

IN THE MATTER OF THE IMPLEMENTATION OF P.L. 2018, C. 17, THE NEW JERSEY CLEAN ENERGY ACT OF 2018, REGARDING THE ESTABLISHMENT OF ENERGY EFFICIENCY AND PEAK DEMAND REDUCTION PROGRAMS, DOCKET NO. QO19010040

IN THE MATTER OF THE IMPLEMENTATION OF P.L. 2018, C. 17, THE NEW JERSEY CLEAN ENERGY ACT OF 2018, REGARDING THE SECOND TRIENNIUM OF ENERGY EFFICIENCY AND PEAK DEMAND REDUCTION PROGRAMS, DOCKET NO. QO23030150

IN THE MATTER OF ELECTRIC PUBLIC UTILITIES AND GAS PUBLIC UTILITIES OFFERING ENERGY EFFICIENCY AND CONSERVATION PROGRAMS, INVESTING IN CLASS I RENEWABLE ENERGY RESOURCES AND OFFERING CLASS I RENEWABLE ENERGY PROGRAMS IN THEIR RESPECTIVE SERVICE TERRITORIES ON A REGULATED BASIS, PURSUANT TO N.J.S.A. 48:3-98.1 AND N.J.S.A. 48:3-87.9 – MINIMUM FILING REQUIREMENTS, DOCKET NO. QO17091004

### **STAFF STRAW PROPOSAL**

Staff herein proposes a framework for implementation of the second triennium (“Triennium 2”) of New Jersey’s energy efficiency (“EE”) programs implemented pursuant to the Clean Energy Act of 2018 (“CEA”). This framework will supersede the EE program framework for the first triennium (“Triennium 1”) of programs as adopted by the Board on June 10, 2020.<sup>1</sup>

...

### **III. GOALS, TARGETS, PERFORMANCE INCENTIVE MECHANISM, ENERGY SAVINGS CARRYOVER**

The CEA establishes that the Utilities must achieve energy savings of 0.75% for the natural gas utilities and 2% for the electric utilities “of the average annual usage in the prior three years within five years of implementation of its energy efficiency program.”<sup>2</sup>

The CEA also provided the following guidance:

[T]he board shall adopt quantitative performance indicators for each electric public utility and gas public utility, which shall establish reasonably achievable targets for energy usage reductions and peak demand reductions and take into account the public utility’s energy efficiency measures and other non-utility energy efficiency measures including measures to support the development and implementation of building code changes, appliance efficiency standards, the Clean Energy program, any other State-sponsored energy efficiency or peak reduction programs, and public utility energy efficiency programs that exist on the date of enactment of [the CEA]. In establishing quantitative performance indicators, the board shall use a methodology that incorporates

---

<sup>1</sup> In re the Implementation of P.L. 2018, c. 17 Regarding the Establishment of Energy Efficiency and Peak Demand Reduction Programs, BPU Docket No. QO19010040 (Order dated June 10, 2020) (“June 10, 2020 Order”).

<sup>2</sup> N.J.S.A. 48:3-87.9(a).

weather, economic factors, customer growth, outage-adjusted efficiency factors, and any other appropriate factors to ensure that the public utility's incentives or penalties . . . are based upon performance, and take into account the growth in the use of electric vehicles, microgrids, and distributed energy resources.<sup>3</sup>

## A. Goals

Staff commissioned a goal-setting study to establish cost-effective goals for the three years of Triennium 2 (July 2024–June 2027).<sup>4</sup> In addition, the study sought to identify cost-effective goals for the State- and Utility-run programs by conducting several scenarios.

Staff notes several key assumptions of the goal-setting study:

- Estimated and incorporated the impacts of federal efficiency rebates anticipated to be available through the Inflation Reduction Act during Triennium 2
- Assumed aggressive adoption rates for several electric measures
- Assumed that incentive levels match 100% of incremental measure costs
- Did not take into account energy savings expected to be achieved through New Jersey's codes and standards (e.g., Energy Subcode applicable to new construction, Rehabilitation Code applicable to existing buildings, and appliance standards law) and State-run programs by State agencies outside of BPU (e.g., Weatherization Assistance Program ("WAP") administered by the New Jersey Department of Community Affairs). BPU is currently estimating the energy savings from these sources, which would contribute to additional energy savings achievement by State-run programs.

