

**BEFORE THE  
NEW JERSEY BOARD OF PUBLIC UTILITIES**

**In The Matter Of The Verified Petition Of Jersey Central  
Power & Light Company For Approval Of JCP&L's  
Energy Efficiency and Conservation Plan Including Energy  
Efficiency and Peak Demand Reduction Programs  
(JCP&L EE&C)**

**BPU Docket No. \_\_\_\_\_**

**Direct Testimony  
Of  
Edward C. Miller**

**On Behalf Of  
Jersey Central Power & Light Company**

**September 25, 2020**

1 **I. INTRODUCTION**

2 **Q. Please state your name and business address.**

3 A. My name is Edward C. Miller and my business address is 800 Cabin Hill Drive,  
4 Greensburg, PA 15601.

5 **Q. Please identify your employer and describe your current position.**

6 A. I am employed by FirstEnergy Service Company as Manager, Compliance & Development  
7 in the Energy Efficiency Department. I am responsible for development and compliance  
8 activities related to energy efficiency (“EE”) and peak demand reduction (“PDR”)  
9 programs for the FirstEnergy utilities in Ohio, Maryland, New Jersey, Pennsylvania and  
10 West Virginia. This primarily involves the development of programs and filings to meet  
11 the FirstEnergy utilities’ EE and/or PDR requirements and obligations in the various states.  
12 I report to the Director, Compliance and Reporting in FirstEnergy’s Energy Efficiency  
13 Department (“EE Department”).

14 **Q. What is your educational and professional background?**

15 A. My educational and professional background is set forth in Attachment A to this testimony.

16 **Q. Have you previously testified in proceedings before the New Jersey Board of Public  
17 Utilities (“Board” or “BPU”)?**

18 A. No. However, I have provided testimony before the Pennsylvania Public Utility  
19 Commission, the West Virginia Public Service Commission, the Public Utilities  
20 Commission of Ohio and the Maryland Public Service Commission. I was involved in the  
21 development of EE and PDR programs and filings for the utilities formerly owned by  
22 Allegheny in Pennsylvania, Maryland and West Virginia. Since completion of the merger  
23 of Allegheny with FirstEnergy, I have been involved in the same activities for the

1 FirstEnergy utilities in West Virginia, Maryland, Ohio, Pennsylvania and New Jersey. I  
2 was responsible for the design of the programs included in the FirstEnergy Utilities’  
3 Pennsylvania Phase II and Phase III Energy Efficiency and Conservation (“EE&C”) plans  
4 that were approved by the Commission in Docket Nos. M-2012-2334387/M-2015-  
5 2514767 (Metropolitan Edison Company), M-2012-2334392/M-2015-2514768  
6 (Pennsylvania Electric Company), M-2012-2334395/M-2015-2514769 (Pennsylvania  
7 Power Company) and M-2012-2334398/M-2015-2514772 (West Penn Power Company),  
8 overseeing the team that designed and developed those plans. I had the same  
9 responsibilities related to the Maryland 2012-2014 plan cycle at Case No. 9153, the  
10 Maryland 2015-2017 plan cycle at Case No. 9153, the Maryland 2018-2020 plan cycle at  
11 Case No. 9153, the Maryland 2021-2023 plan cycle at Case No. 9648, the Ohio 2013-2015  
12 Portfolio Plan at Case Nos. 12-2190-EL-POR/ (Ohio Edison Company), 12-2191-EL-  
13 POR/ (The Cleveland Electric Illuminating Company), 12-2192-EL-POR (The Toledo  
14 Edison Company), and the Ohio 2017-2019 Portfolio Plan at Case No. 16-0743-EL-POR.

15 **II. SCOPE OF TESTIMONY**

16 **Q. What is the purpose of your direct testimony?**

17 A. I am testifying in support of the Company’s proposed EE and PDR programs and  
18 subprograms for the period starting July 1, 2021 and ending June 30, 2024 that are included  
19 in the Company’s September 25, 2020 petition seeking approval of the three-year energy  
20 efficiency and conservation plan (“EE&C Plan” or “Plan”) and associated cost recovery.  
21 The JCP&L EE&C Plan consists of 10 EE programs or subprograms and 1 PDR program,  
22 targeting the Company’s entire customer base. These programs are described in detail in  
23 the EE&C Plan attached hereto as Attachment B. This testimony and the attached EE&C

1 Plan contains the information required by the Minimum Filing Requirements For Petitions  
2 Under N.J.S.A. 48:3-98.1, which the Board revised and adopted for the EE and PDR  
3 program filings of utilities (“MFRs”), other than regarding the Company’s proposed cost  
4 recovery and benefit-cost analysis. The MFRs are attached as Appendix B to the Board’s  
5 Order Directing the Utilities to Establish Energy Efficiency and Peak Demand Reduction  
6 Programs, Docket Nos. QO19010040, QO19060748 and QO17091004, dated June 10,  
7 2020 (“June 10 Order”). My testimony will highlight significant aspects of the programs  
8 and subprograms proposed in the JCP&L EE&C Plan and will address directly or by  
9 reference to the EE&C Plan the elements required in the MFRs regarding their  
10 implementation. The calculations and results of the Benefit-Cost Analysis are provided in  
11 separate direct testimony by Brendon J. Baatz of Gabel Associates. The Company’s  
12 proposed revenue requirements, cost recovery mechanism, and bill impacts are provided  
13 in separate direct testimony by Carol Pittavino.

14 **Q. How is your testimony organized?**

15 A. Following the Introduction (Section I) and this Scope of Testimony (Section II), my  
16 testimony (in Section III) provides an overview of the JCP&L EE&C Plan, including a  
17 description the 10 EE programs or subprograms and 1 PDR program. For each individual  
18 EE and PDR program or subprogram, information will be provided or referenced as to the  
19 implementation plan, its target markets, delivery method, incentives, customer financing  
20 options, customer access to current and historic energy usage data, contractor roles,  
21 estimated customer participants by year, projected energy savings by year and budgets by  
22 year. In Section IV, I discuss the Quantitative Performance Indicators for the Company

1 and their evaluation, measurement and verification. In Section V, I describe the  
2 Company's proposed reporting plan.

3 **III. THE JCP&L EE&C PLAN**

4 **A. Overview**

5 **Q. Please describe the JCP&L EE&C Plan.**

6 A. As shown in Table 5 in the Company's Plan, the Company is proposing a total budget of  
7 approximately \$230.1 million over the three-year plan period covered by this filing. The  
8 JCP&L EE&C Plan consists of 11 programs or subprograms designed to achieve energy  
9 and demand savings in all customer sectors. Savings opportunities are offered to the  
10 Company's entire customer base of residential, multi-family, commercial and industrial  
11 customers, with specific opportunities afforded to low and moderate income ("LMI"),  
12 multi-family, small business, and local government customers. Sections 3.1 and 3.2 of the  
13 EE&C Plan describe how the FirstEnergy plan development team ("EE&C Team")  
14 designed the Company's Plan. The plan development process included the following main  
15 activities, with several activities encompassing the entire program development timeline  
16 and being performed concurrently. The EE&C Team reviewed the existing programs and  
17 measures offered by the Company's affiliates in other jurisdiction to assess implementation  
18 and performance. The EE&C Team also reviewed programs and measures offered by other  
19 utilities, as well as other industry information, to identify additional programs and  
20 measures for consideration. The EE&C Team also reviewed New Jersey ("NJ") specific  
21 information including the EE Potential in New Jersey study, the Straw Proposal for New  
22 Jersey's Energy Efficiency and Peak Demand Reduction Programs, the June 10 Order, the  
23 Utility Demographic and Firmographic Profile 2020 study, the NJ Clean Energy Program

1 and the NJ Protocols to Measure Resource Savings. Additionally, the EE&C Team  
2 participated in joint utility design meetings with the other NJ utilities to collaborate on  
3 program designs.

4 **Q. How does the JCP&L EE&C Plan reflect the findings and recommendations of the**  
5 **Utility Demographic and Firmographic Profile 2020 prepared by DNV·GL dated**  
6 **April 30, 2020 (“Demographic Study”)?**

7 A. The Company considered the Demographic Study in the plan development process to  
8 design programs that strive to maximize access to and participation by all customers. As  
9 a result, the Company’s Plan includes components that provide education and awareness,  
10 include low- to no-cost measures, include measures that target specific customer sectors  
11 and types (e.g. small business, LMI), include incentives and access to financing to  
12 overcome initial cost barriers, include offerings that rely on contractors and trade allies,  
13 and include a commitment to workforce development and consideration of local presence  
14 and the amount of business placed with minority, women, veteran and service-disabled  
15 veteran owned businesses (“MWVBEs”) in the selection of third-party implementation  
16 contractors (“TPIC(s)"). The Company will seek to manage barriers to program success  
17 through a commitment to monitoring program performance and feedback channels for  
18 assessing effective program design, delivery, outreach, marketing/advertising, and  
19 improvement opportunities.

20 **Q. How is the Company coordinating elements of its JCP&L EE&C Plan with other**  
21 **utilities?**

22 A. Over the last several months, the EE&C Team has participated in numerous joint utility  
23 design meetings with the other NJ utilities to collaborate on program designs. This effort

1 has resulted in the development of core programs and certain additional initiatives that are  
2 consistent in design and delivery to those of other NJ utilities. More specifically, the  
3 Board's June 10 Order adopted Staff's recommendation that core programs of the utilities  
4 include coordinated and common program elements, and that the utilities should  
5 collaborate on the design of additional initiatives. The Company has been collaborating  
6 through participation in these design meetings, and plans to continue working with the  
7 other utilities to provide consistency in the following areas: common forms for use by  
8 customers and contractors; contractor requirements; open and competitive procurement  
9 protocols where feasible; customer and property eligibility requirements and processes;  
10 eligible measures; incentive ranges; incentive payment processes and timeframes;  
11 customer and contractor engagement platforms; data platforms and database sharing  
12 among program administrators, and quality control standards and remediation policies. In  
13 addition to these specific program elements, the Company has also been collaborating with  
14 the other utilities to provide access to financing options for qualified EE investments as  
15 well as the use of a Statewide Coordinator ("SWC") System in the delivery of programs  
16 that target both electric and gas savings opportunities for overlapping electric and gas  
17 utility customers.

18 **Q. Describe how the Company has coordinated with the other utilities to provide**  
19 **consistency in the foregoing listed areas?**

20 A. As envisioned by the Board's direction on coordinated program offerings, the utilities'  
21 programs are designed to minimize customer confusion, facilitate contractor participation  
22 and present consistent opportunities for customer participation with access to both electric  
23 and gas measures simultaneously, where appropriate. I believe that the utilities recognize

1 that programs will evolve after initial launch and anticipate ongoing collaborative  
2 processes to continue program alignment. Central to both initial launch and ongoing efforts  
3 will be an effort to standardize when appropriate:

- 4 • Common Forms: The utilities plan to collaborate and work with their TPICs to  
5 design and produce common forms such as rebate applications or online rebate  
6 forms.
- 7 • Contractor Requirements: The utilities have discussed contractor requirements for  
8 certain programs and plan to work in partnership with their TPICs to establish  
9 consistent contractor requirements for such programs where applicable.
- 10 • Customer and Property Eligibility Requirements and Processes: The utilities have  
11 collaborated to establish consistent customer eligibility requirements for each  
12 program.
- 13 • Eligible Measures: The Company established measure eligibility in coordination  
14 with the other NJ utilities, and in consideration of industry ratings such as  
15 ENERGY STAR, and the Consortium for Energy Efficiency (“CEE”).
- 16 • Incentive Ranges: The Company established consistent incentive ranges in  
17 coordination with the other NJ utilities and plans to continue to collaborate and work  
18 with their TPICs to align incentive offerings and ranges.
- 19 • Incentive payment processes and timeframes: To encourage contractor  
20 participation, the utilities have coordinated to establish timely contractor payments,  
21 which provide a significant benefit to contractor working capital. The utilities  
22 and/or TPICs plan to complete contractor payments within 60 days following the

1 submission of complete and required paperwork and completion of program  
2 requirements such as necessary field inspections (if required).

3 • Customer and contractor engagement platforms: The utilities continue to work  
4 through coordination efforts regarding customer and contractor engagement  
5 platforms. The Company plans to continue to pursue establishing common  
6 platforms with the other utilities and its TPICs to ease participation of customers  
7 and contractors in programs where applicable.

8 • Data platforms and database sharing: The Company or its third-party vendor will  
9 identify and implement appropriate IT systems to track and report program  
10 participation and other information (“T&R System”). The T&R System will  
11 exchange data with TPIC databases wherever necessary to gather data to upload  
12 key program metrics on a routine basis, and will transmit data feeds with the  
13 Statewide Coordinator system to facilitate data sharing between utilities for  
14 programs that include coordinated delivery of efficiency measures and the  
15 allocation of costs and energy savings among the utilities.

16 **Q. What is JCP&L’s approach to providing programs within the JCP&L EE&C Plan**  
17 **in overlapping service territories?**

18 A. JCP&L will leverage in conjunction with the other New Jersey utilities a SWC System in  
19 the delivery of programs that target both electric and gas savings opportunities for  
20 overlapping electric and gas utility customers. The SWC System will:

21 • Interconnect utility systems and allocate energy savings and costs by fuel type. The  
22 rebates/incentives will be shared between the electric and gas utility in the service

1 territory based on the allocation of electric and gas savings as captured in the SWC  
2 System.

- 3 • Benefit customers, contractors and other program allies through:
  - 4 ○ Reduced program applications and data requirements;
  - 5 ○ Simplified streamlined incentive/rebate processes; and
  - 6 ○ Screening for certain program pre-requisites and completed or in-process  
7 applications.

8 The utilities have issued a Request for Information (“RFI”) for the SWC System to  
9 learn more about systems capabilities and costs to perform this new function and plan  
10 to issue a Request for Proposal (“RFP”) in the near future for development and  
11 implementation of this system in time to support delivery of coordinated programs as  
12 soon as July 1, 2021.

13 **Q. Is Comfort Partners part of this filing?**

14 A. No. The Board’s June 10 Order, at p. 39, adopted Staff’s recommendation that the utilities  
15 and State continue to co-manage low-income program offerings through the Comfort  
16 Partners program and that the Staff and the utilities are to develop three-year program plans  
17 and submit joint filings with the Board as part of the State’s annual budget process.

18 **B. EE and PDR Programs within the JCP&L EE&C Plan**

19 **Q. Please describe the EE programs proposed to be part of the JCP&L EE&C Plan.**

1 A. Table 3 from the Company’s EE&C Plan, as included below, provides an overview of the  
 2 programs included in the EE&C Plan. It lists the proposed programs and subprograms by  
 3 sector, identifies the program type, and provides summary program descriptions:

4

Table 3: JCP&L 2021-2023 Program Summary Description			
Program	Subprogram	Program Type	Description
<b>Residential Programs</b>			
Efficient Products	Efficient Products	Core Utility	Provides incentives for HVAC, lighting, appliances, appliance recycling, consumer electronics and other energy saving equipment through a variety of channels
Existing Homes	Home Performance with Energy Star	Core Utility	Provides a customer a whole home approach for direct install of efficient equipment and comprehensive retrofits
	Quick Home Energy Check-up	Additional Utility	Audits with direct installed measures provided at no additional cost to participants with education about the opportunities to save energy including other program opportunities
	Moderate Income Weatherization	Additional Utility	Audits with direct installed measures, weatherization services, and HVAC repair/replacement provided at no additional cost to participating income qualified customers
Home Energy Education and Management	Behavioral	Additional Utility	Provides education of energy usage through Home Energy Reports and on-line audits, with targeted customized messaging to promote energy savings and conservation opportunities
<b>Commercial &amp; Industrial Programs</b>			
Direct Install	Direct Install	Core Utility	Audits with direct installed measures to small business customers including lighting, controls, HVAC upgrades and refrigeration
Energy Solutions for Business	Prescriptive / Custom	Core Utility	Provides incentives for HVAC, Lighting, Motors & Drives, Refrigeration, Water Heaters, Air Compressors, Food Service Equipment and other efficient equipment and projects
	Energy Management	Additional Utility	Customer engagement targeting efficient building operations through building tune-up, retro commissioning and customized energy management solutions.
	Engineered Solutions	Additional Utility	Provides consultative service throughout delivery, including comprehensive audits, detailed analysis and recommendations of energy efficiency measures and development of project specifications, to assist customers in identifying and undertaking large comprehensive energy-efficiency projects
<b>Multifamily</b>			
Multifamily	Multifamily	Core Utility	Provides audits, direct install measures, prescriptive and custom incentives as well as comprehensive projects for multifamily buildings
<b>Other Programs</b>			
Home Optimization & Peak Demand Reduction	Home Optimization & Peak Demand Reduction	Additional Utility	Provides control and/or optimization of connected devices (e.g. smart thermostats, smart home energy management systems) to target and achieve energy and peak demand savings

5  
6  
7

8 Program descriptions including information about each program required by MFR  
 9 IIa (i) to (xiv) are included in the EE&C Plan. Core programs and subprograms are  
 10 described in Section 4.0 and Additional JCP&L programs and subprograms are described  
 11 in Section 5.0 of the EE&C Plan. Residential programs and subprograms are described in  
 12 Sections 4.1 and 5.1, Commercial and Industrial programs and subprograms are described  
 13 in Sections 4.2 and 5.2, the Multifamily program is described in Section 4.3 and Other  
 14 programs are described in Section 5.3 of the EE&C Plan.

1 **Q. Please describe the PDR program proposed to be part of the JCP&L EE&C Plan.**

2 A. The Company proposes a Home Optimization & PDR program to be implemented in PY3  
3 that manages customer energy usage year-round and in peak periods through connected  
4 devices initially targeting smart thermostats. This program is planned to be implemented  
5 in PY3 to establish program processes, systems and begin to ramp-up program operations  
6 in advance of PY4 recognizing the Board's June 10 Order sets forth expectations for PDR  
7 program requirements beginning in PY4. This program is described in more detail in  
8 Section 5.3 of the EE&C Plan.

9 **Q. Please describe any pilot programs proposed to be part of the JCP&L EE&C Plan.**

10 A. JCP&L does not propose any pilot programs during PY1-PY3. However, the Company  
11 plans to participate in the initiatives led by Staff on EE technology research and  
12 development initiatives. The Company will also collaborate with the other utilities, Staff,  
13 the Electric Power Research Institute ("EPRI") and may participate in research projects or  
14 demonstrations on technological advancements in efficient measures to assess emerging  
15 technologies to determine if further investigation is warranted for inclusion in the Plan or  
16 possibly in future plan cycles. The Company will also continue to monitor technologies  
17 not incorporated into the EE&C Plan, considering the potential for such technologies to be  
18 incorporated in future initiatives with the other utilities and Staff as appropriate. The  
19 Company anticipates that these collective research and development initiatives could lead  
20 to pilot program offerings by the Company and other utilities throughout the duration of  
21 the EE&C Plan, or to modifying program measures and measure eligibility to include  
22 emerging technology that shows the potential to produce cost effective savings.

1 **Q. Please describe the projected energy savings for each program year from the JCP&L**  
 2 **EE&C Plan.**

3 A. Table 4 from the Company’s EE&C Plan, as included below, provides the energy and peak  
 4 demand reduction savings projected under the Plan, by Sector, Program Type, Year and in  
 5 Total:

**Table 4: JCP&L 2021-2023 Summary of Portfolio Energy and Demand Savings <sup>1,2</sup>**

Sector	Program Type	2021		2022		2023		Total	
		KWh Savings	kW Savings						
Residential	<b>Total</b>	<b>68,456,009</b>	<b>6,006</b>	<b>84,756,312</b>	<b>9,756</b>	<b>95,047,250</b>	<b>12,845</b>	<b>248,259,571</b>	<b>28,607</b>
	Core Utility	67,164,734	5,794	68,727,412	6,626	66,977,400	6,801	202,869,546	19,221
	Additional Utility	1,291,275	211	16,028,900	3,130	28,069,850	6,045	45,390,025	9,385
Commercial & Industrial	<b>Total</b>	<b>54,782,583</b>	<b>9,211</b>	<b>88,527,604</b>	<b>15,902</b>	<b>109,842,420</b>	<b>20,140</b>	<b>253,152,606</b>	<b>45,253</b>
	Core Utility	54,507,583	9,186	84,658,564	15,339	96,456,156	17,699	235,622,302	42,224
	Additional Utility	275,000	26	3,869,040	563	13,386,264	2,441	17,530,304	3,029
Multifamily	<b>Total</b>	<b>982,467</b>	<b>113</b>	<b>1,101,217</b>	<b>127</b>	<b>1,219,967</b>	<b>141</b>	<b>3,303,650</b>	<b>381</b>
	Core Utility	982,467	113	1,101,217	127	1,219,967	141	3,303,650	381
Other	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,738,574</b>	<b>13,200</b>	<b>2,738,574</b>	<b>13,200</b>
	Additional Utility	0	0	0	0	2,738,574	13,200	2,738,574	13,200
EE&C Plan Totals	<b>Total</b>	<b>124,221,059</b>	<b>15,330</b>	<b>174,385,132</b>	<b>25,784</b>	<b>208,848,211</b>	<b>46,326</b>	<b>507,454,402</b>	<b>87,441</b>
	Core Utility	122,654,784	15,093	154,487,193	22,092	164,653,523	24,641	441,795,499	61,826
	Additional Utility	1,566,275	237	19,897,940	3,692	44,194,688	21,686	65,658,903	25,615

<sup>1</sup> Values are Retail Net Electricity Savings. To reflect actual realized system-wide savings at the wholesale/generator level, line loss savings would need to be added to the retail net electricity savings.  
<sup>2</sup> Does not include savings from the Co-Managed Comfort Partners program. Savings projections for the Co-Managed Comfort Partners program will be established as part of three-year program plans developed and filed jointly by Staff and the utilities as part of the State’s annual budget process. Savings from the Co-Managed Comfort Partners program will be included in the Company’s annual compliance filing assessing performance towards its OPIs.

6  
 7 Appendix D of the EE&C Plan provides the projected participation and energy savings by  
 8 Sector, Program Type, Program and Subprogram and in Total.

9 **Q. What is the budget each year for the JCP&L EE&C Plan?**

10 A. Table 5 from the EE&C Plan, as included below, provides the budgets by Sector, Program  
 11 Type, Year and in Total:

**Table 5: JCP&L 2021-2023 Summary of Portfolio Costs <sup>1</sup>**

Sector	Program Type	2021		2022		2023		Total	
		Portfolio Budget (\$)	% of Portfolio Budget	Portfolio Budget (\$)	% of Portfolio Budget	Portfolio Budget (\$)	% of Portfolio Budget	Portfolio Budget (\$)	% of Portfolio Budget
Residential	<b>Residential Total</b>	<b>\$ 31,084,742</b>	<b>56%</b>	<b>\$ 39,767,819</b>	<b>51%</b>	<b>\$ 44,385,678</b>	<b>46%</b>	<b>\$ 115,238,239</b>	<b>50%</b>
	Core Utility	\$ 24,895,940	45%	\$ 31,022,959	48%	\$ 34,191,601	47%	\$ 90,110,500	48%
	Additional Utility	\$ 6,188,802	11%	\$ 8,744,860	65%	\$ 10,194,077	44%	\$ 25,127,739	58%
Commercial & Industrial	<b>C&amp;I Total</b>	<b>\$ 22,937,862</b>	<b>41%</b>	<b>\$ 36,515,417</b>	<b>46%</b>	<b>\$ 46,374,986</b>	<b>48%</b>	<b>\$ 105,828,265</b>	<b>46%</b>
	Core Utility	\$ 22,266,134	45%	\$ 32,211,834	49%	\$ 36,266,654	50%	\$ 90,744,621	49%
	Additional Utility	\$ 671,728	10%	\$ 4,303,583	32%	\$ 10,108,333	44%	\$ 15,083,644	35%
Multifamily	<b>Multifamily Total</b>	<b>\$ 1,802,530</b>	<b>3%</b>	<b>\$ 1,877,174</b>	<b>2%</b>	<b>\$ 2,075,301</b>	<b>2%</b>	<b>\$ 5,755,006</b>	<b>3%</b>
	Core Utility	\$ 1,802,530	4%	\$ 1,877,174	3%	\$ 2,075,301	3%	\$ 5,755,006	3%
Other	<b>Other Total</b>	<b>\$ -</b>	<b>0%</b>	<b>\$ 454,156</b>	<b>1%</b>	<b>\$ 2,867,807</b>	<b>3%</b>	<b>\$ 3,321,963</b>	<b>1%</b>
	Additional Utility	\$ -	0%	\$ 454,156	3%	\$ 2,867,807	12%	\$ 3,321,963	8%
Plan Total	<b>Plan Total</b>	<b>\$ 55,825,134</b>	<b>100%</b>	<b>\$ 78,614,566</b>	<b>100%</b>	<b>\$ 95,703,773</b>	<b>100%</b>	<b>\$ 230,143,473</b>	<b>100%</b>
	Core Utility Total	\$ 48,964,604	88%	\$ 65,111,967	83%	\$ 72,533,556	76%	\$ 186,610,127	81%
	Additional Utility Total	\$ 6,860,530	12%	\$ 13,502,599	17%	\$ 23,170,217	24%	\$ 43,533,346	19%

<sup>1</sup> Does not include budget for the Co-Managed Comfort Partners program. The budget for the Co-Managed Comfort Partners program will be established as part of three-year program plans developed and filed jointly by Staff and the utilities as part of the State’s annual budget process.

12

1 Appendix E of the EE&C Plan provides the projected budgets by Cost Category, by Sector,  
2 Program Type, Program and Subprogram and in Total.

3 **Q. How does the Company intend to implement the JCP&L EE&C Plan?**

4 A. The Company intends to provide overall administration and oversight of the Plan and  
5 utilize TPICs to perform various program implementation and support duties. Specific  
6 activities that the Company will oversee include monitoring program performance, the  
7 execution of marketing campaigns, Quality Assurance/Quality Control activities and  
8 tracking and reporting activities. The Company will use TPICs to provide many program  
9 implementation services, including program delivery and fulfillment, marketing, outreach,  
10 rebate processing, EM&V and the support, maintenance and software hosting of the  
11 tracking and reporting system. More specifically, the Company's implementation strategy  
12 will rely on a number of TPICs, program and trade allies and other entities engaged in  
13 energy efficiency to promote, deliver, and support effective deployment of the EE and PDR  
14 programs. Some TPICs will operate as turnkey program delivery contractors while others  
15 will provide specific functions across multiple programs. The Company plans to issue a  
16 request(s) for proposals in the 1st quarter of 2021 for TCIPs who will be responsible for  
17 program implementation and delivery activities, including such aspects as program  
18 marketing, customer enrollment, program and trade ally engagement, application and  
19 rebate processing, documentation and tracking and reporting activities. JCP&L plans to  
20 select the TCIPs in a timeframe that supports timely program implementation upon Board  
21 approval of the Plan or during the period of the EE&C Plan.

22 **Q. Please describe the marketing plan for the JCP&L EE&C Plan.**

1 A. Marketing strategies vary by customer sector and program offerings. Detailed descriptions  
2 of the marketing plan for each program offering are available in each Program Description  
3 in the EE&C Plan under the title “Marketing Plan”.

4 The Company will implement a multi-pronged direct and indirect marketing  
5 campaign to promote the Residential programs. Customers will be exposed to broad-based  
6 energy efficiency awareness campaigns, web-based engagement and information, digital  
7 advertising, social media and hard-copy materials to promote awareness, as well as tie-ins  
8 with other programs. Retailers, wholesalers, distributors, manufacturers and trade allies  
9 will be contacted directly and/or through trade associations to develop networks and  
10 promote involvement in the program where applicable.

