revenue ($/MWh)) *The Project Sponsor shall provide the source of the energy revenue forecast and explain any adjustments to expected revenues over the forecast period in the Project Assumptions tab.*”

**However, the methodology for evaluating the forecasted revenue streams for Static Delist bids was not updated during recent rule revisions and continues to reflects backward looking revenue forecast –** effectively using historic revenues and gross margins looking backwards up to three years as the revenue forecast applied over three years forward for the future capacity delivery period. It is widely acknowledged that such a rear view forecasting methodology is inappropriate in a market in which there is a large shift in the generating technologies being employed and with changes to the overall fuel mix in the supply stack.

Existing Tariff Provisions and IMM User Guides (emphasis added in italics):

**III.13.1.2.3.2.1.2.A. Static De-List Bid and Export Bid Net Going Forward Costs**.

The Lead Market Participant for an Existing Capacity Resource that submits a Static De-List Bid or an Export Bid at or above the Dynamic De-List Bid Threshold that is to be reviewed by the Internal Market Monitor shall report net going forward costs in a manner and format specified by the Internal Market Monitor …

As soon as practicable*, the resource’s total ISO market revenues used in this calculation shall be calculated by the ISO* and available to the Lead Market Participant upon request.

**Static Delist Bid Model – User Guide Section 2.0: Infra-marginal Revenue** – calculated by subtracting all submitted cost data representing the cumulative actual cost of production (total expenses related to the production of energy, e.g. fuel, actual consumables such as chemicals and water, and, if quantified, incremental labor and maintenance) from the total ISO market revenues as provided by ISO-NE. I

**Cells C33-H33 – ISO Revenues ($)** Enter the ISO revenues, in dollars, in Cells C33-H33 for each individual unit that is the subject of this De-list Bid submission. *This information is provided by ISO-NE.*

**4.0 Import ISO Table**

The *Import ISO Table* worksheet is designed for Market Participants to import a table of relevant values *that are provided by ISO-NE* for use in populating certain sections of the *General Inputs* worksheet. *These values include* the following: EFORd; *ISO Revenues*; and Peak Energy Rent.

**Proposed Tariff Changes:**

The changes shown in redline below comport the Static Delist Bid net revenue determination with how Retirement and Permanent Delist net revenues are evaluated by the IMM. The majority of the proposed changes are simply copied from the existing language from the Retirement/Permanent Delist bid methodology of the tariff and inserted into the Static Delist Bid section. The entirety of the section is included for completeness.

**III.13.1.2.3.2.1.2.A. Static De-List Bid and Export Bid Net Going Forward Costs**.

The Lead Market Participant for an Existing Capacity Resource that submits a Static De-List Bid or an Export Bid at or above the Dynamic De-List Bid Threshold that is to be reviewed by the Internal Market Monitor shall report all expected costs, revenues, prices, discount rates and capital expenditures in a manner and format specified by the Internal Market Monitor, and may supplement this information with other evidence. The Internal Market Monitor will review the Lead Market Participant’s submitted data to ensure that it is consistent with overall market conditions and reflects expected values. The Internal Market Monitor will adjust any data that are inconsistent with overall market conditions or do not reflect expected values . A Static De-List Bid or Export Bid at or above the Dynamic De-List Bid Threshold shall be considered consistent with the Existing Capacity Resource’s net going forward costs based on a review of the data submitted in the following formula. To the extent possible, all costs and operational data used in this calculation shall be the cumulative actual data for the Existing Capacity Resource from the most recent full Capacity Commitment Period available.

[*GFC –IMR]* x *InfIndex*

(*CQSummer, kw*) x (12,*months*)

Where:

GFC = annual going forward costs, in dollars. These are costs that might otherwise be avoided or not incurred if the resource were not subject to the obligations of a listed capacity resource during the Capacity Commitment Period (i.e., maintaining a constant condition of being ready to respond to commitment and dispatch orders). Costs that are not avoidable in a single Capacity Commitment Period and costs associated with the production of energy are not to be included. Service of debt is not a going forward cost. Staffing, maintenance, capital expenses, and other normal expenses that would be avoided only in the absence of a Capacity Supply Obligation may be included. Staffing, maintenance, capital expenses, and other normal expenses that would be avoided only if the resource were not participating in the energy and ancillary services markets may not be included, except in the case of a resource that has indicated in the submission of a Static De-List Bid that the resource will not be participating in the energy and ancillary services markets during the Capacity Commitment Period. To the extent that the Capacity Commitment Period data used to calculate these data do not reflect known and measurable costs that would or are likely to be incurred in the relevant Capacity Commitment Period, the Internal Market Monitor shall also consider adjustments submitted, provided the costs are based upon expectatons of the Lead Market Participant and supported by appropriate documentation to reflect those costs.

CQSummerkW = capacity seeking to de-list in kW. In no case shall this value exceed the resource’s summer Qualified Capacity.

IMR = annual infra-marginal rents, in dollars. In the case of a resource that has indicated in the submission of a Static De-List Bid that the resource will not be participating in the energy and ancillary services markets during the Capacity Commitment Period, this value shall be calculated by subtracting all submitted cost data representing the cumulative actual cost of production (total expenses related to the

production of energy, e.g. fuel, actual consumables such as chemicals and water, and, if quantified, incremental labor and maintenance) from the Existing Generating Capacity Resource’s annual expected market revenues. In the case of a resource that has not indicated in the submission of a Static De-List Bid that the resource will not be participating in the energy and ancillary services markets during the Capacity Commitment Period, this value shall be $0.00.

NOTE: PER is no longer part of the market design

InfIndex = inflation index. infIndex = (1 + *i*)4

Where: “*i*” is the most recent reported 4- Year expected inflation number published by the Federal Reserve Bank of Cleveland at the beginning of the qualification period. The specific value to be used shall be specified by the ISO and available to the Lead Market Participant.