The "full compliance" scenario (Scenario B) presented below reflects achievable, cost-effective energy savings by State- and Utility-administered programs. The scenario assumes that savings targets are capped at the CEA-mandated targets, increasing the rate of annual adoption for select measures by adjusting maximum achievable penetrations based on current market conditions and increasing administrative costs by 10% for those measures.

Table 1 includes Triennium 1 (July 2021–June 2024) savings targets for the purposes of comparison with the Triennium 2 savings targets presented in the goal-setting study.

---

<sup>3</sup> N.J.S.A. 48:3-87.9(c).

<sup>4</sup> The *2023 New Jersey BPU Goal Setting Study* will be available on the "Program Evaluations, Market Analysis and TRMs" page in the "Market Potential Studies" section at <https://www.njcleanenergy.com/main/public-reports-and-library/market-analysis-protocols/market-analysis-baseline-studies/market-an>

Table 1<sup>5</sup>

Year	Natural Gas			Electric		
	Scenario B. State-Administered Annual Energy Reduction Target (% of retail sales)	Scenario B. All Utility-Administered Annual Energy Reduction Target (% of retail sales)	Total	Scenario B. State-Administered Annual Energy Reduction Target (% of retail sales)	Scenario B. All Utility-Administered Annual Energy Reduction Target (% of retail sales)	Total
<b>Triennium 1</b>						
<b>2024</b>	0.07%	0.55%	<b>0.61%</b>	0.13%	1.18%	<b>1.31%</b>
<b>Triennium 2</b>						
<b>2025</b>	0.08%	0.61%	<b>0.68%</b>	0.18%	1.48%	<b>1.66%</b>
<b>2026</b>	0.08%	0.67%	<b>0.75%</b>	0.23%	1.77%	<b>2.00%</b>
<b>2027</b>	0.08%	0.67%	<b>0.75%</b>	0.23%	1.77%	<b>2.00%</b>

Staff requests stakeholder feedback on whether the Board should apply the following sources of energy savings toward the CEA's annual energy reduction goals:

- For State and Utility incentive programs: Net energy savings
- For all other programs and initiatives (including New Jersey's codes and standards and WAP) such that total energy use reduction will exceed the CEA's annual energy savings goals of 2% and 0.75% by the amount that can be attributed to these programs and initiatives: Gross energy savings

Staff also requests stakeholder feedback on an alternative approach in which the Board would apply both net energy savings from incentive programs *and* energy savings from all other sources (including other programs and initiatives, and market-driven energy savings) toward the CEA's annual energy savings goals.

<sup>5</sup> Staff notes that the Board allowed for a net-to-gross ("NTG") value of 1.0 for the purpose of determining programs' compliance with Triennium 1 targets and called for the development of New Jersey-specific NTG factors. In contrast, the proposed Triennium 2 targets above include NTG adjustments specific to New Jersey based on the effects of free ridership and spillover effects of EE programs that alter the level of energy savings that program administrators can claim for purposes of compliance with the CEA. The NTG study is available on the "Program Evaluations, Market Analysis and TRMs" page in the "Technical Reference Manuals" section at <https://www.njcleanenergy.com/main/public-reports-and-library/market-analysis-protocols/market-analysis-baseline-studies/market-an>.

**B. Targets and Quantitative Performance Indicators (“QPIs”)**

For Triennium 2, Staff proposes tracking and evaluating the Utilities’ performance with the following six QPIs.