11 Marketing may include activities such as:

- 12 • Point of purchase displays and materials, joint advertising, coupons, and special  
13 “instant sales events.”
- 14 • Public relations and public awareness materials.
- 15 • Brochures that describe the benefits and features of the program including application  
16 forms and processes. The brochures will be available for various public awareness  
17 events (community events, presentations, seminars etc.)
- 18 • Bill inserts, bill messages, email, Facebook, Twitter and other social media platforms,  
19 pop-up stores.
- 20 • Company website content providing program information resources, contact  
21 information, online application forms, online retail store and links to other relevant  
22 service and information resources.
- 23 • Customer representatives trained to promote the program to customers.

- 1 • Presence at conferences and public events used to increase general awareness of the  
2 program and distribute program promotional materials.

3 Marketing activities for commercial and industrial programs will target eligible  
4 customers and program allies to inform them of the programs, their components, and the  
5 associated benefits through channels including, but not limited to direct mail, website, trade  
6 shows, the business customer newsletter, and the Company’s account managers. JCP&L  
7 will also work with distributors and contractors to market eligible higher efficiency  
8 equipment. The Company will regularly communicate with its program allies and  
9 participating contractors and provide educational type seminars describing eligibility,  
10 incentives, and other program details to promote and market the program to customers.

11 The marketing strategy for Multifamily programs will focus on informing property  
12 owners, managers, associations, tenant groups, municipalities, and community  
13 organizations about the availability and benefits of the program and how to participate.  
14 Marketing activities will also target the low- and moderate-income multi-family sector.  
15 Key elements of the marketing strategy may include:

- 16 • Targeted outreach through direct mailings and presentations to inform property owners,  
17 managers, apartment associations, tenant groups, municipalities, and community  
18 organizations about the benefits of the program and participation processes.
- 19 • Brochures highlighting the benefits and features of the program as well as the  
20 enrollment and participation processes.
- 21 • Website content providing program information resources and contact information.
- 22 • In-person visits by program representatives.

- 1           • Energy assessments of properties may include the direct installation of standard energy  
2           savings measures to engage, educate and promote the participation of building owners  
3           or facility managers in the other program offerings targeting greater savings.

4           The Company also plans to participate in the Marketing and Equity Working Groups  
5           and will collaborate with Staff and the other utilities to promote the programs and the  
6           overall statewide brand in a cohesive and effective manner while marketing the specific  
7           programs and initiatives to all customers. To broaden outreach and address language  
8           barriers, the Company plans to provide materials in Spanish and to explore developing  
9           materials in a broader range of languages as part of its participation in these Working  
10          Groups.

11 **Q. Please describe the financing plan for the programs within the JCP&L EE&C Plan.**

12 A. To address the requirement of the June 10 Order to offer customers flexible financing  
13 options, the Company plans to leverage third-party financing options for qualified EE  
14 investments in utility programs. JCP&L will make arrangements with third-party loan  
15 providers to finance customer loans, and has incorporated the estimated costs associated  
16 with buying down the interest, fees, and default costs associated with such third-party loans  
17 within its budget to be able to provide low- to no-interest loan opportunities to its  
18 participating customers with similar terms and arrangements offered by the other NJ  
19 utilities. Default costs have been included in the budgeted amounts to address default risk  
20 for the third-party lenders. This will in turn reduce the interest buy-down costs associated  
21 with customer loans and facilitate EE financing opportunities.

22 **Q. What quality control standards and remediation policies will be instituted by the**  
23 **Company to ensure the quality of the programs offered in the JCP&L EE&C Plan?**

1 A. The Company will leverage the experience of its affiliates with implementing EE programs  
2 in other States since 2009 and will deploy quality assurance and quality control measures  
3 to ensure its internal and vendor processes are meeting the goals, requirements and  
4 objectives of the program. Such measures may include routine program performance  
5 reviews, vendor meetings, customer participation surveys, and project inspections.  
6 Additionally, any Trade Ally or Participating Contractor will undergo a thorough  
7 onboarding review and assessment to ensure that participating contractors are licensed,  
8 insured, and that they fully understand program requirements before performing any work  
9 on behalf of the Company for a program. Further, routine reviews and assessments will be  
10 completed throughout implementation of the programs to ensure consistent program  
11 deployment and execution by vendors that meet program requirements and objectives. The  
12 Company will take corrective actions for non-compliance by vendors with program  
13 requirements, objectives or Company standards.

14 **Q. Please describe the workforce development and job-training pipelines proposed by**  
15 **the Company for energy efficiency jobs?**

16 A. The Company has included an annual budget of \$400,000 for workforce development as a  
17 component of its Utility Administration budget for its EE&C Plan for 2021-2023. This  
18 budget was developed in collaboration and is consistent with the budget of other NJ utilities  
19 on a dollar-per-customer basis. The Company plans to participate in the Workforce  
20 Development Working Group to share anticipated program hiring needs and to develop  
21 workforce development and job training partnerships and pipelines in collaboration with  
22 the State and the Workforce Development Working Group and Equity Working Group. In  
23 addition, the Company plans to prioritize criteria including, but not limited to, local

1 presence and the amount of business placed with MWVBES when evaluating contract  
2 proposals from TPICs and participating trade allies to support the program offerings to  
3 ensure the Plan includes opportunities for local, underrepresented and disadvantaged  
4 workers.

5 **Q. Please describe the Company’s proposal for offering the EE programs in the PJM**  
6 **Base Residual Auction (“BRA”).**

7 A. The Board Order requires participation of EE Resources beginning with PY2 in the PJM  
8 2024/25 Base Residual Auctions (“PJM BRA Auctions”). The Company plans to leverage  
9 the experience of its affiliates in other States with PJM capacity market participation to  
10 develop its EE offers for the PJM BRA Auctions. Consistent with the joint-utility process  
11 proposed to Board staff, the Company will identify and quantify all EE resources for each  
12 auction taking into account PJM EE eligibility, capacity resource ownership rights,  
13 estimation of PJM Capacity Performance kW amounts and applicable PJM rules. The  
14 preliminary estimated PJM MW Potential by installation period and PJM delivery year are  
15 provided in Appendix F, Table F-1 of the EE&C Plan. Section 10.1 of the EE&C Plan  
16 provides more information on how the Company proposes to address EE as a Resource and  
17 its participation in the PJM BRA Auctions. The Company will consider its EE sell offer  
18 and buy bid values confidential as they are considered market sensitive information;  
19 however, they can be provided to Board Staff via confidential submissions and after the  
20 applicable auction results are available.

21 **IV. QUANTITATIVE PERFORMANCE INDICATORS AND THEIR EVALUATION,**  
22 **MEASUREMENT AND VERIFICATION**

1 **Q. Has the Company included quantitative performance indicator (“QPI”) values based**  
2 **on the metrics applicable to each program year of the three-year program covered by**  
3 **this filing?**

4 A. The Board adopted QPI for both annual and lifetime energy savings for PY1 through PY3.  
5 Table 11 from the Company’s EE&C Plan, as included below, provides the values for these  
6 QPIs.

7

<b>Table 11: JCP&amp;L 2021-2023 Quantitative Performance Indicators (QPIs)</b>			
<b>Metric (MWh)</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Net Annual Energy Savings <sup>1</sup>	124,221	174,385	208,848
Net Lifetime Energy Savings <sup>1</sup>	1,752,890	2,264,413	2,530,829

<sup>1</sup> Values are Retail Net Electricity Savings. To reflect actual realized system-wide savings at the wholesale/generator level, line loss savings would need to be added to the retail net electricity savings.

8

9 Additionally, although not required until PY4 and PY5, JCP&L will track and report the  
10 additional future QPI metrics identified in the Board Order beginning in PY1. These  
11 additional future QPIs include:

- 12 • Net annual peak demand savings.
- 13 • Net lifetime demand savings.
- 14 • Net present value of net benefits as determined by the Utility Cost Test.
- 15 • Net lifetime energy savings derived from qualifying low-income customers.
- 16 • Net lifetime energy savings derived from qualifying small commercial customers.

17 Table 12 from the Company’s EE&C Plan, as included below for informational purposes  
18 for this three-year Plan cycle, provides what the Plan estimates would result for these  
19 additional future QPIs during each year of the Plan.

Table 12: JCPL Future Quantitative Performance Indicators (QPIs)			
Metric	2021	2022	2023
Net Annual Peak Demand Savings (MW) <sup>1</sup>	15	26	46
Net Lifetime Peak Demand Savings (MW) <sup>1</sup>	209	318	390
Net Present Value of Net Benefits by UCT	\$131,242,986	\$157,534,160	\$164,291,642
Net Lifetime Energy Savings from Qualifying Low Income Customers (MWh) <sup>1</sup>	14,740	21,287	24,996
Net Lifetime Energy Savings from Qualifying Small Commercial Customers (MWh) <sup>1</sup>	60,967	274,350	304,833

<sup>1</sup> Values are Retail Net Electricity Savings. To reflect actual realized system-wide savings at the wholesale/generator level, line loss savings would need to be added to the retail net electricity savings.

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**Q. Please describe the methodology, processes and strategies proposed to be used for monitoring and improving portfolio performance of JCP&L’s EE and PDR programs related to the Company’s targets established pursuant to the QPI’s for the JCP&L EE&C Plan.**

A. The EE Department is entrusted with ensuring that the Company complies with all EE and PDR requirements and that the approved programs are successfully implemented. To support this, the Company will develop and leverage its tracking and reporting processes to monitor the portfolio of programs and subprograms towards its overall target as well as progress of each program toward its goals and budgets, identifying performance issues, gaps and opportunities for improvement. Review meetings are performed at least monthly. In addition, while implementing the approved EE&C Plan, the Company will gain direct input from various sources and customers will be surveyed to measure satisfaction with the programs and related services. Evaluation activities, including program assessments, will also inform how well the programs and subprograms are moving toward the achievement of goals and will inform recommendations for program improvement.

**V. REPORTING PLAN**

**Q. The MFR requires Quarterly Progress Reports, Annual Progress Reports and Triennial Reports. Please provide the Company’s plan to comply with these requirements.**

1 A. As discussed above, the EE Department is entrusted with ensuring that the Company  
2 complies with all EE and PDR requirements including all regulatory reporting activities.  
3 This department has a dedicated reporting team that will be responsible to comply with the  
4 Board’s reporting requirements, including working on: i) quarterly progress reports; ii)  
5 annual progress reports; and iii) triennial reports.

6 To support its compliance reporting requirements among other things, the EE  
7 Department has developed an enterprise-wide EE&C T&R System in partnership with a  
8 third-party vendor to complete regulatory required EE&C reports across any jurisdiction  
9 in FirstEnergy’s footprint. This T&R System is used by the Company’s affiliated utilities  
10 in other jurisdictions to meet its regulatory reporting requirements. The Company will  
11 enhance the system to integrate new JCP&L EE&C Plan offerings and generate reports  
12 with format and content consistent with that defined by the Board. In addition, the  
13 Company will utilize SAP enterprise software for financial management and reporting of  
14 program costs.

15 Section 9 of the JCP&L EE&C Plan provides additional details regarding the  
16 reporting process.

17 **VI. CONCLUSION**

18 **Q. Please briefly summarize of your direct testimony.**

19 A. The JCP&L EE&C Plan is a comprehensive effort to implement EE and PDR programs  
20 and subprograms in an organized and cost-effective manner to meet the requirements of  
21 the Board’s June 10 Order. The Company looks forward to further collaboration with  
22 stakeholders and the Board and to successful implementation of its proposed JCP&L  
23 EE&C Plan.

1 **Q. Does this conclude your direct testimony at this time?**

2 A. Yes, although I reserve the right to supplement this testimony should further information

3 arise. I note that the Plan workpapers are being provided as set forth in Attachment C.

**EXPERIENCE AND QUALIFICATIONS**

1  
2  
3 My name is Edward C. Miller. I am currently employed by FirstEnergy Service Company  
4 as Manager, Compliance & Development in the Energy Efficiency Department. I am responsible  
5 for compliance and development activities related to energy efficiency (“EE”) and peak demand  
6 reduction (“PDR”) programs for the FirstEnergy utilities in Ohio, Maryland, New Jersey,  
7 Pennsylvania and West Virginia. This primarily involves the development of programs and filings  
8 to meet the FirstEnergy utilities’ EE and/or PDR requirements and obligations in the various states.  
9 I report to the Director, Compliance and Reporting in FirstEnergy’s Energy Efficiency  
10 Department.

11 I hold a Bachelor of Science degree in Electrical Engineering from the University of  
12 Pittsburgh. For over seventeen years, I was employed by Allegheny Energy Service Corporation,  
13 the service company for Allegheny Energy Inc. (“Allegheny”), which merged in 2011 with  
14 FirstEnergy Corp. (“FirstEnergy”). While with Allegheny, I held various engineering, customer  
15 service and management positions in Customer Services, Sales & Marketing, Customer  
16 Management and Energy Efficiency departments. After FirstEnergy and Allegheny merged, I was  
17 assigned my current position as Manager, Compliance & Development.

18 I have provided testimony before the Pennsylvania Public Utility Commission, the West  
19 Virginia Public Service Commission, the Public Utilities Commission of Ohio and the Maryland  
20 Public Service Commission relating to EE and PDR Programs which I helped to develop.



**JERSEY CENTRAL POWER & LIGHT COMPANY**

**Energy Efficiency and Peak Demand Reduction  
Programs**

(For the period July 1, 2021 through June 30, 2024)

**Docket Nos. QO19010040; QO19060748 and  
QO17091004**

**September 25, 2020**



## 1.0 TABLE OF CONTENTS & LIST OF ACRONYMS

### Table of Contents

<b>1.0</b>	<b>TABLE OF CONTENTS &amp; LIST OF ACRONYMS</b> .....	<b>1</b>
<b>2.0</b>	<b>EXECUTIVE SUMMARY</b> .....	<b>5</b>
2.1	<i>Summary of Proposal</i> .....	5
2.2	<i>Overall results for the plan including MWh, MW, costs and forecasted cost-effectiveness</i> .....	10
<b>3.0</b>	<b>PORTFOLIO ANALYSIS AND PROGRAM DESIGN</b> .....	<b>12</b>
3.1	<i>Describe Plan design objectives and approaches (MFR a 1)</i> .....	12
3.2	<i>Describe how the Plan and programs were developed (MFR II a 2)</i> .....	13
3.3	<i>Pilot and Emerging Technologies and Approaches (MFR I e)</i> .....	15
<b>4.0</b>	<b>CORE PROGRAMS</b> .....	<b>17</b>
4.1	<i>Residential</i> .....	21
4.1.1	<i>EFFICIENT PRODUCTS</i> .....	21
4.1.2	<i>EXISTING HOMES-HOME PERFORMANCE WITH ENERGY STAR</i> .....	29
4.2	<i>Commercial &amp; Industrial</i> .....	34
4.2.1	<i>BUSINESS DIRECT INSTALL</i> .....	34
4.2.2	<i>ENERGY SOLUTIONS FOR BUSINESS-PRESCRIPTIVE / CUSTOM</i> .....	39
4.3	<i>Multifamily</i> .....	46
4.3.1	<i>MULTIFAMILY</i> .....	46
<b>5.0</b>	<b>ADDITIONAL JCP&amp;L PROGRAMS</b> .....	<b>51</b>
5.1	<i>Residential</i> .....	53
5.1.1	<i>HOME ENERGY EDUCATION &amp; MANAGEMENT-BEHAVIORAL</i> .....	53
5.1.2	<i>EXISTING HOMES-QUICK HOME ENERGY CHECK UP (QHEC)</i> .....	56
5.1.3	<i>EXISTING HOMES-MODERATE INCOME WEATHERIZATION</i> .....	61
5.2	<i>Commercial &amp; Industrial</i> .....	65
5.2.1	<i>ENERGY SOLUTIONS FOR BUSINESS-ENERGY MANAGEMENT</i> .....	65

5.2.2 ENERGY SOLUTIONS FOR BUSINESS-ENGINEERED SOLUTIONS.....	73
5.3 Other Programs.....	78
5.3.1 HOME OPTIMIZATION & PEAK DEMAND REDUCTION.....	78
<b>6.0 PROGRAM MANAGEMENT AND IMPLEMENTATION PLAN.....</b>	<b>82</b>
6.1 Describe the Company’s management structure for efficiency programs and include the organization chart for management team responsible for implementing this plan .....	82
6.2 Summary of the Company’s implementation strategy to manage the portfolio, engage customers and trade allies, encourage innovation and market access, transform markets, and align or coordinate with other utilities (MFR II a xiii, MFR II c).....	82
6.3 Role of Statewide Coordinator .....	85
6.4 Workforce Development (MFR II b 2).....	88
<b>7.0 EVALUATION, MEASUREMENT &amp; VERIFICATION .....</b>	<b>90</b>
7.1 Summary of the utility’s data management, quality assurance and internal evaluation processes, including how the Plan and individual program will be updated or refined based on evaluation results .....	90
<b>8.0 QUANTITATIVE PERFORMANCE INDICATORS .....</b>	<b>93</b>
<b>9.0 REPORTING PLAN .....</b>	<b>95</b>
<b>10.0 PLAN COMPLIANCE AND OTHER INFORMATION .....</b>	<b>97</b>
10.1 Energy Efficiency as a Resource .....	97
10.2 Customer Access to Current and Historic Energy Usage Data (MFR II.a.vii).....	99
<b>11.0 APPENDICES.....</b>	<b>100</b>
<b>12.0 LIST OF TABLES.....</b>	<b>102</b>

## LIST OF ACRONYMS

A/C	Air Conditioner
AHU	Air Handling Units
AMI	Advanced Metering Infrastructure
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
BOC	Building Operations Certification
BPI	Building Performance Institute
BPU	Board of Public Utilities
BRA	Base Residual Auction
C&I	Commercial and Industrial
CEA	Clean Energy Act of 2018
CEE	Consortium for Energy Efficiency
DI	Direct Install
DLC	Design Lights Consortium
DSM	Demand Side Management
EDC	Electric Distribution Company
EE	Energy Efficiency
EE&C	Energy Efficiency and Conservation
EM&V	Evaluation, Measurement and Verification
EPRI	Electric Power Research Institute
FRR	Fixed Resource Requirement
HE	High Efficiency
HES	Home Energy Score
HP	Horsepower
HPwES	Home Performance with ENERGY STAR
HVAC	Heating Ventilation and Air Conditioning
IA	Incremental Auction
ICAP	Installed Capacity
IT	Information Technology
JCP&L	Jersey Central Power and Light
kW	Kilowatt
kWh	Kilowatt-hour
LED	Light-Emitting Diode
LMI	Low-to-Moderate income
M&V	Measurement & Verification
MFR	Minimum Filing Requirements
MI	Moderate Income
MOPR	Minimum Offer Price Rules
MUSH	Municipalities, Universities, Schools, Hospitals
MW	Megawatt
MWh	Megawatt-hour

MWVBES	Minority, Women, Veteran and Service Disabled Veteran Owned Businesses
NJ	New Jersey
NJACCA	New Jersey Air Conditioning Contractors Association
NJAEE	New Jersey Association of Energy Engineers
NJBPU	New Jersey Board of Public Utilities
NJCEP	New Jersey's Clean Energy Program
NJCT	New Jersey Cost Test
NJPHCC	New Jersey Association of Plumbing, Heating, and Cooling Contractors
OBRP	On-Bill Repayment Program
PDR	Peak Demand Reduction
PJM	Pennsylvania, Jersey, Maryland Power Pool/PJM Interconnection, L.L.C.
POS	Point of Sales
PTAC	Packaged Terminal Air Conditioner
PTHP	Packaged Terminal Heat Pump
PY	Plan Year
QA/QC	Quality Assurance/Quality Control
QHEC	Quick Home Energy Check-up
QPIs	Quantitative Performance Indicators
RCx	Retro-Commissioning
RTU	Roof Top Units
SEE Action	State and Local Energy Efficiency Action Network
SEM	Strategic Energy Management
SEMP	Strategic Energy Management Plan
SHEMS	Smart Home Energy Management Systems
SWC	Statewide Coordinator
T&D	Transmission and Distribution
T&R System	Tracking and Reporting System
TPICs	Third-Party Implementation Contractors
TRM	Technical Reference Manual
TVs	Televisions
UCAP	Unforced Capacity
UCT	Utility Cost Test
UEZ	Urban Enterprise Zones
UPS	Uninterruptable Power Supply
VCx	Virtual Commissioning
VFDs	Variable Frequency Drive

## 2.0 EXECUTIVE SUMMARY

### 2.1 Summary of Proposal

In response to the Board of Public Utilities (“BPU” or “Board”) Order of June 10, 2020 that directs each electric public utility and gas public utility in the State of New Jersey (“NJ”) to establish energy efficiency (“EE”) and peak demand reduction (“PDR”) programs pursuant to the EE provisions of the Clean Energy Act of 2018 (“CEA” or the “Act”), Jersey Central Power and Light (“JCP&L” or “Company”) submits, for review and approval by the BPU, this Energy Efficiency and Conservation (“EE&C”) Plan (“EE&C Plan” or “Plan”) that includes a portfolio of programs for the period July 1, 2021 through June 30, 2024.

The Act directs the BPU to require each electric company to procure or provide cost-effective programs and services with projected verifiable electricity savings that are designed on a trajectory to achieve annual reductions of at least 2% of the average annual electricity usage in the prior three years within five years of implementation of its electric energy efficiency program. The June 10, 2020 Board Order at Docket Nos. QO19010040, QO19060748 and QO17091004 (“Board Order”) provides guidance for energy efficiency and peak demand reduction programs pursuant to the Act, outlines a framework for cost-effectiveness screening and establishes a methodology for determining electric energy efficiency goals.

The Board Order established energy use reduction targets including target percentages for the “Utility Program Annual Energy Savings Target” for Plan Year (“PY”) 2 and PY3. Based on these target percentages and the Company’s actual retail sales for the period July 1, 2018 through June 30, 2020, and its forecasted retail sales for the period July 1, 2020 through June 30, 2023, the Company’s planning targets for PY1-PY3 are shown in the following table:

<b>Year</b>	<b>Energy Efficiency Baseline MWh<sup>1</sup></b>	<b>Utility Program Annual Energy Savings Target<sup>2</sup></b>	<b>Required Energy Efficiency Savings MWh</b>
<b>2021</b>	20,095,384	0.50%	100,477
<b>2022</b>	19,595,537	0.74%	145,007
<b>2023</b>	19,451,028	0.97%	188,675

<sup>1</sup> Based on actual and forecasted retail sales, excluding wholesale sales, for the prior three-year period for each year (e.g. 2021 based on average of actual retail sales for 2018 and 2019, and forecasted retail sales for 2020).

<sup>2</sup> 2021 for planning purposes only, 2022 and 2023 targets pursuant June 10, 2020 Board Order.

The figures in Table 1 represents the Company’s planning targets as required by the Board Order. The three-year rolling average energy efficiency baselines upon which the energy

efficiency benchmarks are based, are also shown in Table 1. These energy savings reduction targets have been established for planning purposes.

The programs outlined in the Company's EE&C Plan were designed based on the Company's three primary goals:

- Comply with CEA and Board Order requirements and directives;
- Establish a program framework that is adaptable and scalable to meet the aggressive and increasing energy savings targets over time; and
- Implement programs to establish systems and processes, customer awareness, program and trade ally participation, and experience and momentum for the future.

The EE&C Plan includes a comprehensive portfolio of EE&C programs for the residential, commercial and industrial, and multifamily sectors, and other Company initiatives included as part of the "Other" sector of the Plan. The Plan incorporates Core Utility Programs and Additional Utility Programs based on enhancements to existing NJ programs and successful programs in other jurisdictions. The Core Programs and Additional Company Initiatives are based on extensive collaboration with other NJ utilities to promote coordinated program designs and delivery. The Plan incorporates both near-term and longer-term energy saving opportunities for customers including single and prescriptive measures, multiple prescriptive and custom measures, direct install, and comprehensive whole building solutions. It provides opportunities for all customer classes to participate in EE programs. The Plan includes a commitment to workforce development and job training through participation in the Workforce Development Working Group as well as consideration of the amount of business placed with minority, women, veteran and service disabled veteran owned businesses ("MWVBES") when evaluating contract proposals from vendors and contractors to support the program offerings. The Plan relies on experienced outsourced Third-Party Implementation Contractors ("TPICs"), and leverages prior experiences, volume cost efficiencies, and a variety of delivery channels that will support successful and efficient program operations and customer participation. The table below provides an overview of the Company's Plan including the proposed programs and subprograms by sector and identification of program type:

Table 2: JCP&L 2021-2023 Program Portfolio Plan		
Program	Subprogram	Program Type
<b>Residential Programs</b>		
Efficient Products	Efficient Products	Core Utility
Existing Homes	Home Performance with Energy Star	Core Utility
	Quick Home Energy Check-up	Additional Utility
	Moderate Income Weatherization	Additional Utility
Home Energy Education and Management	Behavioral	Additional Utility
<b>Commercial &amp; Industrial Programs</b>		
Direct Install	Direct Install	Core Utility
Energy Solutions for Business	Prescriptive / Custom	Core Utility
	Energy Management	Additional Utility
	Engineered Solutions	Additional Utility
<b>Multifamily</b>		
Multifamily	Multifamily	Core Utility
<b>Other Programs</b>		
Home Optimization & Peak Demand Reduction	Home Optimization & Peak Demand Reduction	Additional Utility

**Residential Sector Programs** – Residential programs were designed to address both educational and initial cost barriers and to tap a variety of delivery channels and vendors to support customer engagement, education, and participation. The residential programs include direct or targeted programs that engage customers and serve as a portal for other program offerings because they serve a dual purpose of providing customers with energy efficiency education as well as information regarding other program services and opportunities upon which they can act. The residential programs incorporate strategies to change behaviors and include incentives and access to financing to address the initial cost barrier to promote the participation of all residential customers. The programs provide opportunities for prescriptive equipment and direct install, so that customers who are unable or unwilling to undertake whole home/comprehensive solutions are still able to increase efficiency, and the programs also provide opportunities for customers interested in whole home/comprehensive solutions that encourage customers to consider a holistic approach to EE.

Throughout implementation of the Plan, the Company will strive to identify and promote participation by low- to moderate-income customers in the Company’s program offerings including the Co-Managed Comfort Partners program<sup>1</sup>. The Company has also designed certain residential programs to coordinate with its overlapping gas companies. The coordinated programs will provide shared customers of the Company and the overlapping gas companies with access to both gas and electric measures to target greater energy savings opportunities through coordinated program delivery.

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<sup>1</sup> The Co-Managed Comfort Partners program is not included in the Company’s Plan. Board Order at pages 15 and 24 establishes that Staff and the utilities will collaborate to develop three-year program plans for any co-managed program and to file joint program filings with the Board as part of the State’s annual budget process.

**Commercial and Industrial Sector Programs** – The Commercial and Industrial Programs were designed to provide customer engagement and education, incorporate energy controls and strategies to change behaviors, include incentives to address the initial cost barrier, and tap a variety of delivery channels and vendors that promote the participation of all customers. Commercial businesses and industrial customers are also addressed through programs that provide opportunities including prescriptive rebates, custom measures, direct install, and whole building/comprehensive solutions. The programs include specific opportunities that ensure access for small customers, provide opportunities for single or multiple prescriptive and/or custom measures, so that customers who are unable or unwilling to undertake whole building/comprehensive solutions are still able to increase efficiency. And the programs include opportunities that encourage customers to consider a holistic approach to EE for customers interested and able to participate in whole building/comprehensive solutions.

The Company has also designed certain Commercial & Industrial programs to coordinate with its overlapping gas companies. The coordinated programs will provide shared customers of the Company and the overlapping gas companies with access to both gas and electric measures to target greater energy savings opportunities through coordinated program delivery.

**Multifamily Sector Programs** – Similarly to the Residential and Commercial & Industrial Sector programs, the Multifamily Sector program is designed to address both educational and initial cost barriers to support customer engagement, education, and participation. The program will be targeted to engage customers, provide energy efficiency education as well as information regarding program services and opportunities upon which they can act. The program incorporates strategies to change behaviors and includes incentives and access to financing to address the initial cost barrier to promote the participation of all customers. The program provides opportunities for direct install and prescriptive equipment, so that customers who are unable or unwilling to undertake whole building/comprehensive solutions are still able to increase efficiency, and the program also provides opportunities for customers interested in whole building/comprehensive solutions that encourages customers to consider a holistic approach to energy efficiency.

The Company has also designed the Multifamily Program to coordinate with its overlapping gas companies. The coordinated programs will provide shared customers of the Company and the overlapping gas companies with access to both gas and electric measures to target greater energy savings opportunities through coordinated program delivery.

**Other Sector Programs** – The Company has included an “Other” sector as part of its plan for other Company initiatives in addition to the Core and Additional Utility Programs in the Residential, C&I and Multi-family sectors. More specifically, the Company proposes a Home Optimization & Peak Demand Reduction program to be implemented in PY3 that manages customer energy usage year-round and in peak periods through connected devices initially targeting smart thermostats. This program is planned in PY3 to establish program processes, systems and begin to ramp up program

operations in advance of PY4 recognizing the Board Order sets forth expectations for peak demand reduction program requirements beginning in PY4.

As discussed above, the plans provide access to financing to address the initial cost barrier to promote the participation of all customers. To offer customers financing options, the Company plans to leverage third-party financing options for qualified EE investments in utility programs. JCP&L will make arrangements with third-party loan providers to finance customer loans, and has incorporated the estimated costs associated with buying down the interest, fees, and default costs associated with such third-party loans within its budget to be able to provide low- to no-interest loan opportunities to its participating customers.

Collectively, the proposed programs and subprograms across all sectors cover all the major energy-consuming devices in the home, building or business, thus increasing the opportunity for more customers to participate and benefit from one or more programs. Furthermore, the proposed programs promote and support comprehensive whole home/whole building/comprehensive solutions as called for under the Board Order. The table below provides the Company’s programs and subprograms along with summary program descriptions as proposed in the Plan:

Table 3: JCP&L 2021-2023 Program Summary Description			
Program	Subprogram	Program Type	Description
<b>Residential Programs</b>			
Efficient Products	Efficient Products	Core Utility	Provides incentives for HVAC, lighting, appliances, appliance recycling, consumer electronics and other energy saving equipment through a variety of channels
Existing Homes	Home Performance with Energy Star	Core Utility	Provides a customer a whole home approach for direct install of efficient equipment and comprehensive retrofits
	Quick Home Energy Check-up	Additional Utility	Audits with direct installed measures provided at no additional cost to participants with education about the opportunities to save energy including other program opportunities
	Moderate Income Weatherization	Additional Utility	Audits with direct installed measures, weatherization services, and HVAC repair/replacement provided at no additional cost to participating income qualified customers
Home Energy Education and Management	Behavioral	Additional Utility	Provides education of energy usage through Home Energy Reports and on-line audits, with targeted customized messaging to promote energy savings and conservation opportunities
<b>Commercial &amp; Industrial Programs</b>			
Direct Install	Direct Install	Core Utility	Audits with direct installed measures to small business customers including lighting, controls, HVAC upgrades and refrigeration
Energy Solutions for Business	Prescriptive / Custom	Core Utility	Provides incentives for HVAC, Lighting, Motors & Drives, Refrigeration, Water Heaters, Air Compressors, Food Service Equipment and other efficient equipment and projects
	Energy Management	Additional Utility	Customer engagement targeting efficient building operations through building tune-up, retro commissioning and customized energy management solutions.
	Engineered Solutions	Additional Utility	Provides consultative service throughout delivery, including comprehensive audits, detailed analysis and recommendations of energy efficiency measures and development of project specifications, to assist customers in identifying and undertaking large comprehensive energy-efficiency projects
<b>Multifamily</b>			
Multifamily	Multifamily	Core Utility	Provides audits, direct install measures, prescriptive and custom incentives as well as comprehensive projects for multifamily buildings
<b>Other Programs</b>			
Home Optimization & Peak Demand Reduction	Home Optimization & Peak Demand Reduction	Additional Utility	Provides control and/or optimization of connected devices (e.g. smart thermostats, smart home energy management systems) to target and achieve energy and peak demand savings

## 2.2 Overall results for the plan including MWh, MW, costs and forecasted cost-effectiveness

The following chart illustrates the energy and demand savings results projected under the Plan, by sector, program type, year and in total:

Sector	Program Type	2021		2022		2023		Total	
		KWh Savings	kW Savings						
Residential	<b>Total</b>	<b>68,456,009</b>	<b>6,006</b>	<b>84,756,312</b>	<b>9,756</b>	<b>95,047,250</b>	<b>12,845</b>	<b>248,259,571</b>	<b>28,607</b>
	Core Utility	67,164,734	5,794	68,727,412	6,626	66,977,400	6,801	202,869,546	19,221
	Additional Utility	1,291,275	211	16,028,900	3,130	28,069,850	6,045	45,390,025	9,385
Commercial & Industrial	<b>Total</b>	<b>54,782,583</b>	<b>9,211</b>	<b>88,527,604</b>	<b>15,902</b>	<b>109,842,420</b>	<b>20,140</b>	<b>253,152,606</b>	<b>45,253</b>
	Core Utility	54,507,583	9,186	84,658,564	15,339	96,456,156	17,699	235,622,302	42,224
	Additional Utility	275,000	26	3,869,040	563	13,386,264	2,441	17,530,304	3,029
Multifamily	<b>Total</b>	<b>982,467</b>	<b>113</b>	<b>1,101,217</b>	<b>127</b>	<b>1,219,967</b>	<b>141</b>	<b>3,303,650</b>	<b>381</b>
	Core Utility	982,467	113	1,101,217	127	1,219,967	141	3,303,650	381
Other	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,738,574</b>	<b>13,200</b>	<b>2,738,574</b>	<b>13,200</b>
	Additional Utility	0	0	0	0	2,738,574	13,200	2,738,574	13,200
EE&C Plan Totals	<b>Total</b>	<b>124,221,059</b>	<b>15,330</b>	<b>174,385,132</b>	<b>25,784</b>	<b>208,848,211</b>	<b>46,326</b>	<b>507,454,402</b>	<b>87,441</b>
	Core Utility	122,654,784	15,093	154,487,193	22,092	164,653,523	24,641	441,795,499	61,826
	Additional Utility	1,566,275	237	19,897,940	3,692	44,194,688	21,686	65,658,903	25,615

<sup>1</sup> Values are Retail Net Electricity Savings. To reflect actual realized system-wide savings at the wholesale/generator level, line loss savings would need to be added to the retail net electricity savings.

<sup>2</sup> Does not include savings from the Co-Managed Comfort Partners program. Savings projections for the Co-Managed Comfort Partners program will be established as part of three-year program plans developed and filed jointly by Staff and the utilities as part of the State's annual budget process. Savings from the Co-Managed Comfort Partners program will be included in the Company's annual compliance filing assessing performance towards its QPIs.

The Company projects the total Plan costs to average nearly \$77 million per year for the 2021-2023 period. The chart below provides the summary of portfolio cost by sector, program type, year and in total:

Sector	Program Type	2021		2022		2023		Total	
		Portfolio Budget (\$)	% of Portfolio Budget	Portfolio Budget (\$)	% of Portfolio Budget	Portfolio Budget (\$)	% of Portfolio Budget	Portfolio Budget (\$)	% of Portfolio Budget
Residential	<b>Residential Total</b>	<b>\$ 31,084,742</b>	<b>56%</b>	<b>\$ 39,767,819</b>	<b>51%</b>	<b>\$ 44,385,678</b>	<b>46%</b>	<b>\$ 115,238,239</b>	<b>50%</b>
	Core Utility	\$ 24,895,940	45%	\$ 31,022,959	48%	\$ 34,191,601	47%	\$ 90,110,500	48%
	Additional Utility	\$ 6,188,802	11%	\$ 8,744,860	65%	\$ 10,194,077	44%	\$ 25,127,739	58%
Commercial & Industrial	<b>C&amp;I Total</b>	<b>\$ 22,937,862</b>	<b>41%</b>	<b>\$ 36,515,417</b>	<b>46%</b>	<b>\$ 46,374,986</b>	<b>48%</b>	<b>\$ 105,828,265</b>	<b>46%</b>
	Core Utility	\$ 22,266,134	45%	\$ 32,211,834	49%	\$ 36,266,654	50%	\$ 90,744,621	49%
	Additional Utility	\$ 671,728	10%	\$ 4,303,583	32%	\$ 10,108,333	44%	\$ 15,083,644	35%
Multifamily	<b>Multifamily Total</b>	<b>\$ 1,802,530</b>	<b>3%</b>	<b>\$ 1,877,174</b>	<b>2%</b>	<b>\$ 2,075,301</b>	<b>2%</b>	<b>\$ 5,755,006</b>	<b>3%</b>
	Core Utility	\$ 1,802,530	4%	\$ 1,877,174	3%	\$ 2,075,301	3%	\$ 5,755,006	3%
Other	<b>Other Total</b>	<b>\$ -</b>	<b>0%</b>	<b>\$ 454,156</b>	<b>1%</b>	<b>\$ 2,867,807</b>	<b>3%</b>	<b>\$ 3,321,963</b>	<b>1%</b>
	Additional Utility	\$ -	0%	\$ 454,156	3%	\$ 2,867,807	12%	\$ 3,321,963	8%
Plan Total	<b>Plan Total</b>	<b>\$ 55,825,134</b>	<b>100%</b>	<b>\$ 78,614,566</b>	<b>100%</b>	<b>\$ 95,703,773</b>	<b>100%</b>	<b>\$ 230,143,473</b>	<b>100%</b>
	Core Utility Total	\$ 48,964,604	88%	\$ 65,111,967	83%	\$ 72,533,556	76%	\$ 186,610,127	81%
	Additional Utility Total	\$ 6,860,530	12%	\$ 13,502,599	17%	\$ 23,170,217	24%	\$ 43,533,346	19%

<sup>1</sup> Does not include budget for the Co-Managed Comfort Partners program. The budget for the Co-Managed Comfort Partners program will be established as part of three-year program plans developed and filed jointly by Staff and the utilities as part of the State's annual budget process.

The successful implementation of the Plan is projected to be cost-effective at the portfolio and sector level under the New Jersey Cost Test ("NJCT"), having benefit-cost ratios greater than 1.0, as shown in the table below. Note that the Company is providing the benefit-cost ratios under other tests in this table for informational purposes.

Table 6: Portfolio Summary of Cost-Effectiveness Results						
Sector	Cost - Benefit Ratio (NJ Cost Test)	Cost - Benefit Ratio (Participant Cost Test)	Cost - Benefit Ratio (Program Administrator Cost Test)	Cost - Benefit Ratio (Ratepayer Impact Measure Test)	Cost - Benefit Ratio (Total Resource Cost Test)	Cost - Benefit Ratio (Societal Cost Test)
Residential	4.2	n/a	3.0	1.3	2.9	8.9
Commercial & Industrial	3.1	n/a	4.1	1.7	2.2	7.0
Multifamily	1.9	5.6	1.2	0.8	1.3	4.1
Other	1.0	2.1	0.9	0.8	0.9	2.3
<b>Total Portfolio</b>	<b>3.5</b>	<b>4.1</b>	<b>3.4</b>	<b>1.5</b>	<b>2.4</b>	<b>7.6</b>

The Company refers the Board to the testimony of Brendon J. Baatz from Gabel Associates, Inc. for the detailed information regarding the cost-effectiveness of the Company’s Plan and programs.

## 3.0 PORTFOLIO ANALYSIS AND PROGRAM DESIGN

### *3.1 Describe Plan design objectives and approaches (MFR a 1)*

As discussed earlier, the programs outlined in the Company's EE&C Plan were designed based on the Company's three primary goals:

- Comply with CEA and Board Order requirements and directives;
- Establish a program framework that is adaptable and scalable to meet the aggressive and increasing energy savings targets over time; and
- Implement programs to establish and develop systems and processes, program and trade ally participation, customer awareness, and experience and momentum for the future.

In setting out to achieve these goals, the Company pursued the following themes:

- Leverage the program offerings of the Company's affiliates in other jurisdictions that have proven to be successful
- Align and coordinate program designs, measures, and services with other New Jersey utilities as well as with its affiliates where appropriate
- Incorporate additional programs or measures identified as successful from other peer utilities or based on the expertise and input from other NJ utilities, or the Company's or Company affiliate's consultants, vendors, and stakeholders
- Incorporate new programs or measures that are considered promising to target new customer segments or end uses, increase savings, or promote new innovative program concepts

The Company strived to develop a program framework that not only would meet its targets and requirements for PY1 to PY3 but would work long term to avoid potential market disruption or confusion from unnecessary changing program structures between plan cycles. The Company sought to leverage the experience and successes of its affiliates in other jurisdictions, while seeking opportunities to improve and expand program offerings. The Company strived to design a portfolio of programs that will be flexible enough to meet an assortment of customer needs to drive customer participation and to provide the opportunity for all customers to participate in the programs. The Company also strived to develop coordinated and/or consistent program offerings both among NJ utilities following the requirements and directives of the Board Order to ease participation by contractors and customers and with its affiliates in other states to leverage economies of scale and target cost savings for its customers.

### ***3.2 Describe how the Plan and programs were developed (MFR II a 2)***

In developing the Plan, the Company's EE&C program design team reviewed the existing NJ Clean Energy Programs as well as existing or proposed programs at other NJ utilities, its affiliates or peers in other states. The program design team extensively participated in weekly program design meetings with the NJ utilities to discuss at length and develop consistent core programs and additional utility initiatives, and also considered input that it received from consultants, vendors and stakeholders both in NJ and in other states. The program design team also coordinated program design with its plan development activities in both Maryland and Pennsylvania and reviewed both existing and potential new programs and measures to develop a broad and comprehensive program portfolio. As a result, the program design team created a portfolio of potential programs and measures that draws upon the programs and measures offered through the EE&C plans of the Company's affiliates and other New Jersey, Pennsylvania and Maryland utilities, other NJ or industry programs and measures and incorporates stakeholder, consultant and vendor input. Once the proposed program portfolio was developed, the program development team created measure level participation projections and plan and program budgetary inputs and performed preliminary modeling to determine plan and program level projections. The Company finalized the plan, program and measure projections based on its experience, collaboration with other NJ utilities, performance of the existing Clean Energy Programs, and consultation with the Company's implementation team and consultant.

The Company's approach to developing the Plan balanced and considered several key sources of information, including:

- New Jersey specific information including the EE Potential in New Jersey study, the Straw Proposal for New Jersey's Energy Efficiency and Peak Demand Reduction Programs and the Board Order, the Utility Demographic and Firmographic Profile 2020 study ("Demographics Study"), the NJ Clean Energy Program and the NJ Protocols to Measure Resource Savings
- TPICs' expertise in delivering programs and program performance
- Industry experience from market potential studies, consultants, verification results and Technical Reference Manuals from other states
- NJ Utility, external stakeholder and vendor experience and opinions captured in meetings and other discussions
- Customer attitudes and preferences based on program performance in other jurisdictions

The Company utilized a comprehensive bottom-up approach in designing the programs and selecting measures for inclusion in the Plan. Under this approach, the Company identified potential measures from extensive sources including but not limited to the Electric Power Research Institute ("EPRI"), ENERGY STAR, ESource, other utilities, other jurisdictions, and input from vendors, the Company's EE&C consultant, TPICs and stakeholders. The Company established measure

eligibility in coordination with the other NJ utilities, and in consideration of industry ratings such as ENERGY STAR, the Consortium for Energy Efficiency (“CEE”) and other efficiency ratings.

The Company primarily utilized the Protocols developed for New Jersey and the Mid-Atlantic Technical Reference Manual (“TRM”) developed for Maryland and other jurisdictions to quantify the energy and demand savings, the “measure life” and other assumptions of the measures included in the Plan. The Mid-Atlantic TRM has been developed and frequently updated based on actual data when available, and with input of stakeholders with extensive experience in EE&C programs. In limited cases where the Protocols or TRMs did not cover a proposed measure, the Company utilized estimates based on other sources as listed in Appendix C, Table C-2. The Company also utilized the Protocols, TRM, or Company calculation, as the source of the incremental costs of measures included in the Plan. The incentive values for common measures included in the Plan are also based on coordination with the NJ utilities or, in cases where the measures are different, are based on targeting a portion of the incremental cost of the energy efficient equipment versus equipment meeting current standards, with consideration of similar programs offered in other jurisdictions and of customer payback. For program modeling, the Company incorporated the most recent realization rates established by evaluation for similar program offerings in other jurisdictions.

One of the primary objectives was to make certain that participation would be straightforward for customers, contractors, and trade allies. The Company established projected participation rates for the proposed programs portfolio and measures through a multiple-step process leveraging industry experience. First, the Company established participation rates based on the performance of the existing programs and measures operating in the Company’s affiliates in other jurisdictions, the NJCEP or other New Jersey utilities, and the Market Potential Studies completed in New Jersey and other jurisdictions. The review of projected results for each program and measure included assessing the reasonableness of the projected results based on customer participation, estimated costs, and potential savings. Checks are then made between the results from the “bottom-up” analysis and selected data points (such as number of customers by customer segments and number of kWh sales by class, energy savings potential by major end use) to see how proportional the savings are to these figures. Logical and intuitive feasibility about the program assumptions were examined next, and adjustments were made as necessary, rebalancing the portfolio as appropriate. The Company then solicited input from the Company’s implementation team and finalized its program projections.

The program development process included the following activities, with several activities encompassing the program development timeline and being performed coincidentally or iteratively:

- The Company’s EE&C program design team consulted the documents and stakeholders discussed above.
- Technologies were grouped by: (i) sectors, such as residential and C&I; (ii) program/subprogram types, such as Efficient Products and Energy Solutions for Business - Prescriptive/Custom; and (iii) end uses, such as HVAC, Appliances and Lighting.

- The potential programs and measures were considered by the program design team, which included, among other things, coordination with the other NJ utilities or Company affiliates, assessment of the market availability, and anticipated participation and savings impacts.
- Program cost characteristics were developed at the program component or technology level, including, for example, incentive levels; incremental measure costs; the availability of other benefits; and TPIC marketing or delivery costs. The value of benefits was developed from savings estimates or formulas that were included in the Protocols for those measures covered, and for measures not covered by the Protocols, from other industry sources including the Mid-Atlantic TRM and other sources.
- Program modeling was completed on an iterative basis and participation, savings, and costs were determined for each program.
- The results from the New Jersey and other recent industry Market Potential Studies were reviewed to confirm the final program designs and assumptions where applicable are reasonable for the PY1 – PY3 programs.
- Economic modelling was completed by Gabel Associates to assess and review program cost-effectiveness results.

The preliminary Plan and results were reviewed with the Company's implementation team and energy efficiency consultants, incorporating (when appropriate) suggestions for refinement from these groups. The Company also utilized the resources of Gable Associates to review the Plan's participation, energy savings, measure assumptions, incremental costs and incentive levels.

### ***3.3 Pilot and Emerging Technologies and Approaches (MFR I e)***

While the EE&C Plan primarily focuses on encouraging the adoption of commercially available and proven technologies for achieving the energy efficiency requirements in a cost-effective manner, the Company plans to participate in the initiatives led by Staff on EE technology research and development initiatives. The Company will also collaborate with the other utilities, Staff, EPRI and may participate in research projects or demonstrations on technological advancements in efficient measures to assess emerging technologies to determine if further investigation is warranted for inclusion in the Plan or possibly future plan cycles. The Company will continue to monitor technologies not incorporated into these Plans throughout the Plan Period, discussing potential for such technologies to be incorporated into the Plans with the other utilities and Staff as appropriate. The Company anticipates that these research and development initiatives could lead to pilot program offerings by the Company and other utilities throughout the duration of the Plan, or to modifying program measures and measure eligibility to include emerging technology that shows the potential to produce cost effective savings.

In addition, in response to an Order of the Board dated February 19, 2020 in Docket No. ER16060524, on August 27, 2020 JCP&L filed a petition with the Board for approval of an Advanced Metering Infrastructure (AMI) Program to install advanced meters and other advanced metering infrastructure throughout its service territory over an accelerated multi-year period. .

Affiliates of the Company in Pennsylvania have noted additional benefits by leveraging AMI with Energy Efficiency. Examples include:

- Home Energy Reports include more granular information to better educate customers regarding their usage and target improved tips and recommendations.
- Peak demand reduction program offerings are reaching residential and smaller commercial and industrial customers who did not previously have interval metering without the installation of program infrastructure.
- AMI data is used to support program or custom project evaluation, measurement, and verification activities.

Should the Board approve the Company's AMI filing, the Company would expect to find similar opportunities to leverage AMI for Energy Efficiency and further anticipates that program offerings and/or potential pilot offerings involving Demand Response and Energy Efficiency and will evolve as AMI is deployed, thereby further supporting the Company's efforts to meet its goals under the CEA.

## 4.0 CORE PROGRAMS

The Utilities will administer the following core programs to engage customers and encourage the pursuit of energy efficient solutions from single transactions to comprehensive upgrades. The Utilities will strive to provide customized guidance wherever possible and provide supporting resources to make energy-efficient retrofits more accessible for all customers.

The table below provides a listing and description of the Core programs and subprograms included in the Plan:

Table 7: JCP&L 2021-2023 Core Program Names & Descriptions		
Program	Subprogram	Description
<b>Residential Programs</b>		
Efficient Products	Efficient Products	Provides incentives for HVAC, lighting, appliances, appliance recycling, consumer electronics and other energy saving equipment through a variety of channels
Existing Homes	Home Performance with Energy Star	Provides a customer a whole home approach for direct install of efficient equipment and comprehensive retrofits
<b>Commercial &amp; Industrial Programs</b>		
Direct Install	Direct Install	Audits with direct installed measures to small business customers including lighting, controls, HVAC upgrades and refrigeration
Energy Solutions for Business	Prescriptive / Custom	Provides incentives for HVAC, Lighting, Motors & Drives, Refrigeration, Water Heaters, Air Compressors, Food Service Equipment and other efficient equipment and projects
<b>Multifamily Programs</b>		
Multifamily	Multifamily	Provides audits, direct install measures, prescriptive and custom incentives as well as comprehensive projects for multifamily buildings

Note: Comfort Partners, the comprehensive energy efficiency solution for low income customers in New Jersey, is not addressed within this filing since it is intended to be run as a Co-Managed Program under Societal Benefits Clause funding and will be addressed in a separate filing and proceeding in accordance with the Board Order.

The table below provides a listing of the measures that are offered in the Core programs and subprograms included in the Plan:

**Table 8: JCP&L 2021-2023 Core Program Portfolio**

Program	Subprogram	Measure
<b>Residential Programs</b>		
Efficient Products	Efficient Products	Freezer Recycling
		Refrigerator Recycling
		Room Air Conditioner Recycling
		Dehumidifier Recycling
		Clothes Washer
		Refrigerators
		Room Air Conditioner
		Freezers
		Clothes Dryer
		Air Purifier / Cleaner
		Dehumidifiers
		Water Heater - Heat Pump
		Pool Pump Variable Speed
		Dishwashers
		Water Coolers
		Elec Vehicle Chargers - Res
		Monitors
		Computers
		Imaging
		Smart Strip Plug Outlets
		TVs
		Sound Bars
		Smart Home
		LED Lamps (Speciality)
		LED Lamps
		LED Fixtures Internal
		LED Fixtures External
		Residential Occupancy Sensors
		LED Holiday Lights
		Ceiling Fans
		LED Table/Desk Lamps
		Air Source Heat Pumps
		Central Air Conditioners
Ductless Mini-Split Heat Pump		
Ductless Mini-Split A/C		
PTAC		
PTHP		
Heat Pump - Water & Geothermal		
Furnace Fans		
Smart Thermostat		
HVAC - Custom		
Circulating Pump		
HE Bathroom Fans		
HVAC Quality Install		
Existing Homes	Home Performance with Energy Star	Home Performance with Energy Star

Table 8: JCP&L 2021-2023 Core Program Portfolio

Program	Subprogram	Measure
<b>Commercial &amp; Industrial Programs</b>		
Direct Install	Direct Install	Audits w DI - CI - Tier 1
		Audits w DI - CI - Tier 2
		Auto Milker Takeoff
		Custom - Agricultural
		Dairy Refrigeration Tune-Up
		Dairy Scroll Compressor
		Dairy Vac Pump VSD Controls
		Engine Block Heater Timer
		HE Ventilation Fans
		Heat Reclaimers
		High Volume Low Speed Fans
		Livestock Waterer
		Low Pressure Irrigation
		Process Lighting - Agricultural
		Clothes Dryer - C&I
		Clothes Washer- C&I
		Dehumidifier - C&I
		Elec Vehicle Chargers - C&I
		Freezer - C&I
		Pre-Rinse Sprayers
		Refrigerators - C&I
		Water Cooler C&I
		Water Heater - Heat Pump - C&I
		Dehumidifier Recycling - C&I
		Freezer Recycling - C&I
		Refrigerator Recycling - C&I
		Room Air Conditioner Recycling - C&I
		Advanced Pwr Strips- C&I
		Computers - C&I
		Imaging - C&I
		Monitors - C&I
		Small Network
		Uninterruptible Power Supply (UPS)
		Custom - Compressed Air
		Custom - HVAC/Chlrs/Cntrls
		Custom - Process Improvement
		Custom - Refrigeration
		Custom - Equipment/Servers
		Custom - Motors - Three Phase
		Custom - VFDs < 10HP
		Custom - VFDs > 10 HP
		Custom - Audit & Education
		Custom - Bldg Improvements
		Anti Sweat Heater Controls
		Beverage Vending Machine - Controls
		Beverage Vending Machine - Energy Star
		Coffee Brewers
		Combination Oven
		Convection Oven
		Dishwasher - C&I
		ECM Evap Fan Motor
		Evap Fan Controls
		Refrigerators - Reach In
		Freezers - Reach In
		Fryers
		Griddles
		Hot Food Holding Cabinet
		Ice Machines
		Induction Warmer/Rethermalizer Well
		Refrigerated Case Cover
		Steam Cookers
		Strip Curtains
Energy Solutions for Business	Prescriptive / Custom	

Table 8: JCP&L 2021-2023 Core Program Portfolio

Program	Subprogram	Measure
<b>Commercial &amp; Industrial Programs Cont'd</b>		
Energy Solutions for Business	Prescriptive / Custom	Air Conditioning ( >5.4 < 20 Ton) - C&I
		Air Conditioning (<=5.4 Ton) - C&I
		Air Conditioning (>=20 Ton) - C&I
		Circulating Pump - C&I
		Ductless Mini-Split Heat Pump - C&I
		Ductless Mini-Split A/C - C&I
		Furnace Fans - C&I
		Heat Pump (<=5.4 Ton) - C&I
		Heat Pumps - Wtr & GeoT - C&I
		HVAC - Custom C&I
		HVAC - Maintenance - C&I
		PTAC - C&I
		PTHP - C&I
		Room Air Conditioner - C&I
		Smart Thermostat - C&I
		Exit Signs
		LED Channel Signage
		LED Fixture External
		LED Fixture Internal
		LED Lamps - C&I
		LED Linear
		LED Reach in Refrigerator / Freezer Lights
		Lighting - Custom
		Lighting - Other
		Lighting Controls (Daylight & Occupancy)
		Lighting Controls (Network)
		Linear Fluorescent
		Linear Lamps - Mnt-C&I
		High/Low Bays Lamps - Mnt-C&I
		LED Fixture - Mnt-C&I
Street & Area Lighting		
<b>Multifamily Programs</b>		
Multifamily	Multifamily	MF - Tenant - DI
		MF - Tenant - Prescriptive
		MF - Tenant - Custom
		MF - Common - DI
		MF - Common - Prescriptive
		MF - Common - Custom
		MF - Engineered Solutions

## ***4.1 Residential***

### **4.1.1 EFFICIENT PRODUCTS**

This program provides incentives for Efficient Products, including retail products, appliance rebates, HVAC equipment, and appliance recycling.