**Table 2: Proposed Triennium 2 Quantitative Performance Indicators**

<b>QPI</b>	<b>Description</b>	<b>Weight</b>	<b>Unit</b>
1) Annual Energy Savings	Deemed first year energy savings from measures completed in the given program year	30%	Source MMBtu
2) Annual Demand Savings	Deemed peak demand savings from measures completed in the given program year	10%	Peak MW or peak-day therm
3) Lifetime Energy Savings	Deemed lifetime energy savings from measures completed in the given program year	20%	Source MMBtu
4) LMI and OBC Lifetime Energy Savings	Deemed lifetime energy savings from measures completed in the given program year from low- and moderate-income (“LMI”) and overburdened community (“OBC”) customers	10%	Source MMBtu
5) Small Business Lifetime Energy Savings	Deemed lifetime energy savings from measures completed in the given program year from small business customers	10%	Source MMBtu
6) Cost to Achieve	Total EE portfolio costs divided by total portfolio deemed lifetime energy savings	20%	Total EE portfolio \$ / Lifetime source MMBtu

*Use of Source MMBtu*

While the CEA requires reductions in electricity and natural gas consumption, estimated as a percent of retail sales, for the purpose of setting detailed QPIs, Staff proposes using source MMBtu units to also capture energy savings from fuel switching measures, as contemplated in the proposed building decarbonization start-up programs. Use of source MMBtu provides a unifying, common energy unit for analyzing and combining impacts across fuels.

Source MMBtu shall be calculated by multiplying the site-based kWh and therm impact values, from the New Jersey Technical Reference Manual (“TRM”), with site-to-source conversion factors expressed as the ratio of Source Btu to Site Btu, by year.

For electricity, Source Btu shall incorporate losses associated with electricity generation efficiency and transmission and distribution (“T&D”) losses that occur between generation and site. Source Btu for electricity are based on an estimate of the heat rate per MWh for PJM, de-escalated to a value equivalent to a 50% reduction in CO<sub>2</sub> emissions by 2050, as compared to the initial PJM-based value, consistent with the rate of de-escalation of CO<sub>2</sub> emissions as specified in the New Jersey Cost Test (“NJCT”). For electricity, conversion of Site kWh to Site Btu is first calculated based on 3,412 Btu per kWh and then converted to Source Btu using the Site-to-Source Conversion Factors in Table 3.

The starting value for the heat rate is based on the mix of marginal generation units for PJM

using heat rates by plant type from EIA and calculating a weighted average heat rate based on PJM's reported share of each plant type associated with marginal generation.<sup>6</sup> The resulting heat rates and Site-to-Source MMBtu Conversion Factors are shown in Table 3. The values in the table include line losses, which are calculated using a statewide average of 5.8% multiplied by a marginal loss factor of 1.5, as per the NJCT.

Source Btu for fossil fuels shall be based on the latest EPA Btu conversion values, adjusted to account for losses (Source Btu = Site Btu/(1-losses)).

---

<sup>6</sup> Heat rates for fossil and nuclear resources are from EIA's Electric Power Annual, <https://www.eia.gov/electricity/annual/>. For renewable resources, including wind and solar, a heat rate of 3,412 was used. A weighted average heat value was calculated for 2022 using the percent of each generator type from *PJM's 2018–2022 CO<sub>2</sub>, SO<sub>2</sub> and NO<sub>x</sub> Emission Rates*, April 27, 2023, Table 1 for the year 2022. <https://www.pjm.com/-/media/library/reports-notice/special-reports/2023/2022-emissions-report.ashx>

**Table 3: Electricity Heat Rates and Site-to-Source Conversion Factors**

Year	Heat Rate (MMBtu per MWh)	Site-to-Source Conversion Factor (StS-CF)
2022	7,899	2.54
2023	7,822	2.51
2024	7,744	2.49
2025	7,667	2.46
2026	7,589	2.44
2027	7,512	2.41
2028	7,435	2.39
2029	7,357	2.36
2030	7,280	2.34
2031	7,203	2.31
2032	7,125	2.29
2033	7,048	2.26
2034	6,971	2.24
2035	6,893	2.21
2036	6,816	2.19
2037	6,738	2.16
2038	6,661	2.14
2039	6,584	2.11
2040	6,506	2.09
2041	6,429	2.06
2042	6,352	2.04
2043	6,274	2.01
2044	6,197	1.99
2045	6,120	1.96
2046	6,042	1.94
2047	5,965	1.91
2048	5,888	1.89
2049	5,810	1.87
2050	5,733	1.84
2051	5,655	1.82
2052	5,578	1.79
2053	5,501	1.77
2054	5,423	1.74
2055	5,346	1.72
2056	5,269	1.69
2057	5,191	1.67
2058	5,114	1.64
2059	5,037	1.62
2060	4,959	1.59

## QPIs

Each QPI is the percent achievement against a target that the Utility shall file for each program year. For example, if the filed value is 10,000 MWh and the achievement is 11,000 MWh, the QPI value is 1.1 (which is unitless). For cost to achieve, the QPI should be inverted such that the filed value is the numerator and the achievement is the denominator.