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#### ***PROGRAM DESCRIPTION / DESIGN (MFR II.A.1)***

This program will promote the installation of ENERGY STAR and other high-efficiency electric and natural gas equipment by residential customers by offering a broad range of energy efficient equipment and appliances through a variety of channels, including an online marketplace, downstream rebates to customers (including but not limited to in-store or online), up-front rebates, reduced point of sale costs, a midstream or upstream component and a network of trade allies and in collaboration with local foodbank and non-profit organizations serving customers in need. The program will provide incentives for energy efficient lighting, appliances, electronics, and heating and cooling equipment, as well as other energy efficiency products (e.g. smart thermostats, water saving measures, weatherization items, and prepackaged kits). Measures range in type and price but include both electric and natural gas technologies that improve energy efficiency in the home. The program may include customer opportunities at no up-front cost to engage and introduce customers to energy savings opportunities and achieve energy savings. Up-front rebates will also be offered to reduce initial costs on some purchases, and on-bill repayment or access to financing with similar terms will be available to further reduce first cost barriers for select products. The program is designed to provide easy and cost-effective access to energy efficient measures through customers' preferred channels and also provide a means to encourage customers to take the first steps toward energy-efficiency.

The program is designed to:

- Provide incentives for products that reduce energy use in the home and information about other programs that encourage the installation of high efficiency equipment, such as lighting, HVAC units, other heating and cooling equipment, electronics and appliances.
- Provide midstream incentives to retailers and/or distributors to increase sales of ENERGY STAR or other energy efficient products.
- Continue to support and/or provide downstream approaches for certain measures to ensure market is properly supported.
- Provide a marketing mechanism for retailer and high efficiency product suppliers to promote energy efficient equipment and products to end users.
- Ensure the participation process is clear, easy to understand and simple for the customer and contractor.

- Provide online or other channels for customers that include but are not limited to online and in-store eligibility options to acquire select ENERGY STAR products, as well as low and moderately priced energy-saving products.
- Recognize unique barriers that low- and moderate-income customers face and employ strategies to address those barriers, including no cost measures and/or enhanced incentives where appropriate.
- Utilize energy efficiency kits to introduce and promote energy efficiency technologies that can be easily installed in the home. The kits will serve as a gateway to other programs by including energy efficiency and conservation educational materials and promotional materials for other program opportunities, including the Company's, Comfort Partners and NJCEP programs.
- Provide energy efficiency kits to local foodbank and non-profit organizations and at energy assistance outreach events to reach low- to moderate-income customers, with schools to promote energy efficiency education in classrooms, to new movers, to customers upon request, and within utility marketplaces to support customer engagement.

This program will increase utilization of energy efficient equipment and products by harnessing the unique utility customer relationship to positively impact the entire sales process surrounding efficient equipment, from education and awareness of customers, engagement with trade ally contractors and equipment distributors and retailers, to on-bill repayment or access to financing with similar terms for select products.

The utilities will use their brand and customer outreach infrastructure to increase the availability, awareness, and customer uptake of energy efficient products. On-bill repayments or access to financing with similar terms will be available to customers to cover the remaining cost (after applying the rebate discount) for the balance of the efficient product cost for select products and services.

The Company and/or a third-party implementation contractor(s) will assist with the administration, oversight, and delivery of the program. Activities will include in the launch of a statewide online marketplace with utility-specific interfaces, efforts to raise awareness of the program, on-going refinements to the list of eligible measures, validating customer eligibility and processing incentives and conducting outreach to and securing partnerships with retailers, wholesalers, distributors, manufacturers and trade allies to assure all customers are able to easily purchase energy efficient products and equipment through the program. Customer engagement and sales channels may include:

- **Post Purchase (Downstream) Rebates:** Rebates will be made available to customers after they have made their purchase. Applications may be available online or in stores to submit either electronically or in hard copy with proof-of-purchase.
- **Online Marketplace:** This online marketplace is an easy to use source for the online purchase of efficient products and services. Participants will be able to browse energy efficient equipment and appliances and purchase through the marketplace which will offer instant rebates and may offer the option for on-bill repayments or access to financing with similar terms for select products.

- **Point of Sale Rebates:** Prescriptive rebates will be made available at the point of sale for selected products. The utilities will also explore the viability of using a digital, smartphone-based application platform, to enable customers to purchase efficient equipment at traditional consumer retail outlets and instantly redeem rebates at point-of-sale in both physical stores and online. Allowing easy access to rebates encourages customers to purchase qualifying efficient products.
- **Appliance Recycling:** Rebates will be provided to customers for recycling qualifying, inefficient, operating appliances. Offering an incentive for the drop off or pick-up and removal of an appliance prevents the appliance from being maintained as a second unit or being transferred to another customer.
- **Midstream or Upstream Rebates:** The utilities will pursue a midstream or upstream rebate component to encourage purchase of certain efficient equipment. The utilities will work with retail partners (such as Home Depot, Lowes, etc.), distributors or manufacturers to assure that measures are available throughout the state. Midstream or upstream rebates encourage market transformation and wider availability of efficient equipment. Efficient products that are rebated via a midstream or upstream approach may be passed on or discounted to the customer at the retail level. Utilities may also offer downstream rebate programs to ensure customers and trade allies are properly supported.
- **Trade Allies:** The utilities will establish a network of trade allies to promote certain components of the program with a consistent experience to the customer where applicable. The trade ally network will consist of qualified installation contractors, plumbers, electricians, and other trade service professionals who meet all applicable statewide requirements for performing the respective service (E.g. HVAC license, insurance requirements). Trade allies will be able to leverage the program and offer customers rebates through their normal course of business.
- **Community Partners:** The utilities will partner with foodbanks and other community organizations serving customers in need to help reduce the energy burden of those customers with no-cost energy efficient products and to raise the awareness of other energy efficiency and energy assistance programs available to help.

By developing relationships with both program and trade allies, the program will develop a broad reach across the marketplace and also solicit feedback from the marketplace to ensure incentives and measures are impacting the market as designed. Targeted program and trade allies may include:

- Efficient equipment retailers, distributors and manufacturers
- HVAC & appliance contractors
- General contractors, plumbers, electricians, and other trade service professionals

Regardless of the delivery mechanism, the utilities will take steps to ensure customers are made aware of utility engagement in helping to off-set up-front costs of the efficient products.

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**TARGET MARKET OR SEGMENT (MFR II.A.II)**

The target market for this program will be all electric and/or natural gas customers served by at least one investor-owned utility in New Jersey. The program is focused on promoting the sale and installation of efficient electric and natural gas equipment across all major residential end-use categories, and can be promoted to program allies, trade allies and customers via straightforward prescriptive rebates. Technologies incentivized through this program include lighting, HVAC, other heating/cooling equipment, electronics, appliances, smart thermostats, water saving measures, weatherization items, pre-packaged kits, and other efficient products. The program will also promote the retirement, recycling, and replacement of old refrigerators, freezers, and other inefficient appliances.

The utilities may offer enhanced incentives for Low-to-Moderate income (LMI) customers (up to 400% of federal poverty level) for certain products to assure that the program reaches all customer types. Eligibility for these enhanced incentives can be determined based on screening an individual customer. However, the utilities will also explore implementing automatic eligibility for enhanced incentives based upon a physical location (e.g. census tract, environmental justice community, Urban Enterprise Zone) to encourage more activity in LMI communities.

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**MARKETING PLAN (MFR II.A.XIV)**

The utilities will implement both multi-pronged direct and indirect marketing campaigns to promote this program. Customers will be exposed to broad-based energy efficiency awareness campaigns, web-based engagement and information, digital advertising, social media and hard-copy materials to promote awareness, as well as tie-ins with other programs. Retailers, wholesalers, distributors, manufacturers and trade allies will be contacted directly and/or through trade associations to develop networks and promote involvement in the program where applicable. The utilities will also look to leverage the behavior program for ‘warm leads’ into the program through both the home energy reports and online audit tool. In addition, the kits provided through this Program will include pamphlets and literature recommending customers visit utilities online portals and marketplace, further increasing engagement.

Targeting and promotion within this program will be enabled through intelligence gained through other residential programs or offerings, primarily Behavioral Home Energy Reports, Existing Homes, and other activity in the Efficient Products program. The utilities will explore opportunities to provide customized information to customers with prioritized action items, to maximize availability and uptake.

A combination of strategies will be used to train and support retailers, distributors and other program allies, including media advertising, outreach community forums, events, and direct outreach to customers. Consistent with current New Jersey CEP practices, the utilities may also offer Cooperative Marketing funding to encourage HVAC contactors to promote the program. Marketing activities may include:

- Point of purchase displays and materials, joint advertising, coupons, and special “instant sales events”
- Public relations materials
- Brochures that describe the benefits and features of the program including application forms and processes. The brochures will be available for various public awareness events (community events, presentations, seminars etc.)
- Bill inserts, bill messages, email, Facebook, Twitter and other social media platforms, pop-up stores.
- Company website content providing program information resources, contact information, online application forms, online retail store and links to other relevant service and information resources
- Customer representatives trained to promote the program to their customers
- Presence at conferences and public events used to increase general awareness of the program and distribute program promotional materials

The primary market barriers that impact this program include:

- **Initial Cost of Efficient Equipment:** Relative to the market baseline, efficient equipment often carries a higher upfront cost but a lower lifetime operating cost. Customers often may not fully value the lifetime operating cost advantage of efficient equipment and, as a result, higher upfront cost is a barrier to purchasing efficient equipment. To address this barrier, incentives are provided to the customer to reduce the initial cost. On-bill repayment or access to financing with similar terms will also help mitigate the up-front cost barrier.
- **Customer Awareness and Engagement:** Residential customers may not be aware of the benefits of installing efficient equipment and/or lack the time and resources to pursue efficient equipment when replacing existing equipment. To address this barrier, the utilities will educate customers on the benefits of installing efficient equipment through targeted marketing, ensure that incentives are easily accessible, and encourage market transformation and stocking of efficient equipment through midstream incentives. Through outreach efforts, the utilities will seek to partner with retail and wholesale entities to promote program offerings, and also focus marketing, education, and outreach efforts on the trade ally community to ensure that trade allies are aware of available incentives and prepared to serve customers. To increase awareness among customers with English as a second language, utilities will develop and provide outreach materials in Spanish. The utilities intend to be active participation in both the Equity or Marketing Working groups and expect to address the need and cost for developing materials in a broader range of languages as part of those discussions.
- **Landlord/Tenant Arrangements:** Split incentives between landlord/tenants with respect to who pays for energy use vs. who owns the energy-using equipment challenge investment decisions. To address this barrier, the program will be marketed to both landlords and tenants to assure that those exposed to energy costs are able to participate in the program. Utilities may also provide technical and outreach assistance to property owners and managers in developing and marketing green properties to attract tenants.
- **Sufficient Stocking and Availability of Efficient Products:** The utilities will look for opportunities to develop and promote a midstream component for specific equipment to

encourage high levels of participation via incenting midstream market actors and/or directly discounting the cost of the efficient equipment at the point of sale.

The Company will seek to manage barriers to program success through a commitment to monitoring program performance and feedback channels for assessing effective program design, delivery, outreach, and marketing/advertising, and improvement opportunities. The utilities' established customer communication channels, data, and brand in the marketplace will all be leveraged to deliver best-practice programs that identify and confront market barriers on an ongoing basis. To the extent possible, the utilities will cross-promote programs to spread awareness of the range of efficiency opportunities proposed in this plan.

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***DELIVERY METHOD, CONTRACTOR ROLES AND IMPLEMENTATION PLAN (MFR II.A.V, MFR II.A.VIII, MFR II.A.X.III, MFR.II.C)***

The utilities and/or third-party implementation contractors will be responsible for identifying and engaging retail and wholesale entities dealing in energy efficient equipment to on-board them with the program vision, eligible efficient products, rebates, and ways to participate. Additionally, the Company and/or third-party implementation contractors will engage trade allies, including local HVAC, electrical, plumbing, and other contractors to educate them on program benefits and build a trade ally network which will reliably install energy efficient equipment for participating customers. The Company and/or third-party implementation contractors will also monitor participation to assess the effectiveness of outreach efforts, incentive levels, delivery methods, and both program ally and trade ally availability to provide suggestions to assure that the program is continually providing customers with their needs. The Company and/or a third-party implementation contractor will be responsible for the management of the online marketplace. The utilities will oversee the build-out of the online marketplace as well as the retail and Trade Ally network, which may be administered by third-party implementation contractors. The Company and/or third-party implementation contractors will also process the online instant rebates, verify eligibility of customers and manage the delivery of items purchased on the website.

To select qualified third-party implementation contractors, the utilities will prioritize criteria including, but not limited to:

- Experience delivering similar programs or initiatives
- Resources and marketing strength
- Cost
- The amount of business placed with MWVBEs.
- By allowing participants to select a trade ally they are comfortable with for select products, the program reduces barriers to entry related to knowledge of energy efficiency, confidence in assessments, and measure installation. The utilities will perform customer satisfaction and other quality assurance and quality control activities to monitor, ensure program and verify quality standards are met.

The Company plans to issue a request for proposal in the 1st quarter of 2021 for third-party implementation contractor(s) who will be responsible for marketing, customer enrollment, program

and trade ally engagement, application and rebate processing, documentation and/or other program delivery activities as discussed above. The Company plans to select the third-party implementation contractor(s) in a timeframe that supports timely program implementation upon Board approval of the program.

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*EXISTING AND PROPOSED INCENTIVES RANGES (MFR II.A.III, MFR II.A.IV)*

Refer to Appendix A, Table A-1 for the Proposed Incentive Ranges for this program.

The utilities propose to provide a range of incentives depending on the measure type, subject to changes based upon customer response and marketplace changes over the plan period. Incentives will vary depending on the specific product, the incremental cost of the high-efficiency technology, and the product maturity in the marketplace.

Incentives will be available in several ways and are adapted to the retail partner needs and market response. Strategies may include:

- Mail-in applications available from the retailer and the program website or directly from contractors
- Online rebate forms
- Point of Sale or In-store “Instant Reward” coupons that are redeemed in-store at the time of purchase.
- Special sale events in retail stores
- Manufacturer buy down to Retailer
- Midstream or Upstream incentives to retailers, distributors or manufacturers to encourage them to stock and promote efficient products or to provide product incentives at time of purchase
- Partnerships with community groups, schools, and/or non-profit organizations

The Company may change incentives with Staff notice or approval following the June 10, 2020 Board Order.<sup>2</sup> Incentives may change based on market prices, as well as manufacturer and distributor co-funding. Other incentive alternatives may be used as the market evolves and new and innovative customer, program ally and trade ally engagement opportunities become apparent.

In instances where incentives are not immediate, the utilities will complete consumer or contractor payments within 60 days following completion of contractor work, submission of complete and

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<sup>2</sup> June 10, 2020 Board Order page 13 states “the utilities shall propose incentive ranges as common elements for core programs within which they can adjust incentives as needed with Staff notice; any adjustments outside the established range requires Staff approval... Utilities can decrease incentives for additional

utility-led initiatives with Staff notification; increase incentives up to 50% of the originally-approved incentive amount with Staff notification; and increase incentives over 50% of the originally-approved incentive amount with Staff approval.”

required paperwork, and completion of program requirements such as necessary field inspections (if required).

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***CUSTOMER FINANCING OPTIONS (MFR II.A.VI)***

Refer to Appendix B Table B-1 for the summary of Proposed Financing for this program.

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***CUSTOMER ACCESS TO CURRENT AND HISTORIC ENERGY USAGE DATA (MFR II.A.VII)***

Refer to Section 10.2 for a description of how the Company provides customers access to their current and historic energy usage data.

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***PROJECTED PARTICIPANTS (MFR II.A.IX) AND ENERGY SAVINGS (MFR II.A.X)***

Refer to Appendix D, Table D-10 for the projected participants and energy savings for this program. The table summarizes the projected participation and savings associated with this subprogram. All values are annual incremental totals, and do not incorporate savings achieved in prior years. Savings estimates are based on projected participation during each year of the forecast period.

For customers in areas where gas and electric service territories overlap, the utilities will use the Statewide Coordinator to allocate costs and energy savings for shared measures. Refer to Section 6.3 for a description of the role of the Statewide Coordinator.

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***PROGRAM BUDGET (MFR II A.XI, MFR II.A.XII)***

Refer to Appendix E, Table E-10 for the projected program expenditures for the program.

#### **4.1.2 EXISTING HOMES-HOME PERFORMANCE WITH ENERGY STAR**

This sub-program provides incentives to encourage customers to pursue comprehensive upgrades to their home.

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##### ***PROGRAM DESCRIPTION / DESIGN (MFR II.A.I)***

Home Performance with ENERGY STAR will provide a holistic approach for customers to explore and invest in the efficiency and comfort of their homes. All participants in this subprogram must have an initial energy audit performed directly by a qualified Home Performance with ENERGY STAR contractor or auditor. That audit will develop an energy efficiency action-plan that includes recommendations for upgrades and available incentives. To ensure the upgrades are accessible to customers, there will be financing available through either an On-Bill Repayment Program (“OBRP”) or access to financing with similar terms.

This subprogram is designed to review the entire status of a home, including equipment and envelope to achieve deeper energy savings. The program will follow guidelines and qualifying criteria associated with the U.S. Environmental Protection Agency Home Performance with ENERGY STAR (HPwES) program subject to as-needed enhancements to maximize participation and cost-effective energy savings opportunities. The utilities will also seek to increase the number of contractors certified to offer customers the U.S. Department of Energy Home Energy Score (HES) to help customers understand how Home Performance with ENERGY STAR improvements can improve the efficiency and comfort of their home.

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##### ***TARGET MARKET OR SEGMENT (MFR II.A.II)***

Home Performance with ENERGY STAR will be available to all single-family and single-family attached (1 to 4 unit properties) electric and/or natural gas customers served by at least one of the investor owned utilities in New Jersey.

As noted, all customers will start with a comprehensive energy audit or through upgrading from a Quick Home Energy Check-up (QHEC). Potential measures incentivized through this program include but are not limited to insulation, air sealing, smart thermostats, and HVAC. All HPwES projects must include air sealing and insulation.

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##### ***MARKETING PLAN (MFR II.A.XIV)***

The utilities will utilize many marketing avenues to assure subprogram awareness and participation is maximized. These include traditional marketing avenues, such as web-based engagement and information, digital advertising, media advertising, and hard-copy materials to

promote awareness among trade allies and customers. The utilities will also cross promote this subprogram to participants in other energy efficiency program offerings. Information garnered from other programs, such as the Residential Behavioral and Residential Efficient Products could also be used to identify prime candidates for participation in this HPwES subprogram. For example, a review of usage data contained in Home Energy Reports from the Residential Behavioral Subprogram could allow the utilities to identify customers who are particularly susceptible to changes in weather and would be ideal candidates for an audit. Likewise, the Residential Efficient Products program could provide leads to customers interested in energy efficiency. Most importantly, the QHEC subprogram was specifically designed to educate, engage and provide immediate energy savings to customers and identify strong leads for candidates that would benefit from participating in this HPwES program. Consistent with current New Jersey CEP practices, the utilities may also offer Cooperative Marketing funding to encourage HPwES contactors to promote the subprogram.

The primary market barriers that impact this subprogram include:

- **Initial Cost of Comprehensive Home Retrofits:** Home retrofits are more expensive and involved than purchasing efficient equipment and therefore, require more participant investment and commitment. Customers must be willing and able to invest in more expensive energy-efficiency projects. The utilities address this barrier by offering incentives and On-Bill Repayment Programs or access to financing with similar terms.
- **Traditional Credit Screening:** Many customers interested in pursuing comprehensive projects may not be able to pass traditional credit screening (e.g. requirements for debt to equity ratio) despite having a proven track record for paying their utility bills on time. The utilities will explore solutions to help more customers access this incentive through either an OBRP approach or access to financing with similar terms that relies on a review of utility payment history and bankruptcy check to ensure customers who have a proven track record have the opportunity to participate or through innovative approaches.
- **Customer Awareness and Engagement:** Many customers are unaware of the “whole house” approach to energy-efficiency or the fact that building science exists. The utilities will work to address this by:
  - continuing to educate customers about the HPwES subprogram and how both the structure and equipment work together
  - highlighting the extra training that participating contractors must have
  - identifying how the shell measure improvements can improve their comfort within the home
  - noting that an audit includes health and safety testing
  - reinforcing that the investments in equipment and shell measures may increase the value of their home.
- **Trade Ally Awareness and Training:** To meet the participation goals, sufficient HPwES contractors must be available to undertake the work. The utilities will address this barrier by trying to recruit more HVAC contractors to secure the additional certification necessary to participate in this program, including pursuing initiatives that align with the Workforce Development Working Group strategies to include more local, underrepresented and disadvantaged workers.

The Company will seek to manage barriers to program success through a commitment to monitoring program performance and feedback channels for assessing effective program design, delivery, outreach, and marketing/advertising, and improvement opportunities. The utilities established customer communication channels, data, and brand in the marketplace will all be leveraged to deliver best-practice programs that identify and confront market barriers on an ongoing basis.

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***DELIVERY METHOD, CONTRACTOR ROLES AND IMPLEMENTATION PLAN (MFR II.A.V, MFR II.A.VIII, MFR II.A.X.III, MFR.II.C)***

The utilities will administer this HPwES subprogram and may also choose to select a third-party implementation contractors to manage delivery of this subprogram.

The Company and/or third-party implementation contractors will oversee all aspects of the subprogram, including training and engagement, Quality Assurance/Quality Control (QA/QC), and rebate processing. There will be a significant focus on developing, training, and growing a qualified trade ally network. This will include trade ally training sessions, workshops, and market development events to grow and develop the trade ally network, with a priority placed on encouraging them to integrate home efficiency performance into their business and become Building Performance Institute (BPI) certified contractors. The Company and/or third-party implementation contractors will maintain a close relationship with trade allies to ensure consistent subprogram delivery experience and high customer satisfaction. The Company and/or third-party implementation contractors will also take on the responsibility of providing an additional layer of customer support as needed and conducting selective verification of trade ally installation work.

Trade allies will consist of companies employing BPI-certified professionals to complete HPwES audits and energy-saving projects. In order to facilitate trade ally access to participants, utilities or the third-party implementation contractor will maintain a list of companies and professional services where customers can find local trade allies based on geography and other criteria.

Selection of third-party implementation contractors will prioritize criteria including but not limited to:

- Experience delivering similar subprograms or initiatives
- Knowledge of the current marketplace
- Ability to educate and train contractors
- Local presence
- Cost
- The amount of business placed with MWVBEs.

The utilities will encourage all participating contractors to also look for opportunities to promote measures from the Residential Efficient Products Subprogram, such as home appliances (e.g. clothes washers) to increase energy savings and leverage those incentives.

The Company plans to issue a request for proposal in the 1st quarter of 2021 for third-party implementation contactor(s) who will be responsible for marketing, customer enrollment, program and trade alley engagement, application and rebate processing, documentation and/or other program delivery activities as discussed above. The Company plans to select the third-party implementation contractor(s) in a timeframe that supports timely program implementation upon Board approval of the program.

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***EXISTING AND PROPOSED INCENTIVES RANGES (MFR II.A.III, MFR II.A.IV)***

Refer to Appendix A, Table A-1 for the Proposed Incentive Ranges for this subprogram.

The utilities will provide incentives to encourage customers to implement the measures recommended during their audit. Incentives will be calculated based on modeled savings through a sliding scale up to an overall project cap. Modeled savings will be based upon software that will use consistent calculations across territories. As the utilities work to launch midstream incentives for HVAC measures through the EE Products program, there is a recognition that a baseline incentive may be provided when a participating contractor secures the equipment from a participating distributor or retailer. The utilities intend to adjust the calculation of the incentive when an incentive has already been provided through a midstream path. However, the utilities have a shared intention to have the value of an HVAC measure being installed through this program be higher than a standalone HVAC equipment installation to ensure that customers are encouraged to pursue comprehensive upgrades and to recognize additional energy savings associated with improving the building shell.

Consistent with current practices for the New Jersey HPwES program, the utilities are proposing an incentive range for a Contractor Production incentive and separate scale for incentives for multi-family properties.

The utilities and/or third-party implementation contractors will complete consumer or contractor payments within 60 days following completion of contractor work, submission of complete and required paperwork, and completion of program requirements such as necessary field inspections (if required).

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***CUSTOMER FINANCING OPTIONS (MFR II.A.VI)***

Refer to Appendix B Table B-1 for the summary of Proposed Financing for this subprogram.

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***CUSTOMER ACCESS TO CURRENT AND HISTORIC ENERGY USAGE DATA (MFR II.A.VII)***

Refer to Section 10.2 for a description of how the Company provides customers access to their current and historic energy usage data.

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***PROJECTED PARTICIPANTS (MFR II.A.IX) AND ENERGY SAVINGS (MFR II.A.X)***

Refer to Appendix D, Table D-11 for the projected participants and energy savings for this subprogram. The table summarizes the projected participation and savings associated with this subprogram. All values are annual incremental totals, and do not incorporate savings achieved in prior years. Savings estimates are based on projected participation during each year of the forecast period.

For customers in areas where gas and electric service territories overlap, the utilities will use the Statewide Coordinator to allocate costs and energy savings for shared measures. Refer to Section 6.3 for a description of the role of the Statewide Coordinator.

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***PROGRAM BUDGET (MFR II A.XI) (MFR II.A.XII)***

Refer to Appendix E, Table E-11 for the projected program expenditures for the subprogram.

## ***4.2 Commercial & Industrial***

### **4.2.1 BUSINESS DIRECT INSTALL**

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#### ***PROGRAM DESCRIPTION / DESIGN (MFR II.A.I)***

The C&I Direct Install Program is focused on installation of efficiency measures for small businesses, non-profit organizations, municipalities, schools and faith-based organizations (“eligible customers”) that typically lack the time, knowledge, or financial resources necessary to investigate and pursue energy efficiency. The program is designed to provide eligible customers with easy investment decisions for the direct installation of energy efficiency projects. The program will pay a percentage of the up-front cost to install the recommended energy efficiency measures, with the participating customer contributing the balance of the project cost not covered by the incentive. The program will also provide a repayment option to the customer to pay their required contribution over time. The no-cost energy assessment mitigates the time constraints and knowledge barriers while the reduced overall costs and repayment options mitigate up-front cost barriers and assist participants in making decisions, which otherwise would be time-consuming and difficult to justify. The C&I Direct Install program plays an important role in the marketplace because private providers of energy efficiency services typically do not target smaller customers due to the lower overall profit for their services when compared with larger non-residential customers. For these reasons, small businesses, non-profit organizations, municipalities, schools, and faith-based organizations are often hard to reach, and the program fills an important gap by targeting, promoting, and delivering efficiency services to these customers directly.

The energy assessment will be provided to customers free of charge and will offer recommendations on energy efficiency measures to reduce energy usage and costs. Standard basic energy savings measures may also be provided or installed at no cost at the time of the energy assessment to support customer engagement, participation, and energy savings.

The program will also focus on the smallest customers within the eligible customer segment. The Company anticipates portions of the program to be directed at restaurants, small offices, convenience stores and other small independent businesses that often are left behind in less-comprehensive energy efficiency programs. Through a number of delivery mechanisms, the Company will assure that all eligible business types are able to participate in this program.

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#### ***TARGET MARKET OR SEGMENT (MFR II.A.II)***

The program seeks to address the most cost-effective measures (e.g. LED lighting retrofits) but will also address all measure retrofits that would comprise a cost-effective project. Examples of end-use categories covered by the program include lighting, HVAC, controls, refrigeration, food service, motors, low-flow devices, pipe wrap and domestic hot water equipment.

The program will be divided into two tiers of eligibility, determined by the customer's individual facility peak electrical demand over the last 12 months. Tier 1 will serve the smallest of the eligible customer base, specifically focusing on customers with an average individual facility peak electrical demand of up to 100 kW. Tier 1 will also include customers up to 200 kW owned or operated by a local government, and K-12 public schools. Additionally, customers with an average peak demand from 101 – 200 kW that are located within designated opportunity zones or Urban Enterprise Zones (“UEZ”) may also qualify for Tier 1 status. Tier 2 will serve the larger segment of small non-residential customers, with an average individual facility peak electrical demand of 101 - 200 kW. This figure may be increased by the Company to ensure the program is properly addressing the market in the Company's service territory.

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#### **MARKETING PLAN (MFR II.A.XIV)**

The C&I Direct Install Program will be marketed to customers through a combination of direct outreach by program staff, and/or the third-party implementation contractor, web-based engagement and customer information analytics, digital advertising, and hard-copy materials to promote awareness among trade allies and customers. Direct outreach may include visits to customer premises to distribute hard-copy program materials, inform customers about the program directly, and solicit participation. Additionally, the Company may engage community partners, including chambers of commerce and other local organizations including those comprised of underrepresented and socially or economically disadvantaged individuals. The Company will also consider the potential to utilize customer information analytics or other targeted energy education outreach to identify and target customers best suited for participation in the program. The collective marketing plan strategy is useful for enrolling eligible customers that may be interested in participating but have not heard of the program and do not have the time or resources to prioritize investigating energy efficiency opportunities or reaching out to the Company.

The primary market barriers that impact this program include:

- **Customer Awareness and Engagement:** Small businesses, non-profit organizations, schools and faith-based organizations typically have limited resources and time to consider or prioritize energy efficiency and may have efficiency needs not well aligned with traditional commercial demand side management (DSM) programs targeted at larger customers. This program is intended to confront these market barriers by providing turnkey, direct installation of efficiency measures tailored to these eligible customers at no cost, while identifying additional efficiency opportunities directly on-site, and through directly soliciting eligible customers for participation. This personalized approach builds trust and achieves results while increasing the likelihood of further participation referrals. To increase participation rates among a diverse demographic, utilities may include focused outreach efforts to reach minority- and women-owned small businesses, and start-ups by engaging with business groups and organizations that support these customers. Partner business groups might include the Chamber of Commerce, and the Small Business

Administration. Utilities may also explore providing outreach materials in Spanish to reach Spanish-speaking business owners.

- **Initial Cost of Efficiency Investments:** Recommended energy efficiency projects that go beyond direct-install measures will require more participant investment and commitment. This barrier will be addressed through offering incentives and a repayment option, as well as through operating a program that is flexible and easy for small business customers to utilize.
- **Landlord/Tenant Arrangements:** Split incentives between landlord/tenants with respect to who pays for energy use versus who owns the energy-using equipment presents a unique challenge because the investor in the equipment does not experience an immediate benefit. The subprogram will employ strategies to help the landlord understand the long-term benefits of participating. This subprogram will be marketed to both landlords and tenants to assure that those exposed to energy costs and investments are able to participate in the program. Utilities may also provide technical and outreach assistance to property owners and managers in developing and marketing green properties.

The Company will seek to manage barriers to program success through a commitment to monitoring program performance and feedback channels for assessing effective program design, delivery, outreach, and marketing/advertising, and improvement opportunities. The Company's established customer communication channels, data, and brand in the marketplace will all be leveraged to deliver best-practice programs that identify and confront market barriers on an ongoing basis. To the extent possible, the Company will cross-promote program offerings to spread awareness of the range of efficiency opportunities proposed in this plan.

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***DELIVERY METHOD, CONTRACTOR ROLES AND IMPLEMENTATION PLAN (MFR II.A.V, MFR II.A.VIII, MFR II.A.X.III, MFR II.C)***

The C&I Direct Install Program interfaces with customers via either direct solicitation or upon customer request. All participants receive a site visit, including a free on-site energy assessment to identify energy efficiency retrofit opportunities. Standard basic energy savings measures may also be provided at no cost at the time of the energy assessment for eligible Tier 1 customers, to support customer engagement, participation, and energy savings. Following the energy assessment, participants are provided with a report assessing the site and recommending investments that could further improve the energy efficiency of the facility.

Based on the results of the energy assessment report, the program will offer to initially pay a percentage of the project cost to install the recommended energy efficiency measures with the participating customer (and/or landlord). The program will also provide a payment option to the customer (and/or landlord) for their portion of the project cost. The Company will provide for the installation of all work and assure it is completed on time and to specifications. This approach frees up the participant, who may not have the time or resources to dedicate to project implementation. The distinction between Tier 1 and Tier 2 eligibility criteria will ensure that eligible customers, even those that are the smallest and often overlooked, receive ample focus. The

simple, turnkey solution provides eligible customers with the initial site visit, energy assessment, and installation of recommended efficiency measures at no initial cost to participants.

The Company will administer and manage the program with the support of third-party implementation contractor(s) and/or Company staff. The third-party implementation contractor or the Company will have responsibility for most delivery tasks and customer outreach on behalf of the Company. The third-party implementation contractor will work closely with the Company to optimize the program offering, including, but not limited to:

- Initial participant recruitment, energy assessment, and equipment installation
- Program data tracking
- Direct customer outreach/program delivery strategy
- Development of measure mix
- Marketing
- Promotion of emerging technology
- Customer satisfaction

The third-party implementation contractor or the Company will take on the responsibility of implementing the program, directing the qualification and enrollment of participating contractors, and will work to assure that ample participating contractors are available to complete all work derived from the program. The participating contractors will perform the energy assessments and installations, working with the Company and/or the third-party implementation contractor's oversight to undertake all construction and installation work identified in the energy assessment process.

The Company plans to issue a request for proposal in the 1st quarter of 2021 for third-party implementation contractor(s) who will be responsible for marketing, customer enrollment, program and trade alley engagement, application and rebate processing, documentation and/or other program delivery activities as discussed above. The Company plans to select the third-party implementation contractor(s) in a timeframe that supports timely program implementation upon Board approval of the program.

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***EXISTING AND PROPOSED INCENTIVES RANGES (MFR II.A.III) (MFR II.A.IV)***

Refer to Appendix A, Table A-2 for the Proposed Incentive Ranges for this program.

Both tiers of the program will encompass many of the same benefits, including a simple, turnkey solution for eligible customers, which requires no up-front investment. The initial site visit, energy assessment, and installation of recommended energy efficiency measures are provided at no initial cost to participants. The utilities propose to provide an incentive level of up to 70-80% of the project costs, and to continue discussions to determine the appropriate level and at what level the incentive is applied to best promote the completion of comprehensive projects while maintaining

overall program cost effectiveness. Additionally, the utilities plan to coordinate on the methodologies and calculations used to determine energy savings and program incentives.

For Tier 1 customers, standard basic energy savings measures may be installed at no cost during the time of the energy assessment. The program will offer to pay up to 80% of the project cost to install the recommended energy efficiency measures with the participating customer (and/or landlord) repaying the balance not covered through the incentive either in a lump sum or through an available repayment option. Customers located in an Urban Enterprise Zone, Opportunity Zone, owned or operated by a local government, or K-12 public schools, may also qualify for Tier 1 status, up to an average individual facility peak electrical demand of 200 kW.

Tier 2 will serve the larger segment of eligible customers, with an average individual facility peak electrical demand of 101 - 200 kW over the past 12 months. Incentives up to 70% of the total project cost will be offered.

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***CUSTOMER FINANCING OPTIONS (MFR II.A.VI)***

Refer to Appendix B Table B-1 for the summary of Proposed Financing for this program.

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***CUSTOMER ACCESS TO CURRENT AND HISTORIC ENERGY USAGE DATA (MFR II.A.VII)***

Refer to Section 10.2 for a description of how the Company provides customers access to their current and historic energy usage data.

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***PROJECTED PARTICIPANTS (MFR II.A.IX) AND ENERGY SAVINGS (MFR II.A.X)***

Refer to Appendix D, Table D-15 for the projected participants and energy savings for this program. The table summarizes the projected participation and savings associated with this subprogram. All values are annual incremental totals, and do not incorporate savings achieved in prior years. Savings estimates are based on projected participation during each year of the forecast period.

For customers in areas where gas and electric service territories overlap, the utilities will use the Statewide Coordinator to allocate costs and energy savings for shared measures. Refer to Section 6.3 for a description of the role of the Statewide Coordinator.

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***PROGRAM BUDGET (MFR II A.XI) (MFR II.A.XII)***

Refer to Appendix E, Table E-15 for the projected program expenditures for the program.

## 4.2.2 ENERGY SOLUTIONS FOR BUSINESS-PRESCRIPTIVE / CUSTOM

### PROGRAM DESCRIPTION / DESIGN (MFR II.A.1)

The C&I Prescriptive and Custom Measure subprogram will promote the installation of high-efficiency electric and/or natural gas equipment by the Company's C&I customers, either via the installation of prescriptive or custom measures or projects. The subprogram provides prescriptive-based incentives to commercial and industrial customers to purchase and install energy efficient products. The subprogram will continue to support and/or provide downstream approaches to ensure the market is properly supported. The subprogram may also provide midstream or upstream incentives or buydowns and support to manufacturers, distributors, contractors, and retailers that sell select energy efficient products. These measures will incent energy efficient lighting, appliances, heating and cooling equipment, and food service equipment, among other efficiency measures. Type and value of incentive provided will range and will include electric and/or natural gas technologies that improve energy efficiency. Up-front rebates will be offered to reduce initial costs and some purchases may qualify for low to no-interest financing to further reduce first cost barriers. Prescriptive measures are designed to provide easy and cost-effective access to energy efficient measures through customers' preferred channels.

Prescriptive rebates are designed to:

- Provide incentives to facility owners and operators for the installation of high efficiency equipment and controls
- Promote the marketing of high efficiency measures by trade allies such as electrical contractors, mechanical contractors, and their distributors to increase market demand.
- Ensure the participation process is clear and simple

Prescriptive incentives will increase adoption of energy efficient equipment by harnessing the Company's unique customer relationships to positively impact the entire sales process surrounding efficient equipment, from education and awareness with customers, engagement with trade ally contractors and equipment distributors, to financing opportunities for the high efficiency equipment.

The subprogram also includes custom measures that provide calculated or performance-based incentives for electric and/or natural gas efficiency opportunities for commercial, industrial, and other non-residential customers that are non-standard and not captured by prescriptive equipment. Calculated or performance-based incentives are designed to reduce the customer's capital investment for qualifying energy efficient equipment, to retrofit specialized processes and applications and/or to implement qualifying high efficiency building shell or systems improvements. Typical custom measures that are eligible for incentives are either less common measures or efficiency opportunities in specialized applications that may include manufacturing or industry-specific processes, or non-traditional use cases. In many cases, custom efficiency projects are more complex than prescriptive equipment replacement.

Potential participants are required to submit an application for pre-approval to confirm project eligibility and reserve funding. The Company and/or implementation contractors will develop electronic rebate application forms that will guide applicants through eligibility guidelines, subprogram requirements, terms and conditions, and general information. In addition, the Company and/or implementation contractors will provide applications in web ready formats to ensure participants have easy access to the forms. The pre-approval process provides for the review of the customer's proposed project to confirm measure eligibility and incentive budget availability. This also supports the Company's subprogram management because it communicates projects that are in the pipeline. If accepted and pre-approved by the Company, a timeline is established for project completion to qualify for a rebate. The typical lead time for completing a custom project is 90 to 120 days but can be longer depending on the complexity of the project. Large projects, or subsets of projects, may be required to undergo pre-and post-inspection to validate project energy savings. Approved projects may also be eligible for low to no cost financing to further reduce first-cost barriers.

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#### ***TARGET MARKET OR SEGMENT (MFR II.A.II)***

The C&I Prescriptive and Custom Measures subprogram will be available to all commercial, industrial, and other non-residential customers located within the Company's service territory. This subprogram is focused on promoting the sale and installation of efficient electric and/or natural gas equipment across all major end-use categories and can be easily promoted to trade allies and customers via straightforward prescriptive rebates, or more complex custom rebates. Potential technologies incentivized through prescriptive measures include energy efficient lighting, appliances, heating and cooling equipment, and food service equipment, among other efficiency measures. Customers pursuing custom incentives will generally be customers with more complex needs and non-standard efficiency opportunities. and typically include building types such as light/heavy industrial, manufacturing, data centers, and distribution centers, among others.

Additionally, JCP&L proposes to target customers on the Company's streetlighting tariffs to promote the replacement of existing Company-owned streetlighting with efficient LED streetlighting equipment.

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#### ***MARKETING PLAN (MFR II.A.XIV)***

The C&I Prescriptive and Custom Measures subprogram will engage with customers and trade allies at multiple levels, including broad-based energy efficiency awareness campaigns, direct outreach by subprogram staff and representatives, web-based engagement and information, digital advertising, and hard-copy materials to promote awareness among trade allies and customers. In some cases, subprogram staff and representatives will reach out directly to large customers. Use of appropriate types of media are anticipated to be included in the marketing plan, such as direct mail, email, print, and digital media. Engagement with trade associations (e.g. builders, architects, engineers, equipment distributors, professional and contractor associations, etc.) will also be

important venues for the Company to present information about the subprogram, raise awareness and encourage participation.

Marketing will be used to target specific customer sectors to ensure awareness in the subprogram and enhance participation. The Company and/or implementation contractor will target various market sectors (i.e. education, medical/health care, manufacturing, retail, food service) to enhance participation and promote a cross-section of measures applicable to each market. Since prescriptive retrofits are generally one-for-one replacements, measure-specific collateral pieces will be developed for new measures or enhanced for continuing measures. These will be delivered to sectors most likely to utilize the specific technology. Fact sheets, mailings, post cards, e-blasts, and on-location seminars will also be used to promote specific measures. Custom marketing efforts require a consistent and directed outreach to trade allies and associations, The Company and/or implementation contractors will be required to develop and implement a marketing plan to identify and target customers to connect them to appropriate measures using e-blasts, webinars, on-site seminars, and large customer publications, among other marketing and outreach initiatives. Further, in order to attract multiple measure participation, the Company and/or implementation contractor will outreach via sectors, as well as to trade allies and associations such as architects, engineers and professional associations. Targeted advertisements in industry/trade publications will also be required to bring awareness to the opportunities and savings available through the Custom offering.

The primary market barriers that impact this subprogram include:

- **Initial Cost of Efficient Equipment:** Relative to the market baseline, efficient equipment often carries a higher upfront premium but a lower lifetime operating cost. Purchasers often may not fully value the lifetime operating cost advantage of efficient equipment and as a result, higher upfront cost is a barrier to purchasing efficient equipment. To address this barrier, incentives are provided to the customer to reduce the initial cost through a variety of channels including at midstream and downstream points. Access to financing for certain measures will also help address this barrier.
- **Customer Awareness and Engagement:** Commercial and Industrial customers may not be aware of the benefits of installing efficient equipment and/or lack the time and resources to pursue efficient equipment when replacing existing equipment. To address this barrier, the Company will educate customers on the benefits of installing efficient equipment through targeted marketing, ensure that incentives are easily accessible, and encourage market transformation and stocking of efficient equipment through midstream incentives. Through outreach efforts, the Company will seek to partner with retail and wholesale entities to promote program offerings, and also focus marketing, education, and outreach efforts on the trade ally community to ensure that trade allies are aware of available incentives and prepared to serve customers. To increase participation rates among a diverse demographic, utilities may include focused outreach efforts to reach minority- and women-owned small businesses, and start-ups by engaging with business groups and organizations that support these customers. Partner business groups might include the Chamber of Commerce, and the Small Business Administration. Utilities may also explore providing outreach materials in Spanish to reach Spanish-speaking business owners.

- **Landlord/Tenant Arrangements:** Split incentives between landlords, who own the energy-using equipment, and tenants, who pay for energy use, present a unique challenge because the investor in the equipment does not experience an immediate benefit. The subprogram will employ strategies to help the landlord understand the long-term benefits of participating. This subprogram will be marketed to both landlords and tenants to assure those exposed to energy costs are able to participate in program. Utilities may also provide technical and outreach assistance to property owners and managers in developing and marketing green properties.
- **Sufficient Stocking and Availability of Efficient Products:** To support a robust marketplace for efficient equipment, the Company may promote midstream incentives for specific equipment types to encourage participation via incentives for distributors or retailers to stock and promote the purchase of or for directly marking down the cost of the efficient equipment at the point of sale

The Company will seek to manage barriers to subprogram success through a commitment to monitoring program performance and feedback channels for assessing effective program design, delivery, outreach, and marketing/advertising, and improvement opportunities. The Company's established customer communication channels, data, and brand in the marketplace will all be leveraged to deliver best-practice programs that identify and confront market barriers on an ongoing basis. The Company will cross-promote programs and subprograms to spread awareness of the range of efficiency opportunities proposed in this plan.

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***DELIVERY METHOD, CONTRACTOR ROLES AND IMPLEMENTATION PLAN (MFR II.A.V, MFR II.A.VIII, MFR II.A.X.III, MFR II.C)***

The Company may outsource some, or all, of the implementation of this subprogram to an implementation contractor who would be responsible for defined functions, which could include administration, marketing, application processing and documentation regarding purchased products and processing incentives and rebates. The Company will perform overall administration and oversight of the subprogram. To maximize customer participation and streamline the customer experience, the Company will use its strong customer and marketplace relationships to support multiple implementation strategies to achieve subprogram goals.

- **Trade Allies:** The Company and/or the implementation contractor will target trade allies (e.g. electricians, HVAC contractors, lighting retailers and distributors, building energy managers, etc.) to promote the efficiency opportunities and incentives to their clients. Preserving this downstream approach will ensure that customers and trade allies are properly supported. Trade allies will be able to leverage the subprogram and offer customers rebates through their normal course of business. By developing relationships with trade allies, the subprogram will develop a broad reach across the marketplace and solicit feedback to ensure incentives and measures are impacting the market as designed. Examples of targeted trade ally firms include:
  - Design, engineering, and controls firms
  - HVAC distributors, contractors, and retail providers

- Food service retailers and service providers
- Commercial lighting distributors and wholesalers
- **Retail:** The Company's subprogram staff, the implementation contractor, and/or field representatives will work with retailers and distributors that directly target C&I customers to inform them of the participation process and available equipment incentives. The Company and/or implementation contractor will also provide support and assistance to retailers or distributors to support identification and promotion of qualifying energy efficient products. This will also include training and instruction to participating retailers and distributors about the application forms.
- **Midstream:** The Company and/or the implementation contractor may promote a midstream component for specific equipment types to encourage purchase of efficient equipment via directly marking down the cost of the efficient equipment at the point of sale. Midstream rebates encourage market transformation and wider availability of efficient equipment. The Company anticipates offering midstream point of sale discounts across numerous equipment types, including, but not limited to: LED lighting, HVAC, and food service equipment. Efficient products that are rebated via a midstream approach will not be eligible for rebates in any other Company rebate program. The Company and/or implementation contractor will also provide support and assistance to distributors to support identification and promotion of qualifying energy efficient products. This will also include training and instruction to participating distributors as well as enrollment of distributors to participate in midstream subprogram offerings
- **Digital:** The subprogram will be marketed directly to C&I customers on the Company's website, where customers will have easy access to information regarding eligible equipment and savings opportunities, how to participate, and incentives across all efficient equipment types and end-uses.
- **Targeted Customer Outreach:** Company staff may choose to reach out directly to large business and commercial customers to develop relationships with energy and facilities managers, operations staff, and procurement personnel. Subprogram staff can help facilitate completion of rebate applications and serve as a direct resource to these customers, providing technical support and helping to assist customers in identifying efficiency opportunities.
- **Technical Customer Assistance:** An important element of the C&I Prescriptive and Custom Measures subprogram is the availability of technical support. The Company and/or implementation contractor will provide technical support to customers on the application of the energy efficiency measures and technologies included in this subprogram, including supporting project identification, developing energy savings calculations, and assessing project economics as required.

Measurement & Verification (M&V) for projects that do not have reliable information to accurately forecast energy savings may require energy monitoring before and after project implementation to determine savings and incentive amounts.

It is anticipated that any third-party implementation contractor will work closely with the Company to optimize the subprogram's strategic direction, including, but not limited to, the following activities:

- Offered incentive levels and strategies
- Customer satisfaction
- Measurement and verification during on-site visits
- Subprogram data tracking
- Rebate payments

The Company may select a qualified third-party implementation contractor (or contractors) based on, but not limited to, the following factors:

- Technical Approach
- Organizational and Management Capability
- Experience
- Cost
- The amount of business placed with MWVBEs.

A comprehensive contractor agreement, containing information about equipment certification (such as DLC lighting, etc.), licensing, insurance requirements and more, will be developed and provided to all participating contractors.

The Company plans to issue a request for proposal in the 1st quarter of 2021 for third-party implementation contractor(s) who will be responsible for marketing, customer enrollment, program and trade alley engagement, application and rebate processing, documentation and/or other program delivery activities as discussed above. The Company plans to select the third-party implementation contractor(s) in a timeframe that supports timely program implementation upon Board approval of the program.

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***EXISTING AND PROPOSED INCENTIVES RANGES (MFR II.A.III) (MFR II.A.IV)***

Refer to Appendix A, Table A-2 for the Proposed Incentive Ranges for this subprogram.

The utilities propose to provide a range of incentives depending on the measure type, subject to changes based upon customer response and market conditions over the plan period. Incentives will vary depending on factors including but not limited to the specific product, the incremental cost of the high-efficiency technology, and the product maturity in the marketplace.

In instances where incentives are not immediate, the utilities will complete consumer or contractor payments within 60 days following completion of contractor work, submission of complete and required paperwork, and completion of program requirements such as necessary field inspections (if required).

Additionally, the Company has designed this subprogram to provide prescriptive-based incentives to customers participating on its streetlighting tariffs to offset the customer's one-time or monthly

cost and promote the replacement of Company-owned streetlighting with LED streetlighting equipment.

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***CUSTOMER FINANCING OPTIONS (MFR II.A.VI)***

Refer to Appendix B Table B-1 for the Summary of Proposed Financing for this subprogram.

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***CUSTOMER ACCESS TO CURRENT AND HISTORIC ENERGY USAGE DATA (MFR II.A.VII)***

Refer to Section 10.2 for a description of how the Company provides customers access to their current and historic energy usage data.

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***PROJECTED PARTICIPANTS (MFR II.A.IX) AND ENERGY SAVINGS (MFR II.A.X)***

Refer to Appendix D, Table D-16 for the projected participants and energy savings for this program. The table summarizes the projected participation and savings associated with this subprogram. All values are annual incremental totals, and do not incorporate savings achieved in prior years. Savings estimates are based on projected participation during each year of the forecast period.

For customers in areas where gas and electric service territories overlap, the utilities will use the Statewide Coordinator to allocate costs and energy savings for shared measures. Refer to Section 6.3 for a description of the role of the Statewide Coordinator.

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***PROGRAM BUDGET (MFR II A.XI) (MFR II.A.XII)***

Refer to Appendix E, Table E-16 for the projected program expenditures for the subprogram.

## 4.3 Multifamily

### 4.3.1 MULTIFAMILY

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#### PROGRAM DESCRIPTION / DESIGN (MFR II.A.I)

This Program addresses multifamily structures with three or more units. As such, there can be significant variation in the types of structures served under this Program ranging from residential type dwelling with three units to large garden apartment complexes to multi-story high rise buildings. In order to meet the specific needs of each customer, the Multi-Family Program will provide, in conjunction with the customer, a structured screening review to identify and develop the project plan for the customer. Potential program services include customer engagement with energy efficiency education through energy assessments, installation of standard energy savings measures, comprehensive energy savings opportunities including prescriptive equipment replacement, custom retrofit projects and engineered solutions and emergency equipment replacement. In addition, the Multifamily Program will provide On-Bill Repayment or access to financing with similar terms and enhanced incentives for low income/affordable housing properties

The Multi-Family Program will seek to work with each customer to determine and package the best energy savings opportunities based on the Company's current program offerings (e.g. direct installation of standard energy savings measures, prescriptive equipment replacement, custom retrofit or engineered solutions), with an emphasis to encourage more comprehensive projects wherever possible. Customers will begin participation in the Multi-Family Program with a screening to identify and develop a project plan. The initial screening may include an energy assessment and installation of standard energy savings measures to help encourage program participation. The assessment will also identify additional energy savings opportunities and develop the project plan that is the best fit for each specific customer and building.

Applications to this program will be reviewed to determine the project plan depending on the type of housing stock and ownership structure. The screening process will consider various factors to create a project plan that will deliver a high level of energy savings in the most cost-effective manner. Examples of these factors include, but are not limited to:

- Building size
- Number of units
- If the facility is being served by a central plant
- If there are individual heating and cooling units
- If there are building envelope/weatherization opportunities
- Application review with a potential virtual site inspection
- Application review with potential telephone interview with Property Management
- An on-site pre-scoping audit may be performed

Depending upon the screening results and the customer's interests, a customer's project plan could include direct installation of standard energy savings measures, incentives for prescriptive equipment replacement, custom retrofit opportunities, or a Comprehensive Engineered Solutions project. The measures within the project plan will be consistent with the terms and conditions of the Company's applicable residential and/or commercial & industrial program offerings (e.g. Existing Homes, Efficient Products, Energy Solutions for Business). Therefore, the project plan can include prescriptive measures with set energy-savings and/or custom projects with savings on a project basis. Please refer to these program descriptions for more information on these program offerings and the associated terms and conditions, including delivery methods and contractor roles.

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#### **TARGET MARKET OR SEGMENT (MFR II.A.II)**

All multi-family buildings with three or more units that are served by at least one investor owned utility are eligible to participate. The Program targets multi-family property owners, property managers, and residents, who, because of the building owner – tenant relationship, have always had difficulty investing in energy efficiency equipment. The utilities will also target outreach to economically-qualified occupants and owners of multifamily buildings who may be eligible for enhanced incentives. Eligibility for these enhanced incentives can be automatic based upon the type of property that has a low- or moderate-income designation (e.g. New Jersey Housing and Mortgage Financing Agency qualified, Housing Authorities) or by a physical location (e.g. census tract, environmental justice community, Urban Enterprise Zone). The program may refer prospective customers to Comfort Partners as appropriate.

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#### **MARKETING PLAN (MFR II.A.XIV)**

The marketing strategy will focus on informing property owners, managers, associations, tenant groups, municipalities, and community organizations about the availability and benefits of the program and how to participate. Marketing activities will also target low- and moderate-income multi-family sector. Key elements of the marketing strategy may include:

- Targeted outreach through direct mailings and presentations to inform property owners, property managers, apartment associations, tenant groups, municipalities and community organizations about the benefits of the program and participation processes
- Printed collateral highlighting the benefits and features of the program as well as the enrollment and participation processes
- Website content providing program information resources and contact information
- In-person visits by program representatives to properties with three or more units
- Energy assessments of properties may include the direct installation of standard energy savings measures to engage, educate and promote the building owners or facility managers to participate in the other program offerings targeting deeper savings.