The first QPI, annual savings, directly pertains to the goals in Section III(A). For each remaining QPI, the Utility shall file a target for the QPI along with detailed calculation based on the forecast of measures in their portfolio of programs across the three program years. In calculating and filing proposed QPIs, the Utilities should use a consistent methodology based on the formulas and other guidance provided by Staff.

As an example of Staff guidance, Staff proposes that the Utility targets applicable to small business lifetime energy savings (QPI #5) should be approximately proportional to small business customers' contributions to sales and, likewise, that the targets applicable to LMI and OBC lifetime energy savings (QPI #4) should be approximately proportional to the contributions to sales by LMI customers and residential customers residing in OBCs.

Staff seeks stakeholder input about whether Staff should develop recommended targets applicable to the lifetime energy savings QPI for the minimum ratio of lifetime-to-first-year energy savings or weighted average expected useful life of EE measures at the portfolio level. The goal-setting study is one source to estimate the weighted average expected useful life. The study models annual savings of each measure. The expected useful life of each measure times the annual savings yields lifetime savings. The sum of lifetime savings across all measures divided by the sum of annual savings across all measures yields the weighted average expected useful life.

For the purposes of calculating QPIs, the Utilities should submit forecasts of retail sales in each of the preceding years that comprise the three-year average. Verified deemed savings will be utilized for the purposes of calculating actual performance and applying incentives and penalties relative to that three-year average, which will apply for the duration of the triennium.

The total weighted QPIs, which is the input to calculate performance incentives and penalties, equates to the weighted sum of the QPIs, as follows:

$$Total\ Weighted\ QPI = \sum_{i=1}^6 weight_i * QPI_i$$

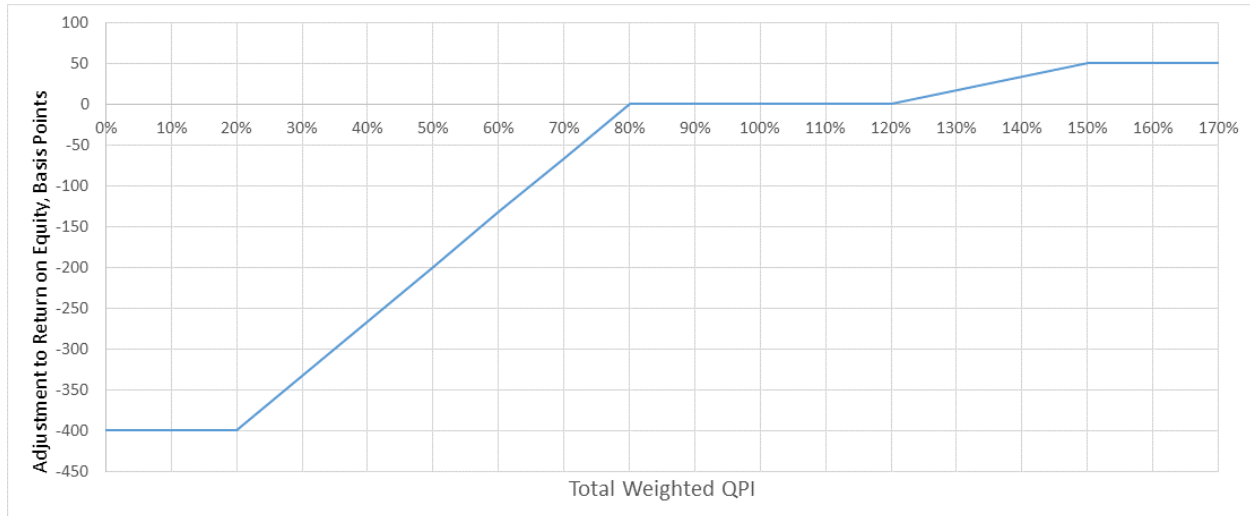
PSE&G should set targets for QPIs for both the natural gas and electricity markets, and then calculate the total weighted QPI for both. PSE&G's company-wide total weighted QPI would then be the weighted average of the natural gas and electricity total weighted QPIs, where the weights are the three-year average baseline retail sales, respectively:

$$PSE\&G\ Total\ Weighted\ QPI = (Total\ Weighted\ QPI_{NG} * Baseline_{NG} + Total\ Weighted\ QPI_{Elec} * Baseline_{Elec}) / (Baseline_{NG} + Baseline_{Elec})$$