The primary market barriers that impact this program include:

- **Business/Operational Constraints:** Multi-family properties often have unique operational and time constraints that act as a barrier to implement energy-efficiency projects. This barrier will be addressed by ensuring the program operates cooperatively with participants, provides program participation and technical assistance, and offers timely incentives and financing support.
- **Customer Awareness and Engagement:** Eligible participants may be unaware of energy-efficiency opportunities and programs because the segment has historically not been well served by traditional energy-efficiency programs. To address this barrier, this program was designed specifically to support the multi-family segment. The utilities will execute targeted outreach strategies to ensure that relevant customers are aware of program opportunities and consider energy efficiency in equipment investments and long-term planning. The program will also prepare and distribute successful case studies of prior participants and their experiences and energy savings. To increase awareness among customers with English as a second language, utilities will develop and provide outreach materials in Spanish. The utilities intend to be active participation in both the Equity or Marketing Working groups and expect to address the need and cost for developing materials in a broader range of languages as part of those discussions.
- **Cost Effectiveness:** Efficiency upgrades require an initial investment that is recovered by lower long-run operating costs and non-energy benefits. Multi-family projects may carry longer payback periods than traditional energy-efficiency projects due to the unique needs of the segment. To address this barrier, incentives and access to OBRP or similar financing options will be provided to the customer to reduce the initial cost. The utilities will also communicate the non-energy benefits offered by many efficiency upgrades that may not be captured in the cost/benefit analysis to further promote efficiency upgrades to customers.

Additionally, the utilities considered the following market barriers identified in the Utility Demographic and Firmographic Profile 2020 Study<sup>3</sup>:

- **Split incentives:** Multi-family properties can face challenges for energy efficiency improvements since the owner generally does not pay the utility bills and may not reap the full benefit of any energy efficiency investment. To address this barrier, the utilities will market to both landlords and tenants to assure that those exposed to energy costs are able to participate in the program, provide low- and no-cost measures at no cost to the tenant or the landlord, and offer comprehensive approaches for multi-family, including application, technical and engineering support to design cost-effective projects with benefits for owners and renters. Utilities may also provide technical and outreach assistance to property owners and managers in developing and marketing green properties.
- **Complex buying process:** There can be a broad range of potential energy efficiency investments and it can be challenging to identify which strategies may be the most

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<sup>3</sup> The purpose of this study was to examine the demographics and firmographics of all customers in the service territories of each of the electric and gas public utilities in New Jersey. This is to comply the CEA, as well as in response to the New Jersey Board of Public Utilities (NJBPU) Order Docket Nos. QO19010040 and QO19060748 (dated October 7, 2019), which directed the utilities to complete a demographic analysis pursuant to the CEA. The study was released on April 30, 2020 and can be found <https://www.njcleanenergy.com/files/file/Library/New%20Jersey%20Demographics%20Report.pdf>

beneficial for owners and/or tenants. To address this barrier, the program will provide customized screening and on-going support to help find the best solution for the customer and include incentives to encourage the customer to implement the recommended solutions.

The Company will seek to manage barriers to program success through a commitment to monitoring program performance and feedback channels for assessing effective program design, delivery, outreach, and marketing/advertising, and improvement opportunities. The utilities will leverage their established customer relationships, communication channels, data, and brand in the marketplace to identify and confront market barriers on an ongoing basis.

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***DELIVERY METHOD, CONTRACTOR ROLES AND IMPLEMENTATION PLAN (MFR II.A.V, MFR II.A.VIII, MFR II.A.X.III, MRF II.C)***

The Multi-Family Program will be delivered in coordination between both the Lead Utility and the Partner Utility (where applicable) and/or qualified third-party implementation contractor(s) with experience delivering similar programs. Because of the unique and varied nature of the multi-family market Program representatives will build relationships with property management companies, owners, associations and their members to recruit participation in the Program. The Program will assist customers to coordinate scheduling of the Energy Assessment and direct installations and will provide program and technical support to complete program and rebate application requirements.

Delivery of energy-saving measures will be dependent on the project plan and may include direct install of standard energy savings measures, installation of prescriptive measures, or custom projects. It may be necessary to schedule appointments for the installation of energy saving measures in the individual living units and common areas. In-unit HVAC tune-ups may also be offered to the property owner or tenant. The installation crews are trained on the technical and educational aspects of the energy saving devices installed and leave educational materials in each unit describing the work performed and explaining the energy-saving benefits.

The Company plans to issue a request for proposal in the 1st quarter of 2021 for third-party implementation contractor(s) who will be responsible for marketing, customer enrollment, program and trade alley engagement, application and rebate processing, documentation and/or other program delivery activities as discussed above. The Company plans to select the third-party implementation contractor(s) in a timeframe that supports timely program implementation upon Board approval of the program.

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***EXISTING AND PROPOSED INCENTIVES RANGES (MFR II.A.III) (MFR II.A.IV)***

Refer to Appendix A, Table A-3 for the Proposed Incentive Ranges for this program.

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***CUSTOMER FINANCING OPTIONS (MFR II.A.VI)***

Refer to Appendix B Table B-1 for the summary of Proposed Financing for this program.

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***CUSTOMER ACCESS TO CURRENT AND HISTORIC ENERGY USAGE DATA (MFR II.A.VII)***

Refer to Section 10.2 for a description of how the Company provides customers access to their current and historic energy usage data.

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***PROJECTED PARTICIPANTS (MFR II.A.IX) AND ENERGY SAVINGS (MFR II.A.X)***

Refer to Appendix D, Table D-19 for the projected participants and energy savings for this program. The table summarizes the projected participation and savings associated with this subprogram. All values are annual incremental totals, and do not incorporate savings achieved in prior years. Savings estimates are based on projected participation during each year of the forecast period.

For customers in areas where gas and electric service territories overlap, the utilities will use the Statewide Coordinator to allocate costs and energy savings for shared measures. Refer to Section 6.3 for a description of the role of the Statewide Coordinator.

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***PROGRAM BUDGET (MFR II A.XI) (MFR II.A.XII)***

Refer to Appendix E, Table E-19 for the projected program expenditures for the program.

## 5.0 ADDITIONAL JCP&L PROGRAMS

JCP&L proposes additional programs and subprograms to provide a comprehensive portfolio of offerings to customers and greater opportunities for customers to participate. The additional offerings help to establish a framework to meet the aggressive and increasing annual energy savings targets and supports the Company’s objective to implement programs to establish and develop systems and processes, program and trade ally participation, customer awareness, and experience and momentum for the future. The Additional Company Initiatives are based on successful programs in other jurisdictions and collaboration with other NJ utilities to promote coordinated program designs and delivery.

The table below provides a listing and description of the Additional JCP&L programs and subprograms included in the Plan:

Table 9: 2021-2023 JCP&L Additional Program Names & Descriptions		
Program	Subprogram	Description
<b>Residential Programs</b>		
Existing Homes	Quick Home Energy Check-up	Audits with direct installed measures provided at no additional cost to participants with education about the opportunities to save energy including other program opportunities
	Moderate Income Weatherization	Audits with direct installed measures, weatherization services, and HVAC repair/replacement provided at no additional cost to participating income qualified customers
Home Energy Education and Management	Behavioral	Provides education of energy usage through Home Energy Reports and on-line audits, with targeted customized messaging to promote energy savings and conservation opportunities
<b>Commercial &amp; Industrial Programs</b>		
Energy Solutions for Business	Energy Management	Customer engagement targeting efficient building operations through building tune-up, retro commissioning and customized energy management solutions.
	Engineered Solutions	Provides consultative service throughout delivery, including comprehensive audits, detailed analysis and recommendations of energy efficiency measures and development of project specifications, to assist customers in identifying and undertaking large comprehensive energy-efficiency projects
<b>Other Programs</b>		
Home Optimization & Peak Demand Reduction	Home Optimization & Peak Demand Reduction	Provides control and/or optimization of connected devices (e.g. smart thermostats, smart home energy management systems) to target and achieve energy and peak demand savings

The table below provides a listing of the measures that are offered in the Additional JCP&L programs and subprograms included in the Plan:

<b>Table 10: 2021-2023 Additional JCP&amp;L Program Portfolio</b>		
<b>Program</b>	<b>Subprogram</b>	<b>Measure</b>
<b>Residential Programs</b>		
Existing Homes	Quick Home Energy Check-up	Quick Home Energy Checkup (QHEC)
	Moderate Income Weatherization	MI Weatherization
Home Energy Education and Management	Behavioral	Behavioral FY22
		Behavioral FY23
		On-Line Audit
<b>Commercial &amp; Industrial Programs</b>		
Energy Solutions for Business	Energy Management	Virtual/Meter Data Commissioning
		Retrocommissioning
		Building Operation Training
		Building Tune Up Large
		Building Tune Up Small
		Unitary HVAC Maintenance
	Engineered Solutions	Strategic Energy Management
		ESB - Engineered Solutions - 1
		ESB - Engineered Solutions - 2
<b>Other Programs</b>		
Home Optimization & Peak Demand Reduction	Home Optimization & Peak Demand Reduction	Smart Tstat Optimization
		Smart Home Systems

## ***5.1 Residential***

### **5.1.1 HOME ENERGY EDUCATION & MANAGEMENT-BEHAVIORAL**

This program initially includes Behavioral initiatives and energy education. This subprogram can reach a significant portion of the Company's customer base, including low- to moderate-income segment and share personalized education, including guidance on low and no-cost energy saving strategies.

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#### ***PROGRAM DESCRIPTION / DESIGN (MFR II.A.I)***

The Home Energy Education & Management-Behavioral subprogram educates customers regarding their home energy usage and provides recommendations to implement and adopt energy efficiency and conservation measures to reduce their energy usage. This subprogram provides customized Home Energy Reports about each customer's energy usage, as well as analysis regarding their usage over time, with specific tips and recommendations that promote energy efficiency and conservation opportunities and programs available to them. The reports help customers to understand how their energy consumption compares to similarly sized and equipped homes; and to develop goals and strategies to reduce their energy use. This subprogram also offers an on-line audit. The audits similarly provide recommendations for home energy efficiency and conservation opportunities and other program opportunities available to them. Collectively, the Home Energy Reports and on-line audit targets customer engagement, education and awareness of energy efficiency and conservation and have become an industry staple for achieving customer participation and energy savings.

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#### ***TARGET MARKET OR SEGMENT (MFR II.A.II)***

The Home Energy Education & Management-Behavioral subprogram will be targeted to electric customers served by Company. This no-risk subprogram is intended to appeal and provide benefits to both renters and homeowners.

Residential customers, including limited - to - moderate - income customers, with above average energy usage and sufficient usage history are the primary candidates selected for participation in the subprogram. The Company will work closely with the third-party implementation contractor to review all customers and their current usage characteristics, to optimize subprogram participation, energy savings and cost.

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#### **MARKETING PLAN (MFR II.A.XIV)**

While the Energy Education & Management-Behavioral subprogram itself is not marketed to customers, the subprogram markets other program opportunities to customers. The Company will work with its third-party implementation contractor to design and produce marketing modules that are used in Home Energy Reports to promote other program opportunities to customers.

The primary market barriers related to this subprogram include:

- **Customer Awareness and Engagement:** Residential customers may not be fully aware of energy efficiency opportunities for their home. This subprogram addresses this barrier by providing customers with information regarding their usage over time, with specific tips and recommendations that promote energy efficiency and conservation opportunities and programs available to them.

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#### **DELIVERY METHOD, CONTRACTOR ROLES AND IMPLEMENTATION PLAN (MFR II.A.V, MFR II.A.VIII, MFR II.A.X.III, MFR.II.C)**

The Company will administer and oversee this subprogram and will select a third-party implementation contractor to manage delivery of this subprogram. The implementation contractor will be responsible to conduct the energy usage analysis and develop and deliver customized Home Energy Reports to customers. For the on-line audit, the Company plans to utilize its enterprise-wide Online Audit tool.

The implementation contractor will develop and distribute customized Home Energy Reports by mail and/or email. The Home Energy Reports will provide customers with meaningful comparisons regarding their usage relative to a peer group, based on home location, size, heating type, and other criteria. The reports deliver information in a simple way, providing customers with the necessary information to take appropriate actions to reduce their energy use, along with marketing modules that promote additional residential program offerings. Customers will also have access to online functionality provided under the subprogram that customers can easily utilize to see additional tips on how to save energy, complete the online audit tool, and review their usage over a period of time.

Additionally, the implementation contractor will use utility and data analytics to identify and target participation among low to moderate income customers and will provide customized reports to these customers promoting low- to no-cost recommendations and other program opportunities available to them including income-qualified programs.

The selection of third-party implementation contractors will prioritize experience delivering similar subprograms or initiatives and cost.

The Company plans to issue a request for proposal for a third-party implementation contactor who will be responsible for developing and providing Home Energy Reports as discussed above. The Company plans to select the third-party implementation contractor in a timeframe that supports program implementation in 2023.

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***EXISTING AND PROPOSED INCENTIVES RANGES (MFR II.A.III) (MFR II.A.IV)***

There is no additional cost to participating customers for the Energy Education & Management-Behavioral subprogram. The subprogram provides customized Home Energy Reports and access to an Online Audit tool to assist and drive customers to develop goals and strategies to reduce their energy usage as incentive for participation.

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***CUSTOMER FINANCING OPTIONS (MFR II.A.VI)***

Since there is no additional cost for participating customers, there is no financing option for this subprogram.

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***CUSTOMER ACCESS TO CURRENT AND HISTORIC ENERGY USAGE DATA (MFR II.A.VII)***

Refer to Section 10.2 for a description of how the Company provides customers access to their current and historic energy usage data.

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***PROJECTED PARTICIPANTS (MFR II.A.IX) AND ENERGY SAVINGS (MFR II.A.X)***

Refer to Appendix D, Table D-12 for the projected participants and energy savings for this program. The table summarizes the projected participation and savings associated with this subprogram. All values are annual incremental totals, and do not incorporate savings achieved in prior years. Savings estimates are based on projected participation during each year of the forecast period.

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***PROGRAM BUDGET (MFR II A.XI) (MFR II.A.XII)***

Refer to Appendix E, Table E-12 for the projected program expenditures for the subprogram.

### **5.1.2 EXISTING HOMES-QUICK HOME ENERGY CHECK UP (QHEC)**

This sub-program helps customers understand their best opportunities to save energy through an in-home consultation and also secure energy savings during that visit through the direct installation of energy saving measures. It will be designed to help renters as well as homeowners and promotes additional energy savings opportunities and upgrades available to the customer.

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#### **PROGRAM DESCRIPTION / DESIGN (MFR II.A.I)**

The Quick Home Energy Check-Up (QHEC) subprogram is an Additional Utility Led Initiative intended to provide residential customers with an understanding of opportunities to save energy and help them start saving energy immediately by providing some standard energy saving measures at no additional cost to participants. Interested customers will sign up for an in-home visit from a qualified energy auditor participating contractor, a Company employee, or a third party implementation contractor. During the visit, the auditor will perform a walk-through of the customer's home with the customer to provide education about the opportunities to save energy. The auditor may also identify larger opportunities for energy savings, including making referrals to other energy efficiency programs and program opportunities based on the needs for that premise and the customer's interest in pursuing additional upgrades. This may include sharing information about the products and incentives available under the Energy Efficient Products program, the potential for comprehensive upgrades through either the Home Performance with ENERGY STAR (HPwES) subprogram, the Moderate Income Weatherization Program, or the Comfort Partners program. Further, during the visit, Standard energy efficiency measures may be installed, including but not be limited to LED bulbs, energy and water saving showerheads, kitchen faucet aerators, bathroom faucet aerators, gaskets, power strips and other energy saving measures. All participants will receive a QHEC report that confirms the findings during the appointment and summarizes the measures received and the recommendations made. The QHEC report will also highlight incentives available to support the implementation of those recommendations, including educating customers about how to pursue the recommendations through other program opportunities as well as the availability of enhanced incentives. This no-risk program is intended to appeal and provide benefits to both renters and homeowners.

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#### **TARGET MARKET OR SEGMENT (MFR II.A.II)**

The QHEC program will be available to all single-family and single-family attached (1 to 4 unit properties<sup>4</sup>) electric and/or natural gas customers served by at least one of the participating investor owned utilities in New Jersey. There are also additional options through other program offerings for Low-to-Moderate income (LMI) customers (up to 400% of Federal Poverty Level or potential automatic eligibility based on physical location) and access to On-Bill Repayment programs or financing with similar terms. Eligibility for these enhanced incentives can be determined based on screening an individual customer but the utilities also intend to explore implementing automatic

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<sup>4</sup> Properties larger than 4 units will be referred for consideration in the Multi-family Program.

eligibility for enhanced incentives based upon a physical location (e.g. census tract, environmental justice community, Urban Enterprise Zone) to encourage more activity in LMI communities.

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#### **MARKETING PLAN (MFR II.A.XIV)**

The utilities will utilize many marketing channels to assure subprogram awareness and participation is maximized. These may include traditional marketing channels, such as web-based engagement and information, digital advertising, media advertising, printed materials, and door-to-door marketing. The utilities also plan to cross promote this subprogram to participants in other energy efficiency program offerings. Information garnered from other program offerings, such as the Residential Behavioral and Residential Efficient Products could also be used to identify prime candidates for participation in this QHEC subprogram. For example, a review of usage data contained in Home Energy Reports from the Residential Behavioral Subprogram could allow the utilities to identify customers who are particularly susceptible to changes in weather and would be ideal candidates for a QHEC. Likewise, the Residential Efficient Products program could provide leads to customers interested in energy efficiency. Most importantly, the QHEC subprogram was specifically designed to engage and provide immediate energy savings to customers and identify strong leads for candidates that would benefit from participating in other programs.

The primary market barriers that impact this subprogram include:

- **Customer Awareness and Engagement:** Residential customers may not be fully aware of energy-efficiency opportunities for their home. This subprogram addresses this barrier by providing an independent professional assessment.
- **Up-front Cost of a Home Energy Assessment:** Many customers would not be interested or have the ability to pay the cost for an assessment. This subprogram addresses this barrier by offering the QHEC at no additional cost to the customer.
- **Split incentives:** Many renters may not consider participating in energy efficiency programs because they don't own the premise and don't have a role in decisions regarding equipment replacement or structural improvements. This subprogram addresses this barrier by providing simple energy efficiency measures that provide immediate energy savings and don't require landlord approval to install or use (e.g. smart strips, LEDs).
- **Customer skepticism of contractor proposals:** Some customers are skeptical that contractors don't have their best interests at heart since contractors are interested in performing the work. This subprogram addresses this barrier by ensuring the entity performing the assessment would not be performing the installation work for the EE Products or HPwES program that may be recommended as potential next steps in QHEC reports.
- **Trade Ally Awareness and Training:** To meet the participation goals, sufficient contractors must be available to undertake the work. The utilities will address this barrier by trying to recruit more contractors to participate in this program, including pursuing initiatives that align with the Workforce Development Working Group strategies to include more local, underrepresented, and disadvantaged workers.

The Company will seek to manage barriers to program success through a commitment to monitoring program performance and feedback channels for assessing effective program design, delivery, outreach, and marketing/advertising, and improvement opportunities. The utilities established customer communication channels, data, and brand in the marketplace will all be leveraged to deliver best-practice programs that identify and confront market barriers on an ongoing basis.

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***DELIVERY METHOD, CONTRACTOR ROLES AND IMPLEMENTATION PLAN (MFR II.A.V, MFR II.A.VIII, MFR II.A.X.III, MFR.II.C)***

Each utility will administer and oversee this QHEC subprogram and may also choose to select a third-party implementation contractor to manage delivery of this subprogram.

The Company's staff and/or third-party implementation contractors will oversee all aspects of the subprogram, including training and engagement, and QA/QC. The Company and/or third-party implementation contractors will maintain a close relationship with participating contractors to ensure consistent subprogram delivery experience and high customer satisfaction. Where the program services are provided by a 3<sup>rd</sup> party implementer, utility staff and/or third-party implementation contractors will also be responsible to provide an additional layer of customer support as needed and conducting selective verification of installation work.

Those selecting third-party implementation contractors will prioritize criteria including but not limited to:

- Experience delivering similar subprograms or initiatives
- Knowledge of the current marketplace
- Ability to educate and train contractors
- Local presence
- Cost
- The amount of business placed with MWVBEs.

The Company plans to issue a request for proposal in the 1st quarter of 2021 for third-party implementation contractor(s) who will be responsible for marketing, customer enrollment, program and trade alley engagement, application and rebate processing, documentation and/or other program delivery activities as discussed above. The Company plans to select the third-party implementation contractor(s) in a timeframe that supports timely program implementation upon Board approval of the program.

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***EXISTING AND PROPOSED INCENTIVES RANGES (MFR II.A.III) (MFR II.A.IV)***

Refer to Appendix A, Table A-1 for the Proposed Incentive Ranges for this subprogram.

The utilities will provide the QHEC to their interested customers at no additional cost, including the installation of standard energy efficiency measures that are appropriate for their home. Participating customers will also benefit from receiving energy efficiency conservation tips, recommendations and referrals to other energy efficiency programs based upon the opportunities identified for their home.

For utilities who are using contractors to perform the QHECs, the utilities and/or third-party implementation contractors will complete contractor payments within 60 days following the submission of complete and required paperwork and completion of program requirements such as necessary field inspections (if required).

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***CUSTOMER FINANCING OPTIONS (MFR II.A.VI)***

Since there is no additional cost for participating customers, there is no financing option for this subprogram.

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***CUSTOMER ACCESS TO CURRENT AND HISTORIC ENERGY USAGE DATA (MFR II.A.VII)***

Refer to Section 10.2 for a description of how the Company provides customers access to their current and historic energy usage data.

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***PROJECTED PARTICIPANTS (MFR II.A.IX) AND ENERGY SAVINGS (MFR II.A.X)***

Refer to Appendix D, Table D-13 for the projected participants and energy savings for this program. The table summarizes the projected participation and savings associated with this subprogram. All values are annual incremental totals, and do not incorporate savings achieved in prior years. Savings estimates are based on projected participation during each year of the forecast period.

For customers in areas where gas and electric service territories overlap, the utilities will use the Statewide Coordinator to allocate costs and energy savings for shared measures. Refer to Section 6.3 for a description of the role of the Statewide Coordinator.

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***PROGRAM BUDGET (MFR II A.XI) (MFR II.A.XII)***

Refer to Appendix E, Table E-13 for the projected program expenditures for the subprogram.

### **5.1.3 EXISTING HOMES-MODERATE INCOME WEATHERIZATION**

This sub-program provides an opportunity for moderate-income customers to receive no cost energy efficiency measures and upgrades.

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#### ***PROGRAM DESCRIPTION / DESIGN (MFR II.A.I)***

The Moderate-Income Weatherization subprogram provides an opportunity for low- to moderate-income customers to receive energy efficiency measures and upgrades at no additional cost. Income eligible customers will undergo an audit and then receive direct install measures (such as showerheads, faucet aerators, and LED bulbs) and weatherization measures (insulation, air sealing, and duct sealing). Homeowners with nonfunctional heating and/or cooling systems may also be eligible to receive repairs or replacement at no additional cost. The subprogram will include a cap on each project with additional funding for health and safety expenses.

During the audit, customers will receive installation of low-cost measures such as LED lighting, energy-saving aerators, showerheads, smart thermostats and smart power strips at no additional cost, in addition to behavioral suggestions to improve efficiency of the home and a review of thermostat and water heating setpoints. Based on the in-home audit recommendations, the participant may also be given the opportunity for additional building envelope measures to be installed at no additional cost. These measures include air sealing and building insulation. Also, customers with nonfunctional heating and cooling equipment may receive repairs or new equipment.

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#### ***TARGET MARKET OR SEGMENT (MFR II.A.II)***

The Moderate-Income Weatherization subprogram will be available to all income-qualified single-family homes served by at least one investor-owned utility in New Jersey. To qualify for this subprogram, the customer's household income must be above the Comfort Partners program eligibility and up to 400% of Federal Poverty Income Guidelines. Eligibility for these enhanced incentives can be determined based on screening an individual customer but the utilities also intend to explore implementing automatic eligibility for enhanced incentives based upon a physical location (e.g. census tract, environmental justice community, Urban Enterprise Zone) or based upon participation in a qualifying program (E.g. PAGE assistance program) to encourage more activity in LMI communities.

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#### ***MARKETING PLAN (MFR II.A.XIV)***

The utilities will utilize many marketing avenues to educate potential eligible customers about the subprogram. These include traditional marketing avenues, such as web-based engagement

and information, digital advertising, and hard-copy materials to promote customer awareness. The utilities intend to cross market this subprogram and pursue additional marketing opportunities through other program offerings, such as through Home Energy Reports, where information garnered could be used to identify potential participants for this subprogram. For example, a review of usage data contained in Home Energy Reports could allow the utilities to identify customers who are particularly susceptible to changes in weather and would be ideal candidates for an audit and comprehensive weatherization. The utilities will also look at customers that did not qualify for the Comfort Partners program that might be eligible for this subprogram. Finally, utility customer service personnel will work to promote the subprogram and educate customers on energy efficiency and the programs available to assist them.

The primary market barriers that impact this subprogram include:

- **Initial Cost of Comprehensive Home Retrofits:** Comprehensive home retrofits are more expensive and require more participant investment and commitment. Customers must be willing and able to invest in more expensive energy-efficiency projects. The utilities address this barrier by offering all program services at no additional cost to income-qualified customers.
- **Customer Awareness and Engagement:** Many customers are unaware of the “whole house” approach to energy-efficiency or the fact that building science exists. The utilities will work to address this by:
  - continuing to educate customers about the subprogram and how both the structure and equipment work together
  - highlighting the extra training and BPI certification that contractors must have
  - identifying how the shell measure improvements can improve their comfort within the home
  - noting that the program includes health and safety testing and repairs to allow energy-saving measures to be installed
  - reinforcing that the installation of equipment and shell measures may increase the value of their home.
- **Awareness and Training:** To meet the participation goals, sufficient qualified contractors must be available to undertake the work. The Utilities and/or their third-party implementation contractors will address this barrier by trying to recruit qualified contractors to participate in this subprogram, including pursuing initiatives that align with the Workforce Development Working Group strategies to include more local, under-represented and disadvantaged workers.

The Company will seek to manage barriers to program success through a commitment to monitoring program performance and feedback channels for assessing effective program design, delivery, outreach, and marketing/advertising, and improvement opportunities. The utilities’ established customer communication channels, data, and brand in the marketplace will all be leveraged to deliver best-practice programs that identify and confront market barriers on an ongoing basis.

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***DELIVERY METHOD, CONTRACTOR ROLES AND IMPLEMENTATION PLAN (MFR II.A.V, MFR II.A.VIII, MFR II.A.X.III, MFR.II.C)***

The Company and/or third-party implementation contractors will oversee all aspects of the subprogram, including contractor training and engagement, quality assurance and fulfillment of subprogram services. The in-home energy audit and efficiency improvements will be conducted by third-party implementation contractors and/or program contractors. There will be a significant focus on developing and training qualified contractors. The Company and/or third-party implementation contractors will oversee their staff and subcontractors and engage contractors to educate them on the subprogram benefits to reliably complete the in-home audits and install energy efficient equipment and improvements for participating customers. The Company and/or third-party implementation contractors will also verify eligibility of customers and will maintain a close relationship with contractors to ensure consistent subprogram delivery experience and high customer satisfaction. The Company and/or third-party implementation contractors will also monitor participation to assess the effectiveness of outreach efforts and that the subprogram is effectively achieving participation and serving customers. Company staff and/or third-party contractors will also take on the responsibility of providing an additional layer of customer support as needed and conducting selective verification of contractor installation work.

Contractors will consist of companies employing BPI-certified professionals to complete audits and energy-saving projects.

Selection of third-party implementation contractors will prioritize criteria including but not limited to:

- Experience delivering similar subprograms or initiatives
- Knowledge of the current marketplace
- Ability to educate and train contractors
- Local presence
- Cost
- The amount of business placed with MWVBEs.

The Company plans to issue a request for proposal in the 1st quarter of 2021 for third-party implementation contractor(s) who will be responsible for marketing, customer enrollment, program and trade alley engagement, application processing, documentation and/or other program delivery activities as discussed above. The Company plans to select the third-party implementation contractor(s) in a timeframe that supports timely program implementation upon Board approval of the program.

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***EXISTING AND PROPOSED INCENTIVES RANGES (MFR II.A.III) (MFR II.A.IV)***

Refer to Appendix A, Table A-1 for the Proposed Incentive Ranges for this subprogram.

The customer may receive no-cost energy efficiency measures and upgrades with a per project cap for weatherization measures and an additional cap on health and safety expenses.

Utilities and/or the third-party implementation contractors will complete contractor payments within 60 days following completion of contractor work, submission of complete and required paperwork, and completion of subprogram requirements such as necessary field inspections (if required).

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***CUSTOMER FINANCING OPTIONS (MFR II.A.VI)***

All services provided under this subprogram are at no additional cost or financing to the customer.

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***CUSTOMER ACCESS TO CURRENT AND HISTORIC ENERGY USAGE DATA (MFR II.A.VII)***

Refer to Section 10.2 for a description of how the Company provides customers access to their current and historic energy usage data.

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***PROJECTED PARTICIPANTS (MFR II.A.IX) AND ENERGY SAVINGS (MFR II.A.X)***

Refer to Appendix D, Table D-14 for the projected participants and energy savings for this program. The table summarizes the projected participation and savings associated with this subprogram. All values are annual incremental totals, and do not incorporate savings achieved in prior years. Savings estimates are based on projected participation during each year of the forecast period.

For customers in areas where gas and electric service territories overlap, the utilities will use the Statewide Coordinator to allocate costs and energy savings for shared measures. Refer to Section 6.3 for a description of the role of the Statewide Coordinator.

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***PROGRAM BUDGET (MFR II A.XI) (MFR II.A.XII)***

Refer to Appendix E, Table E-14 for the projected program expenditures for the subprogram.

## 5.2 Commercial & Industrial

### 5.2.1 ENERGY SOLUTIONS FOR BUSINESS-ENERGY MANAGEMENT

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#### PROGRAM DESCRIPTION / DESIGN (MFR II.A.I)

The C&I Energy Management subprogram targets energy savings for existing commercial and industrial facilities by providing a holistic approach to improving building energy performance through maintenance, tune-up and retro-commissioning services for existing buildings and through the implementation of energy savings strategies that improve the overall operation and energy performance of buildings and building systems. This subprogram compliments the Prescriptive/Custom and Engineered Solutions subprograms which focus on capital equipment replacement or process improvement investments by improving the energy performance of a building by maintaining, adjusting and optimizing the systems within the building and the implementation of complimentary energy savings measures. The program also provides paths to track the ongoing building energy performance by using retro-commissioning and strategic energy management strategies, which ensures continued energy performance. By implementing these measures, customers also receive ancillary benefits including improved occupant comfort, lower maintenance costs, and extended equipment life.

This subprogram includes measures that focus on specific energy efficiency measures and management practices that can be categorized as follows:

#### Building Operations

Building Operations measures provide multiple paths for a customer to implement building tune-up and maintenance services. These measures are designed to focus on midsize commercial and industrial customers and include the following:

- **HVAC Tune-Up:** Provides for a tune-up of central HVAC systems, Mini-Splits and Packaged Terminal units, and include the following measures:
  - Refrigeration charge correction (if needed)
  - Cleaning evaporator and condenser coils
  - Filter changes
  - Verification of proper operation of fans and motors
  - Other minor repairs to refrigerant lines and coils
- **Building Tune-Up:** Provides a path for customers to implement a Building Tune-Up that will focus on the adjustment and calibration of building systems and controls, diagnostic testing and the installation of other measures that enhance

building energy performance and savings. Also includes application of controls to optimize operation of building systems, and includes the following measures:

- Calibration of building systems and controls, including energy management systems, lighting and HVAC
- Diagnostic and function tests of applicable major systems and equipment
- HVAC controls to optimize Roof Top Units (RTU)/Air Handling Units (AHU)
- Refrigeration controls to optimize refrigeration equipment
- Lighting upgrades including application of lighting controls and optimization
- Chiller system controls to optimize chiller performance
- Other program eligible energy saving measures identified through the building assessment
- Building Operations Training for qualified personnel to obtain Building Operations Certification (BOC) through a certified training program or other training programs as related to the efficient design, operations and maintenance of buildings.

### Retro-Commissioning (RCx)

Retro-Commissioning measures provide a comprehensive assessment of a customer's commercial/industrial building by using a prescribed planning process that includes a building audit, development of an action plan for the building and development of a Measurement and Verification (M&V) plan to ensure the optimum on-going performance of the building and building systems. A comprehensive assessment of a commercial/industrial building using a prescribed planning and implementation process, including:

1. Audit Phase – Customer confirms intent to participate in program and registers with the the Company or the third-party implementation contractor. Customer and/or the customer's consultant completes the required level of an American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) audit based on the complexity of the facility, develops a retro-commissioning implementation plan, including project timelines and plan to implement audit identified operation and maintenance measures. There may be opportunities to complete this Phase without a full ASHRAE level audit.
2. Setup Phase - Contracted services to implement the plan are verified, long-term monitoring and reporting is developed and initiated, and project plan is implemented by customer.
3. Measurement and Verification (M&V) Phase: Savings verification and rebate payment from implementation of the plan is completed.

Typical Retro-Commissioning measures include, but are not limited to:

- Optimizing chiller and boiler operations to better match building load conditions

- Reducing ventilation in over-ventilated areas
- Fixing ventilation dampers that are open when they should be closed or vice versa
- Decreasing supply air pressure setpoint and system rebalancing
- Aligning zone temperature setpoints to match the building's actual operating schedule
- Virtual Commissioning (VCx)

As an option to performing an on-site audit to develop a retro-commissioning plan, this option provides eligible customers with an analysis of their building's energy performance by using meter usage data, other data and building modeling to identify and recommend energy efficiency measures and operational changes to improve a building's overall energy performance. The analysis will foster participation in the Company's other programs by identifying and encouraging customers to implement other energy efficiency improvements. The VCx process can also utilize benchmarking and peer comparison metrics to help determine energy performance to identify facilities that are underperforming. This offering can also use continuous engagement, monitoring and periodic reviews of customer's energy usage to ensure that implemented measures or changes have been successfully completed. The use of building analysis using remote analysis techniques will also help customers to participate in the programs because of limited access to customer's facilities due to concerns and restrictions such as COVID-19.

### Strategic Energy Management (SEM)

The Strategic Energy Management (SEM) component of this subprogram is designed to optimize energy consumption for larger C&I customers through long term management of major energy using systems. SEM provides a holistic approach that is focused on management of existing systems and processes (including behavior), as well as tracking and benchmarking performance to identify and evaluate energy optimization efforts. SEM is a long-term effort typically focused on developing and executing an energy management strategy. This strategy is formulated through a series of site and/or remote visits and interviews with building owners and staff to specifically develop a Strategic Energy Management Plan (SEMP) for the customer's facility. The SEMP will be reviewed with the customer by the Company and/or its third-party implementation contractor on a scheduled basis. This plan may include:

- Revisions or improvements to an existing Building Automation System or the addition and initiation of the use of a Building Automation System to monitor and control the buildings components and systems. The implementation or improvements to a system or the review of an existing system, can include the proper training for building operators to achieve maximum efficiency.
- Development of a maintenance plan for existing building components and or systems to identify best practices in building performance and an interactive monitoring of system components by both staff and sponsoring utilities.
- Ongoing engagement to track energy usage and performance, assist with planning energy efficiency projects, and interact with facility personnel to adopt energy efficiency strategies and behaviors.

- Utilizing other Program offerings, including: Prescriptive/Custom measures, Building Tune-Up, Retro-commissioning (RCx), and Virtual Commissioning (VCx).
- Using building modeling and benchmarking to compare customer's usage and performance to cohort of similar facilities and Virtual Commissioning (VCx) to track energy usage and performance over time.
- Application of whole building energy modeling tools that can model buildings for both operational and capital improvements.
- Scheduling of attendance of customer personnel to attend educational workshops, webinars and group/individual training sessions with cohorts of facility managers (e.g. Building Operations Training)

Customers can participate by application to the program or will be contacted directly by subprogram personnel. The subprogram will retrieve customer information and obtain customer agreement for the services to be provided and handle on-going customer engagement. Incentives for improvements recommended by the subprogram will be issued after the retrofit is completed. The Company and/or a third-party implementation contractor will develop rebate application forms for this subprogram that will guide applicants through eligibility guidelines, terms and conditions, and general program information requirements. In addition, the subprogram will provide applications in web-ready formats to ensure participants and potential customers have easy access to the forms.

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***TARGET MARKET OR SEGMENT (MFR II.A.II)***

The C&I Energy Management subprogram will be available to all commercial, industrial, and other non-residential customers located within the Company's service territory with buildings and building systems.

Building Operations measures target existing commercial buildings and is particularly relevant for medium building types that utilize traditional building systems and controls.

Retro-commissioning targets existing commercial buildings and is particularly relevant for medium to large building types utilizing a building energy management system.

SEM targets existing large to very large commercial and industrial customers and building types and is particularly relevant to customers with significant energy use who commit to on-going participation and engagement across the organization including various levels of management and decision making.

Marketing will specifically target commercial, industrial and government entities within the Company's service territory depending upon the subprogram offering. Given the program's breadth of offerings, the program can provide basic HVAC tune up services to medium sized commercial customers up to providing Retro-Commissioning services for the larger C&I customers that have building management technology that controls the daily operations of building lighting and HVAC systems. In many cases, customers do not maintain nor operate their existing building equipment or energy management systems, so the program will focus on bringing those systems back to peak operating performance and/or implementing control schemes that will enhance the operations of those systems as well as implementing energy saving technologies that will focus on building energy savings.

The Company will leverage existing relationships with commercial and industrial customers to promote the overall program. The program will be specifically marketed as a comprehensive solution for a customer to improve the energy performance of their building by utilizing many of the services that the program offers. The subprogram will leverage the Company's existing relationships and communication channels with customers through subprogram staff and account management teams.

The primary market barriers that impact this subprogram include:

- **Business/Operational Constraints:** These facilities often have unique operational constraints that act as a barrier to implement energy-efficiency projects and the maintenance of equipment. This barrier will be addressed by ensuring the subprogram operates cooperatively with participants, provides technical assistance, maintenance services and offers timely incentives and financing support.
- **Customer Awareness and Engagement:** Eligible participants may be unaware of energy-efficiency opportunities and programs because the segment has historically not been well served by traditional energy-efficiency programs. To address this barrier, this subprogram was designed specifically to support the segment. The Company will execute a targeted outreach strategy to ensure that relevant customers are aware of subprogram opportunities and consider energy-efficiency in building tune-ups, retro-commissioning and strategic energy management opportunities that will cover both short term and longer planning needs in those facilities. The subprogram will also prepare and distribute successful case studies of prior participants and their experiences and energy savings.

The Company will seek to manage barriers to program success through a commitment to monitoring program performance and feedback channels for assessing effective program design, delivery, outreach, and marketing/advertising, and improvement opportunities. The Company's established customer communication channels, data, and brand in the marketplace will all be leveraged to deliver a best-practice subprogram that identify and confront market barriers on an

ongoing basis. To the extent possible, the Company will cross-promote other programs and subprograms to spread awareness of the range of efficiency opportunities proposed in this plan.

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***DELIVERY METHOD, CONTRACTOR ROLES AND IMPLEMENTATION PLAN (MFR II.A.V, MFR II.A.VIII, MFR II.A.X.III, MFR.II.C)***

The Company will perform overall administration and oversight of the program and may also choose to select third-party implementation contractors to manage delivery of this subprogram. Company staff and/or third-party implementation contractors will oversee all aspects of the subprogram. The Company and/or third-party implementation contractors will be responsible to administer, promote and provide the program to customers including staffing, processes ensuring quality and other controls supporting successful program implementation. Company staff and/or third-party implementation contractors will conduct the marketing, management, and implementation aspects of this subprogram. Marketing will target specific customer sectors, program allies and partners to ensure awareness in the program and enhance customer participation. Additional target marketing will be completed to enhance participation among hard to reach customers.

The Company and/or third-party implementation contractors will select qualified subprogram trade ally contractors to undertake all subprogram services. Installation and maintenance trade allies must adhere to the project specifications developed by the Company and/or third-party implementation contractors. The Company will leverage its existing and or develop a network of engaged trade allies, including local construction, electrical, plumbing and other contractors, to educate them on subprogram benefits and assist with building an approved trade ally network which will reliably maintain and install energy-efficient equipment for participating customers.

The Company and/or third-party implementation contractors will also monitor participation to assess the effectiveness of outreach efforts, incentive levels, delivery methods, and subprogram trade ally availability and provide suggestions for improvement.

Selection of third-party implementation contractors and subprogram trade allies will prioritize criteria including but not limited to:

- Experience delivering similar subprograms or initiatives
- Knowledge of the current marketplace
- Resources and marketing strength
- Local presence
- Cost
- The amount of business placed with MWVBEs.

The Company plans to issue a request for proposal in the 1st quarter of 2021 for third-party implementation contractor(s) who will be responsible for marketing, customer enrollment, program and trade ally engagement, application and rebate processing, documentation and/or other

program delivery activities as discussed above. The Company plans to select the third-party implementation contractor(s) in a timeframe that supports timely program implementation upon Board approval of the program.

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**EXISTING AND PROPOSED INCENTIVES RANGES (MFR II.A.III) (MFR II.A.IV)**

Refer to Appendix A, Table A-2 for the Proposed Incentive Ranges for this subprogram.

Incentives for this subprogram are structured around the measure categories that focus on specific energy efficiency measures and management practices as follows:

- **Building Operations:** Incentives provided on a fixed or project cost basis as follows:
  - HVAC Tune-Up: Fixed incentives for the implementation of the tune-up measures based on the size of the HVAC units.
  - Building Tune-Up: Incentives that cover up to 70% of the project cost with a project cap of \$75,000 and up to 70% of the cost to attend qualified BOC training up to \$1000 per person.
- **Retro-Commissioning:** Incentives to cover up to 50% of the initial cost to perform the required ASHRAE level audit, and the remaining cost upon the customer commitment to implementation of energy efficiency measures defined by the audit. The customer will also be paid a custom incentive for the implementation of the energy efficiency measures determined through the audit. The total audit and project incentive will be capped at up to 70% of the project cost.
- **Strategic Energy Management:** A third-party implementation contractor may perform an engineering assessment of the Customer's facility to develop a SEMP or the Customer may choose to utilize a consultant of their choosing to perform an engineering assessment to develop the SEMP. Customers who utilize a consultant will receive an incentive to cover up to 50% of the initial cost of the engineering assessment, with the remaining cost upon the customer commitment to implementation of energy efficiency measures defined by the SEMP process. A tiered incentive structure for Customer engineering assessment will be utilized based upon square footage of Customer's facility. The SEMP will identify short, medium, and long-term goals for the customer and will set identifiable metrics for mapping to the plan. For the implementation of the energy efficiency measures determined by the SEMP, the customer will be paid an incentive that is commensurate with the applicable Commercial & Industrial Program offering that the measures are attributed.

The utilities and/or third-party implementation contractors will complete customer contractor payments within 60 days following completion of contractor work, submission of complete and required paperwork, and completion of program requirements such as necessary field inspections (if required).

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***CUSTOMER FINANCING OPTIONS (MFR II.A.VI)***

Refer to Appendix B Table B-1 for the summary of Proposed Financing for this subprogram.

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***CUSTOMER ACCESS TO CURRENT AND HISTORIC ENERGY USAGE DATA (MFR II.A.VII)***

Refer to Section 10.2 for a description of how the Company provides customers access to their current and historic energy usage data.

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***PROJECTED PARTICIPANTS (MFR II.A.IX) AND ENERGY SAVINGS (MFR II.A.X)***

Refer to Appendix D, Table D-17 for the projected participants and energy savings for this program. The table summarizes the projected participation and savings associated with this subprogram. All values are annual incremental totals, and do not incorporate savings achieved in prior years. Savings estimates are based on projected participation during each year of the forecast period.

For customers in areas where gas and electric service territories overlap, the utilities will use the Statewide Coordinator to allocate costs and energy savings for shared measures. Refer to Section 6.3 for a description of the role of the Statewide Coordinator.

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***PROGRAM BUDGET (MFR II A.XI) (MFR II.A.XII)***

Refer to Appendix E, Table E-17 for the projected program expenditures for the subprogram.

## **5.2.2 ENERGY SOLUTIONS FOR BUSINESS-ENGINEERED SOLUTIONS**

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### ***PROGRAM DESCRIPTION / DESIGN (MFR II.A.I)***

The Energy Solutions for Business-Engineered Solutions subprogram will provide tailored energy-efficiency assistance to public service entities, such as municipalities, universities, schools, hospitals and healthcare facilities (“MUSH”) and non-profit entities. The subprogram will provide guided consultative service throughout delivery to assist customers in identifying and undertaking large energy-efficiency projects, while requiring no up-front funding from the customer.

Through this subprogram, customers will be provided with an in-depth audit of their facilities as well as a detailed assessment and recommendation of energy-efficiency measures that could be economically installed. Customer incentives are determined on a project-by-project basis. Selection of trade allies will be subject to a competitive solicitation process. In addition to the calculated project-by-project incentive, participants will have the option to pay back the non-incentive portion of the project costs through on-bill repayments or access to financing with similar terms. Through this subprogram design, participants in market segments that have typically been underserved are able to achieve greater energy savings.

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### ***TARGET MARKET OR SEGMENT (MFR II.A.II)***

C&I MUSH and non-profit entities located within the Company’s service territory are eligible to participate in this subprogram. The subprogram will provide energy audits and incentives to entities that directly serve the public, but often have difficulty investigating and investing in energy-efficiency. The measures included in this subprogram may include HVAC, building envelope, motors, lighting, controls, and other building systems, energy efficiency and energy consuming equipment.

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### ***MARKETING PLAN (MFR II.A.XIV)***

The Company will leverage existing relationships with municipalities, universities, schools and other public agencies to promote the subprogram, and will conduct further outreach through school, university and municipal associations. The subprogram will leverage the Company’s existing relationships and communication channels with customers through subprogram staff and account management/customer service personnel. In addition, the subprogram will work with hospitals, healthcare facilities, and non-profits to increase awareness of the subprogram.

The primary market barriers that impact this subprogram include:

- **Business/Operational Constraints:** These facilities often have unique operational constraints that act as a barrier to implement energy-efficiency projects. This barrier will be addressed by ensuring the subprogram operates cooperatively with participants, provides technical assistance, and offers timely incentives and financing support.
- **Customer Awareness and Engagement:** Eligible participants may be unaware of energy-efficiency opportunities and programs because the segment has historically not been well served by traditional energy-efficiency programs. To address this barrier, this subprogram was designed specifically to support the segment. The subprogram will include a targeted outreach strategy to ensure that relevant customers are aware of subprogram opportunities and consider energy-efficiency in equipment investments and long-term planning. The subprogram will also prepare and distribute successful case studies of prior participants and their experiences and energy savings.
- **Cost Effectiveness:** Efficiency upgrades require an initial investment that is recovered by lower long-run operating costs and non-energy benefits. These projects often carry longer payback periods than traditional energy-efficiency projects due to the unique needs of the segment (e.g. hospital & health buildings). To address this barrier, incentives and on-bill repayment or access to financing with similar terms is provided to the customer to reduce the initial cost, and subprogram will endeavor to communicate the non-energy benefits offered by many efficiency upgrades that are not well captured in traditional cost/benefit analysis.

The Company will seek to manage barriers to program success through a commitment to monitoring program performance and feedback channels for assessing effective program design, delivery, outreach, and marketing/advertising, and improvement opportunities. The Company's established customer communication channels, data, and brand in the marketplace will all be leveraged to deliver best-practice subprograms that identify and confront market barriers on an ongoing basis.

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***DELIVERY METHOD, CONTRACTOR ROLES AND IMPLEMENTATION PLAN (MFR II.A.V, MFR II.A.VIII, MFR II.A.X.III, MFR.II.C)***

The Company will administer this subprogram and may also choose to select a third-party to manage delivery of this subprogram. The Company and/or its third-party implementation contractor(s) will oversee all aspects of the subprogram. The Company, and/or its third-party implementation contractor(s) will utilize qualified trade allies to undertake the audit and engineering services required to deliver this subprogram. The Company may also utilize the third-party implementation contractor(s) to assist in the outreach, marketing, and trade ally coordination. Participants will contract with the installation trade allies selected through a competitive solicitation process to install the measures included in projects.

The subprogram delivery will typically occur in four steps:

- **Audit:** The Company and/or its third-party implementation contractor shall assess the required level of an ASHRAE audit to perform, based on the complexity of the facility and the potential energy efficiency measures; an investment grade audit may not be required for all facilities. The Company and/or its third-party implementation contractor will then select a subprogram trade ally to perform the appropriate level energy audit and prepare a customized audit report that includes a list of recommended energy efficiency upgrades. The Company and/or its third-party implementation contractor will then review the recommended energy efficiency upgrades with the customer to determine whether to proceed with a project.
- **Engineering Analysis of Project:** Based on the audit results and customer feedback, an engineering analysis may be required. The Company and/or its third-party implementation contractor will conduct a screening of the payback and project cost effectiveness and recommend the selected energy-efficiency measures for the project. The Company and/or its third-party implementation contractor will review the project with the Customer for Customer agreement on the approved project. The Company and/or its third-party implementation contractor and/or a subprogram engineering trade ally will work with the customer to prepare a Scope of Work and other project documents, which will be used by the customer to obtain installation cost estimates for the approved project.
- **Scope of Work/Contractor Bids:** The customer will issue a Scope of Work to obtain competitive bids to complete the identified and approved project. The Company and/or its third-party implementation contractor, the subprogram engineering trade ally and the customer will review and evaluate the bids/costs received, and the customer will make the final decision on bid selection. Following bid selection, the proposed project is again screened for cost effectiveness and the customer is presented the funding commitment proposal from the Company and/or its third-party implementation contractor. Once (i) the customer and the Company and/or its third-party implementation contractor have executed the funding commitment and (ii) the customer has executed applicable agreements and contracts with the successful bidder, project funding will be reserved and made available to support the project.
- **Measures Installation and Inspections:** The Company and/or its third-party implementation contractor and the subprogram engineering trade ally, acting as construction administration agent, will monitor project progress and will release project funds based on the following payment structure:
  - Stage 1: Project Contracting Stage - The first progress payment of up to 30% of the installation cost can be issued to the customer to initiate the project.
  - Stage 2: Construction Stage - A pre-defined series of progress payments totaling up to 50% of total project commitment can be issued
  - Stage 3: Project Completion and Commissioning - When the project is 100% complete, a final inspection and final project true-up will be performed; remaining progress payments will be issued.

The final payment based on the results of project true-up is determined and issued only if the final inspection is successfully completed and approved. If the final costs are less than the estimated project commitment, the final payment will be adjusted down to reflect the

actual costs. If the final costs are greater than the estimated project commitment, the final payment will not be adjusted and will be paid according to the executed agreements and contracts specifying original costs.

The progress payment schedule described above is designed to ensure that customers can pay their installation contractors on a timely basis. Project progress and the project cash flow will be monitored and verified by the Company and/or its third-party implementation contractor.

The Company and/or its third-party implementation contractor will select qualified subprogram trade allies to undertake all auditing and engineering work associated with the subprogram. The Company and/or its third-party implementation contractor will also monitor participation to assess the effectiveness of outreach efforts, incentive levels, delivery methods, and subprogram trade ally and installation contractor availability and provide suggestions for improvement. The installation contractor(s) will adhere to the project specifications recommended by Company and/or its third-party implementation contractor and the subprogram engineering trade ally and set forth between the installation contractor and the customer.

Selection of third-party implementation contractors and subprogram trade allies will prioritize criteria including but not limited to:

- Experience delivering similar subprograms or initiatives
- Knowledge of the current marketplace
- Resources and marketing strength
- Local presence
- Cost
- The amount of business placed with MWVBEs.

The Company plans to issue a request for proposal in the 1st quarter of 2021 for third-party implementation contractor(s) who will be responsible for marketing, customer enrollment, program and trade ally engagement, application and rebate processing, documentation and/or other program delivery activities as discussed above. The Company plans to select the third-party implementation contractor(s) in a timeframe that supports timely program implementation upon Board approval of the program.

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***EXISTING AND PROPOSED INCENTIVES RANGES (MFR II.A.III) (MFR II.A.IV)***

Refer to Appendix A, Table A-2 for the Proposed Incentive Ranges for this subprogram.

The subprogram will provide a 100% incentive for an up-front ASHRAE audit, the specific audit level will be determined on a project by project basis based on the complexity of the facility and the potential energy efficiency measures. In addition, the Company will buy-down the simple

payback of the recommended energy-efficiency project cost for approved measures by up to six years, with the resulting payback not less than three years. After the project incentive buy-down, the remaining project costs may be funded by the subprogram with participants repaying the balance of the project costs through OBRP or access to financing with similar terms.

The Company and/or its third-party implementation contractor will complete customer contractor payments within 60 days following completion of contractor work, submission of complete and required paperwork, and completion of program requirements such as necessary field inspections (if required).

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***CUSTOMER FINANCING OPTIONS (MFR II.A.VI)***

Refer to Appendix B Table B-1 for the Summary of Proposed Financing for this subprogram.

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***CUSTOMER ACCESS TO CURRENT AND HISTORIC ENERGY USAGE DATA (MFR II.A.VII)***

Refer to Section 10.2 for a description of how the Company provides customers access to their current and historic energy usage data.

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***PROJECTED PARTICIPANTS (MFR II.A.IX) AND ENERGY SAVINGS (MFR II.A.X)***

Refer to Appendix D, Table D-18 for the projected participants and energy savings for this program. The table summarizes the projected participation and savings associated with this subprogram. All values are annual incremental totals, and do not incorporate savings achieved in prior years. Savings estimates are based on projected participation during each year of the forecast period.

For customers in areas where gas and electric service territories overlap, the utilities will use the Statewide Coordinator to allocate costs and energy savings for shared measures. Refer to Section 6.3 for a description of the role of the Statewide Coordinator.

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***PROGRAM BUDGET (MFR II A.XI) (MFR II.A.XII)***

Refer to Appendix E, Table E-18 for the projected program expenditures for the subprogram.

### ***5.3 Other Programs***

#### **5.3.1 HOME OPTIMIZATION & PEAK DEMAND REDUCTION**

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##### ***PROGRAM DESCRIPTION / DESIGN (MFR II.A.I)***

Smart home and home optimization programs have emerged over the past few years through connected devices and smart home offerings. The Company has observed traditional residential demand response program offerings in the industry transition to the use of the smart thermostat as the primary control device in the home. The industry is evolving to include other connected devices such as plug loads, window shading controls, appliances, pool pumps, water heaters, electric vehicles/chargers, and battery storage systems. In addition, ENERGY STAR has established a specification for Smart Home Energy Management Systems (SHEMS) which is composed of packages of smart home devices (including the smart thermostat as a required device) with features for occupancy detection and corresponding user services which are accessible through a single platform interface, such as a smart app. The SHEMS specification includes an interface that provides user control of devices and information on the energy consumption of SHEMS-connected devices, among other things. The platform also receives and responds to occupancy data to optimize energy savings device control actions.

This program provides incentives to customers for the control and optimization of connected devices (initially Smart Thermostats) and for the purchase, installation and/or enrollment of smart home energy management systems meeting program requirements to provide energy and peak demand reduction savings.

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##### ***TARGET MARKET OR SEGMENT (MFR II.A.II)***

Residential customers who own or purchase and install program qualified connected devices (initially smart thermostats) or home energy management systems.

All residential customers with internet service and a home wi-fi network.