### C. Performance Incentive Mechanism (“PIM”)

The proposed PIM adjusts a Utility’s return on equity (“ROE”) on the Utility’s EE Program investment based on the total weighted QPI as shown in the figure below.

**Figure 1: Proposed Triennium 2 Performance Incentive Mechanism**



The graph shows no adjustment to the ROE if a Utility scores between 80% to 120%. Above 120%, the ROE adjustment increases linearly to 0.5% at 150%. If a Utility achieves 150% or higher, 0.5% is added to its ROE. Going from 80% to 20%, the ROE adjustment (or penalty) becomes increasingly negative. If a Utility is below 20% achievement, then the ROE is adjusted by -400 basis points.

Staff recommends that the Board exercise flexibility in levying penalties due to circumstances outside of Utility control, such as unforeseeable catastrophic circumstances that constitute force majeure events.



#### **D. Energy Savings Carryover for QPIs**

For Triennium 1, the Board approved a stipulation of settlement that allowed the Utilities, in the interest of promoting customer adoption of EE and ensuring EE program continuity, to apply energy savings in excess of annual compliance goals (“Carryover Savings”) toward goals and QPIs for Program Years 2023, 2024, and 2025, with alleviating the Utilities’ minimum energy savings obligations under the CEA. The Board allows Carryover Savings to be applied to only the immediately subsequent Program Year, with the Carryover Savings being the first savings counted prior to application of any EE savings captured in the subsequent Program Year. Carryover Savings applied to Program Year 2025 is limited to no more than 10% of any Utility’s Program Year 2025 annual compliance goal based solely on the savings calculation using the primary metric for Program Year 2025. Should a Utility seek to apply Carryover Savings in excess of 10% of its Program Year 2025 annual compliance goal, the Carryover Savings shall be adjusted based on information reported in each Utility’s Triennium 1 progress report. Such adjustment shall be based on a ratio of the savings reported after application of the Program Year 2024 secondary metric for key measures, as defined by the Technical Reference Manual Committee of the Evaluation, Measurement, & Verification (“EM&V”) Working Group, compared against the savings reported using the Program Year 2024 primary metric used for compliance.

For Triennium 2, Staff requests feedback on whether the Board should continue to allow the Utilities to “bank” and carry over portfolio savings achievements in excess of their annual targeted goals in a given year and apply such achievements to the immediately subsequent future program year or cumulatively to future program years in the triennium according to the parameters outlined below. The intent of such an approach would be to encourage acceleration of EE project adoption, support coordinated program delivery between gas and electric utilities, and promote continuity of market offerings. Carried over achievements would continue to be reported in the year incurred and included during that period for EM&V and cost-effectiveness.

Under this approach, QPI performance incentives or penalties would continue to be calculated based on a Utility’s total weighted performance. However, the Board would allow the Utilities to elect energy and demand QPI results in excess of their annual target to be “banked” for use in future years prior to calculation of performance for each QPI element. Utilities would identify banked QPI achievements and exclude those results to calculate adjusted QPI performance in their annual compliance reports. Utilities would be allowed to apply some or all of their “banked” QPI results in future program year QPI calculation with subsequent annual reports detailing cumulative banked annual energy savings, if applicable. The final QPI performance for each year, including such adjustments (either added or removed from a given year), would be utilized for the purposes of applying incentives and penalties.

Staff requests feedback on whether, if allowed, the banked QPI achievements should only be utilized to offset a penalty and not to earn incentives. Further, Staff requests feedback on whether the Utilities should have the opportunity to elect bank QPI achievements at the end of a program year without opportunity to reverse that election.