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##### ***MARKETING PLAN (MFR II.A.XIV)***

The marketing of this program will be provided by TPICs under management by Company personnel. Marketing activities will target Smart Home Energy Management System providers

(as available) and customers to inform them of the program, its components, and the associated benefits to participation. The Company or the TPIC(s) may recruit smart home system providers and program trade allies throughout program implementation. The Company or the contractor(s) may also market and/or cross market the program offerings to customers through bill inserts, social media, e-mail, online marketing, direct mail, print, newspaper and radio advertisements, Home Energy Reports, point-of-sale displays at retailers, in-store, and community events, and the Company's website. The contractor(s) will design and produce all materials needed to promote the program including promotional signage, informational brochures and rebate forms.

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***DELIVERY METHOD, CONTRACTOR ROLES AND IMPLEMENTATION PLAN (MFR II.A.V, MFR II.A.VIII, MFR II.A.X.III, MFR.II.C)***

The Company will outsource the implementation of this program to a TPIC who will be responsible for marketing, outreach, enrollment, and fulfillment aspects of program. The Company will perform overall administration and oversight of the program.

The contractor will develop an implementation plan that involves marketing activities to target and conduct outreach to both smart home system providers (as available) and customers to inform them of the program offering, components, benefits, and to achieve program buy-in and participation. The contractor will also develop and provide educational materials to support delivery of this program including promotional brochures and presentation. The Home Energy Education & Management Program will also promote this program through Home Energy Reports. The frequency of this promotion will be determined during the program launch phase.

This program supports enrollment of qualified connected devices (initially smart thermostats) for their control and optimization and for implementation of smart technologies in homes (as available). The TPIC will provide education and promote the installation of qualified products and systems to customers and trade allies. Trade allies will also be recruited to partner in and support this program.

The Company plans to issue a request for proposal for third-party implementation contractor(s) who will be responsible for marketing, customer enrollment, program and trade ally engagement, application and rebate processing, documentation and/or other program delivery activities as discussed above. The Company plans to select the third-party implementation contractor(s) in a timeframe that supports program implementation in 2023.

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***EXISTING AND PROPOSED INCENTIVES RANGES (MFR II.A.III) (MFR II.A.IV)***

Refer to Appendix A, Table A-3 for the Proposed Incentive Ranges for this program.

The customer receives an incentive following the enrollment in optimization with qualifying devices (e.g. Smart Thermostats meeting program requirements) or following the purchase, installation and/or enrollment of a Home Energy Management System meeting ENERGY STAR or other program requirements.

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***CUSTOMER FINANCING OPTIONS (MFR II.A.VI)***

There are no financing options for this program.

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***CUSTOMER ACCESS TO CURRENT AND HISTORIC ENERGY USAGE DATA (MFR II.A.VII)***

Refer to Section 10.2 for a description of how the Company provides customers access to their current and historic energy usage data.

Additionally, ENERGY STAR has established a certification for Smart Home Energy Management Systems (SHEMS) which is composed of packages of smart home devices (including the smart thermostat as a required device) and corresponding user services which are accessible through a single platform interface, such as a smart app. A certified SHEMS includes an interface that provides easy recognition and set up of new devices, and user control of devices and information on the energy consumption of SHEMS-connected devices. The platform also receives and responds to occupancy data and initiates energy savings device control actions. The Company anticipates that the participating customer will have access to the data available from the SHEMS system for this program.

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***PROJECTED PARTICIPANTS (MFR II.A.IX) AND ENERGY SAVINGS (MFR II.A.X)***

Refer to Appendix D, Table D-20 for the projected participants and energy and peak demand reduction savings for this program. The table summarizes the projected participation and savings associated with this program. All values are annual incremental totals, and do not incorporate savings achieved in prior years. Savings estimates are based on projected participation during each year of the forecast period.

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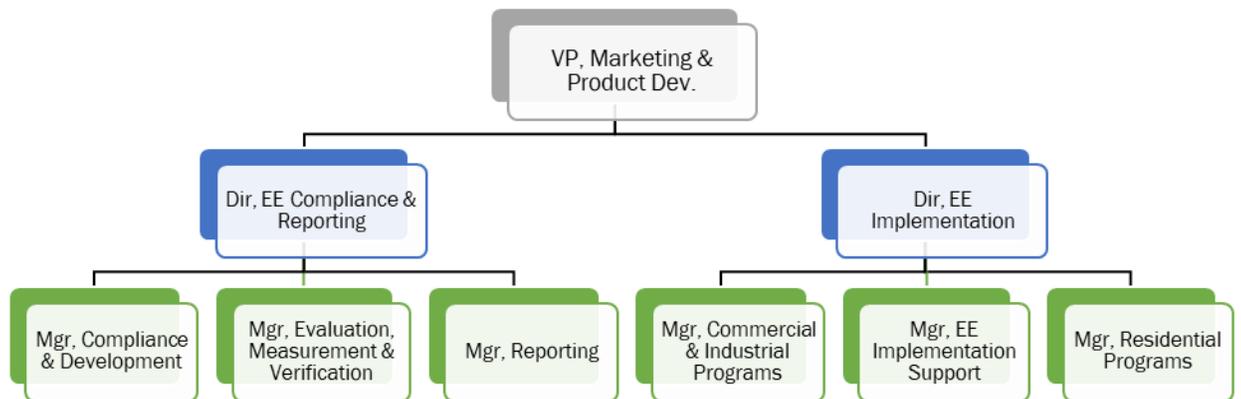
***PROGRAM BUDGET (MFR II A.XI) (MFR II.A.XII)***

Refer to Appendix E, Table E-20 for the projected program expenditures for the program.

## 6.0 PROGRAM MANAGEMENT AND IMPLEMENTATION PLAN

### ***6.1 Describe the Company's management structure for efficiency programs and include the organization chart for management team responsible for implementing this plan***

The Energy Efficiency Department is entrusted with ensuring that the Company complies with all statutory EE/PDR requirements and that the approved programs are successfully implemented. The group reports to the Vice President, Marketing and Product Development. This group also has responsibility for similar activities for FirstEnergy's other utility subsidiaries in other states. The organization chart set forth below depicts the management team and their primary areas of responsibility as they currently exist.



The Energy Efficiency Implementation group is organized based on program management responsibilities across customer classes. Key activities include planning and executing marketing campaigns and acquiring and managing the program implementation vendors to ensure quality control and assurance over program implementation. The Energy Efficiency Compliance and Reporting group is organized based on support functions that are common to all programs such as plan development; program evaluation, measurement and verification; and compliance tracking and reporting. Members from this group also coordinate working group and stakeholder engagement activities, both of which provide input and recommendations on program design and implementation, including customer communication/education.

### ***6.2 Summary of the Company's implementation strategy to manage the portfolio, engage customers and trade allies, encourage innovation and market access, transform markets, and align or coordinate with other utilities (MFR II a xiii, MFR II c)***

### Program Administration

The Company will provide the management, administration, and implementation of the programs through internal operations or under supervised support of third-party implementation contractors. The program teams will monitor the following program elements for each utility-administered program:

- Progress to goal
- Projects completed
- Energy savings
- Customers served
- Budgets

The Company will also keep abreast of industry trends, market research, and best practices from other New Jersey utilities and other jurisdictions to consider possible enhancements to the programs and ensure best-quality program implementation and performance during the term of the Plan.

The Company plans to begin to issue requests for proposal in the 1st quarter of 2021 for third-party implementation contractor(s) who will support the marketing, customer enrollment, program and trade alley engagement, application and rebate processing, documentation and/or other program delivery activities as discussed above. The Company plans to select the third-party implementation contractor(s) in a timeframe that supports timely program implementation upon Board approval of the program and throughout the period of the Plan.

Additionally, JCP&L will ensure a coordinated delivery of programs among utilities and allocation of costs and energy savings among the utilities for areas where utility service territories overlap.

### Marketing Collaboration

To support a consistent statewide approach for program marketing and to support statewide awareness of energy efficiency programs and efforts, the Company will collaborate with partnering utilities on marketing materials and broad customer-awareness language. The Company will also participate in and support efforts of the NJ Marketing Working Group to determine appropriate measures for joint and statewide marketing efforts.

### Customer Service and Call Center

The Company will utilize telephone, Internet, mobile app, and other customer-facing tools to provide energy efficiency program customer support and service. Additionally, the Company will leverage relationships with customers to conduct outreach regarding program availability and provide additional customer support and service. Company personnel (e.g. Area Managers and Customer Support Representatives) will provide first line contacts to eligible customers to engage and educate customers regarding the program opportunities available to them and support their participation in the program offerings.

Listed below are the typical responsibilities of the customer support representatives:

- Handle inquiries related to the Energy Efficiency Programs
- Facilitate electronic or postal delivery of requested information
- Provide program application support and status updates
- Resolve issues or complaints

Any customer complaints will be escalated to the appropriate department within the Company and handled through standard customer service practices.

### IT, Data Tracking and Reporting

The Company or its third-party vendor will identify and implement appropriate Information Technology (IT) systems to track and report program participation and energy-saving data. These systems will be in coordination with existing Company systems or built-out appropriately to meet the specific program tracking and regulatory reporting requirements. The systems will transmit data feeds with the Statewide Coordinator to facilitate data sharing between utilities for dual-fuel programs to support coordinated, consistent delivery of programs among utilities and allocation of costs and energy savings among the utilities

The IT systems capabilities will include, but is not limited to the following functions:

- Program monitoring reports
- Invoicing coordinating utilities and third-party vendors
- EM&V data extracts
- Regulatory reporting extracts

Processes to ensure data quality and data security will be put in place and monitored on a routine basis to ensure program reporting accuracy and customer data protections.

See Section 9.0 for more information regarding the Company's Reporting Plan

### Program Quality Assurance and Quality Control

The Company will deploy routine quality assurance and quality control measures to ensure its internal and vendor processes are meeting the goals, requirements and objectives of the program. Such measures may include routine program performance reviews, vendor meetings, customer participation surveys, and project inspections. Additionally, any Trade Ally or Participating Contractor will undergo a thorough onboarding review to ensure that participating contractors are licensed, insured, and that they fully understand program requirements before performing any work on behalf of the Company and program. Further, routine review periods exist to ensure consistent program deployment and execution. The Company will take corrective actions for non-compliance and conformance with program requirements, objectives or Company standards.

### ***6.3 Role of Statewide Coordinator***

In response to the Board Order directing each electric public utility and gas public utility in the State of New Jersey to establish energy efficiency (“EE”) and peak demand reduction (“PDR”) programs pursuant to the CEA, the New Jersey investor-owned electric and gas utilities are collaborating in order to implement programs in a consistent manner and develop supportive processes, procedures, requirements, and forms.

#### **Coordinated Program Offerings**

To support the coordinated delivery of Core and certain Additional program offerings in situations that involve gas and electric savings opportunities in overlapping utility territories, the Utilities have established a framework that will align key program elements through use of Interconnected Tracking Systems supported by use of a Statewide Coordinator System, aligned Utility Responsibilities, and Coordinated Program Elements as further described below. This structure will support the coordinated delivery of appropriate energy efficiency measures in the following Program or Sub-program offerings:

##### **Core Offerings**

- Energy Efficient Products
- Home Performance with ENERGY STAR
- Multi-Family
- Direct Install
- Prescriptive and Custom Measures

##### **Additional Utility-Led Offerings**

- Moderate-Income Weatherization
- Quick Home Energy Check-Up
- Engineered Solutions
- Energy Management

#### **Interconnected Tracking Systems**

To support consistency across the state and to align the above coordinated program offerings, the utilities will contract with a single third-party entity to serve as a Statewide Coordinator (“SWC”) for measures and costs that impact more than one utility in situations where gas and electric service territories overlap. This entity, to be selected through a competitive procurement process, will provide a software platform to cross-reference eligible customers, identify the local gas and electric company serving the customer, identify completed and in-progress efficiency projects, and perform independent allocations of energy savings and costs for coordinated program offerings. These costs and savings will be allocated between the Utility that provides the program services

(i.e. “Lead Utility”) and the Utility with whom the services were coordinated (i.e. “Partner Utility”).

In areas where gas and electric service territories overlap, the utilities will design program elements that support consistent delivery of the above coordinated program offerings among all of the utilities to enable the SWC to allocate shared costs and energy savings appropriately based on the fuel types impacted by EE measures.

### Statewide Coordinator System Responsibilities

- Serve as a central platform to ensure data minimums required for coordinated data elements, exchange protocols, and serve as a repository for shared measure costs and shared savings for applicable programs.
- Track participation specific to utility programs that require coordination (e.g. screen prior participation in coordinated program offerings)
- Serve as a clearing house for pre-determined data formats and exchanges
- Perform allocation of dual-fuel or partner-fuel savings and cost for customers with separate gas and electric utilities, sharing of costs, investments, and applicable to customer financing
- Determine and provide supporting reports respective to utility invoice balances for allocation of shared measure costs (e.g. costs of respective measures and share of costs)
- Provide monthly reports of coordinated program activity so that customer participation and program results may be tracked

### Utility Responsibilities

The Utilities will implement certain program operations through either internal resources, or under contract with TPICs, outside of the Statewide Coordinator system. By retaining these functions, the Utilities can maintain a strong line of sight to program operations and still work collaboratively with the other Utilities in offering coordinated programs to New Jersey customers. These functions include, where appropriate:

- Customer enrollment
- Developing consistent enrollment forms to collect agreed-upon customer information to share between the utilities
- Screening and qualifying contractors for Utility programs
- Customer care functions
- Marketing of programs
- Providing in-home/business auditing or direct-install of efficiency measures
- Communicating availability of customer financing options
- Integrating with other Utility or Co-managed programs

- Sponsoring EE program applications including paying initial incentives to customers and contractors
- Invoicing peer Utility partners for coordinated program costs

### Coordinated Program Elements

As envisioned by the Board's direction on coordinated program offerings, the Utilities' programs are designed in a way to minimize customer confusion and present consistent opportunities for customer participation with access to both electric and gas measures simultaneously, where appropriate. The utilities recognize that programs will evolve after initial launch and commit to ongoing collaborative efforts among the Utilities to continue program alignment. Central to both initial launch and ongoing efforts will be a focus by the Utilities to standardize the following wherever possible:

- Common forms for contractors and customers with uniform field requirements
- Contractor minimum requirements and credentials for applicable programs
- Eligible customers and property requirements
- Eligible measures
- Incentive structures through use of an agreed-upon standard range
- Software platforms or interfaces to be used by market contractors
- Targeted bonus approaches for customers that meet specific policy priorities (e.g. income qualified, targeted geographic locations)

## ***6.4 Workforce Development (MFR II b 2)***

The utilities recognize the importance of developing and supporting strong Workforce Development Programs. There needs to be a strong pool of qualified candidates ready for companies to hire to meet the increased demand for the energy efficiency programs and projects as the utilities implement programs to strive to meet the new energy savings targets required by the CEA. This overview will address thoughts on training needs and career paths, trade ally needs, and contracting provisions. However, the utilities are not including a detailed Workforce Development Plan for the Core Programs as part of this filing because of the clear direction in the June 10<sup>th</sup> Board Order for the workforce development and job training partnerships and pipelines to be developed in collaboration with the State and the Workforce Development Working Group and Equity Working Group.

JCP&L is interested in being an active participant in the Workforce Development Working Group to share anticipated program hiring needs and understand the interests, feedback and concerns of the other stakeholders. The utilities anticipate that this new work group will provide significant input that will shape the recommended slate of programs and policies to develop a robust pipeline of workers able to meet the needs of a growing energy efficiency industry in New Jersey and to ensure that local, underrepresented, and disadvantaged workers are included in those opportunities.

### Training Needs and Career Paths

In order for the utilities to reach the aggressive energy efficiency goals established by the CEA, New Jersey will need to significantly increase the number of trained professionals and skilled trade persons who are proficient in meeting the needs of residential, commercial and multi-family projects, such as:

- Auditors
- HVAC technicians
- Plumbers
- Electricians
- Seal-up and insulation contractors
- Engineers
- Analysts (energy modeling and evaluation, customer service, financial tracking, cost benefit analysis, demographic analysis)
- Program staff with a strong understanding of the approved energy efficiency programs and supporting administrative staff
- Outreach Specialists

The Company recognizes that these positions require a broad range of technical training and educational experience and that it is in our interest to partner with New Jersey based vocational institutions, community colleges, universities, community-based organizations, and non-profits. The Company anticipates that most of these entities will have some level of representation with

either the Workforce Development Working Group or the Equity Working Group and look forward to hearing their input. The Company also expects the discussion within those working groups will include insights from successful models in other states and other industries as well as efforts already underway in New Jersey. Considering recommendations from those groups and funding from either the State or what the utilities are reserving within these filings, the utilities hope to start to launch programs in Spring of 2021.

### Trade Ally Needs

While ensuring there is trained staff available is a critical path, the utilities also recognize there must be a pool of employers interested in hiring these individuals. While the utilities will be hiring some individuals directly and will see strong interest from implementers and trade allies under direct contracts with the utilities, the Company recognizes that it must also engage the open market to understand the needs of contractors and other firms. Organizations like the New Jersey Air Conditioning Contractors Association (NJACCA), the New Jersey Association of Plumbing, Heating, and Cooling Contractors (NJPHCC) and the New Jersey Association of Energy Engineers (NJAEI) provide industry leadership and guidance to energy businesses, and should be included in the Working Group to guide policies and program designs that will meet the needs of existing and new contractors.

With the Equity lens in mind, utilities expect the Working Groups to also explore paths that can help Women and Minority Owned Businesses grow and thrive in the Clean Energy Economy. The potential for coaching or incubator programs could ensure that underrepresented individuals have a greater chance to share in management and ownership opportunities.

### Contracting Provisions

The utilities will be following internal procurement protocols for the services that will be secured to implement their programs. The utilities are all willing to include the amount of business placed with MWVBES as part of our rating criteria when evaluating contract proposals.

### Budget Considerations for Workforce Development Programs

The Company has proposed a total budget of \$400,000 per year for workforce development as a component of its Utility Administration budget presented in Appendix E. These budgets were established to ensure that there is adequate funding to launch and maintain programs during this initial triennial period. In the event that the State identifies adequate funding from other sources to support these types of programs, the utilities may be able to reduce their planned expenditures.

## 7.0 EVALUATION, MEASUREMENT & VERIFICATION

### *7.1 Summary of the utility's data management, quality assurance and internal evaluation processes, including how the Plan and individual program will be updated or refined based on evaluation results*

The utilities recognize the importance of incorporating Evaluation, Measurement and Verification (“EM&V”) into the energy-efficiency programs. EM&V can help assess whether program objectives are being achieved, document energy and non-energy benefits and inform future program development. PJM Interconnection, L.L.C. (PJM) specific EM&V will be needed to support utility EE Offers into PJM’s Capacity Market. This overview will address common definitions of the types of evaluations and primary evaluation objectives, the philosophy of monitoring and improving program performance, and EM&V budget considerations. Proposed budgets for evaluation are reflected in Appendix E, Tables E-1 through E-12.

Further, the utilities are not including a detailed Evaluation Plan for the Core Programs as part of this filing because of the clear intention of the June 10<sup>th</sup> Board Order for the evaluation plans to be developed in collaboration with the EM&V Working Group. All of the utilities are interested in being active participants in this EM&V Work Group to share both program experiences and understand the interests and concerns of the other stakeholders. The utilities anticipate that this new EM&V workgroup will provide significant input that will shape the slate of evaluation activities for this first triennial program cycle. Further, the Company expects that there will be a robust discussion of which types of evaluations make the most sense in the early stages of this transition. Accordingly, the utilities did not want to prejudge the outcome of the EM&V work group efforts with the Company’s own recommendations, but the Company has included sufficient funding to support the anticipated evaluation work within its filing.

#### Common Definitions and Objectives

The State and Local Energy Efficiency Action Network (“SEE Action”) offers resources, discussion forums, and technical assistance to state and local policymakers as they seek to advance energy efficiency. Their EE Program Impact Evaluation Guide from December 2012 identified three primary objectives for evaluations.

- **Document the benefits** (i.e., impacts) of a program and determine whether the subject program (or portfolio of programs) met its goals
- **Identify ways to improve current and future programs** through determining why program-induced impacts occurred
- **Support energy demand forecasting and resource planning** by understanding the historical and future resource contributions of EE as compared to other energy resources.

That same guide provides the following standard categories of evaluations:

- **Impact evaluations:** assessments that determine and document the direct and indirect benefits of an energy efficiency program. Impact evaluation involves real-time and/or retrospective assessments of the performance and implementation of an efficiency program or portfolio of programs. Program benefits, or impacts, can include energy and demand savings and non-energy benefits (sometimes called co-benefits, with examples being avoided emissions, and water savings). Impact evaluations can also include cost-effectiveness analyses aimed at identifying relative program costs and benefits of EE as compared to other energy resources, including both demand- and supply-side options.
- **Process evaluations:** formative, systematic assessments of an EE program from both a customer and program administrator viewpoint. Process evaluations document program operations and identify and recommend improvements that are likely to increase the program's efficiency or effectiveness for acquiring EE resources and improve the customer experience with the program.
- **Market evaluations:** assessments of structure or functioning of a market, the behavior of market participants, and/or market changes that result from one or more program efforts. Market evaluation studies may include estimates of the current market role of energy-efficiency (market baselines), as well as the potential role of efficiency in a local, state, regional, or national market (potential studies). Market evaluation studies indicate how the overall supply chain and market for EE products works and how they have been affected by a program(s). These evaluations can also include assessments of other societal, customer, or utility benefits of EE programs, such as the economic and job creation impacts of the programs, health benefits to society, or T&D benefits to utilities. And finally, these studies can also be used to inform changes to the portfolio of efficiency measures to be offered to customers, or the savings achieved by the measures.

### Monitoring and Improving Program and Portfolio Performance

There is a feedback loop among program design and implementation, impact evaluation, and process evaluation. Program design and implementation, and evaluation are elements in a cyclical feedback process. Initial program design is informed by prior baseline and market potential studies. Ongoing impact evaluation quantifies whether a program is meeting its goals and may raise questions related to program processes and design. Process evaluation tells the story behind how the impact was achieved and points the way toward improving program impacts by providing insight into program operations. Thus, the three elements work together to create a better, more effective program.

### Budget Considerations for EM&V work

As noted, proposed budgets for “evaluation” are reflected in Appendix E, Tables E-1 through E-12. These budgets were established with consideration of the industry standard of reserving 3% to 5% of budget for this type of work<sup>5</sup>, excluding the cost of financing and any anticipated costs associated with a Statewide Evaluator.

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<sup>5</sup> <https://www.aceee.org/toolkit/2020/02/evaluation-measurement-verification>

## 8.0 QUANTITATIVE PERFORMANCE INDICATORS

For the duration of this Plan, PY1 through PY3, the Board adopted two quantitative performance indicators (“QPIs”): annual and lifetime energy savings. The following QPI metrics and values are applicable for the first plan cycle:

Metric (MWh)	2021	2022	2023
Net Annual Energy Savings <sup>1</sup>	124,221	174,385	208,848
Net Lifetime Energy Savings <sup>1</sup>	1,752,890	2,264,413	2,530,829

<sup>1</sup> Values are Retail Net Electricity Savings. To reflect actual realized system-wide savings at the wholesale/generator level, line loss savings would need to be added to the retail net electricity savings.

While the below additional metrics are not applicable until PY4 and PY5, and therefore targets not included in this plan cycle, JCP&L will track and report the additional future metrics beginning in PY1, consistent with the methodology and guidance provided by Staff. These additional future QPIs include:

- Net annual peak demand savings
- Net lifetime demand savings
- Net present value of net benefits as determined by the Utility Cost Test
- Net lifetime energy savings derived from qualifying low-income customers
- Net lifetime energy savings derived from qualifying small commercial customers

The following table, provided for informational purposes for this three-year plan cycle, provides the plan estimates for these additional future QPIs during each year of the plan.

Metric	2021	2022	2023
Net Annual Peak Demand Savings (MW) <sup>1</sup>	15	26	46
Net Lifetime Peak Demand Savings (MW) <sup>1</sup>	209	318	390
Net Present Value of Net Benefits by UCT	\$131,242,986	\$157,534,160	\$164,291,642
Net Lifetime Energy Savings from Qualifying Low Income Customers (MWh) <sup>1</sup>	14,740	21,287	24,996
Net Lifetime Energy Savings from Qualifying Small Commercial Customers (MWh) <sup>1</sup>	60,967	274,350	304,833

<sup>1</sup> Values are Retail Net Electricity Savings. To reflect actual realized system-wide savings at the wholesale/generator level, line loss savings would need to be added to the retail net electricity savings.

The Company will monitor progress and make necessary adjustments to improve the portfolio performance to achieve the Company’s QPI’s for the EE&C Plan cycle. As discussed in Section 6.1, FirstEnergy has a dedicated department focused on energy efficiency. The EE Department is entrusted with ensuring that the Company complies with all EE/PDR requirements and that the approved programs are successfully implemented. To support this, the Company will develop and leverage its tracking and reporting processes to monitor progress of each program toward its

goals and budgets, and for the portfolio of programs towards its targets on a monthly basis, identifying performance issues, gaps and opportunities for improvement. Progress review meetings are performed at least monthly. In addition, while implementing the approved Plan, the Company will gain additional direct input from various sources and customers will be surveyed to measure satisfaction with the programs and related services. Evaluation activities including program assessments will also inform how well the programs are moving toward the achievement of goals and will inform recommendations for adjustments to programs for continuous improvement.

As discussed earlier in Sections 2.0 and 3.0, the Company designed the EE&C Plan based on three primary goals:

- Comply with statutory and Board Order requirements and directives
- Establish a program framework that is adaptable and scalable to meet the aggressive and increasing energy savings targets over time; and
- Implement programs to establish systems and processes, customer awareness, program and trade ally participation, and experience and momentum for the future.

To achieve these three goals as well as individual QPI targets, the EE&C Plan includes a comprehensive portfolio of cost-effective EE&C programs for all customer sectors, leverages the experience of Company affiliates in other states, includes enhancements to existing NJ programs and successful programs in other jurisdictions, and is based on collaboration with other NJ utilities to promote coordinated program designs and delivery. The Plan incorporates both near-term and longer-term energy saving opportunities for customers including single and prescriptive measures, multiple prescriptive and custom measures, direct install, and comprehensive whole building solutions that provides opportunities for all customers to participate in EE programs. The Plan includes a commitment to workforce development and job training through participation in the Workforce Development Working Group as well as consideration of the amount of business placed with MWVBES when evaluating contract proposals from vendors and contractors to support the program offerings. The Plan relies on experienced outsourced TPICs, and leverages experiences, volume cost efficiencies, and a variety of delivery channels that will support successful and efficient program operations and customer participation.

As a result, the Company has prepared an EE&C strategy that balances near-term energy savings opportunities among all rate classes with longer-term programs that continue to create jobs and build capacity and momentum for delivering greater energy savings in the future. The result of these efforts is a comprehensive set of programs that, if approved as filed, will enable the Company to meet its energy savings targets as set forth in Table 1 and its QPIs detailed above in Table 11.

## 9.0 REPORTING PLAN

JCP&L has the following tracking and reporting plan to comply with the Board’s reporting requirements of: i) quarterly progress reports; ii) annual progress reports; and iii) triennial reports. FirstEnergy has developed an enterprise-wide EE&C Tracking and Reporting System (“T&R System” or “System”) in partnership with a third-party vendor to support regulatory required EE&C reports across any jurisdiction in its footprint. This T&R System is used by the Company’s affiliated Utilities in other jurisdictions and has capabilities for advanced reporting, analytics, and quality assurance/quality control processes. The Company will enhance the system to integrate new JCP&L EE&C offerings and generate reports with format and content consistent with that defined by the Board. The System will also be able to produce customized reports as required and will provide summaries, dashboards, or other information to be used by the Company to monitor program performance on an on-going basis. Utilization of the existing FirstEnergy Corp. enterprise T&R System will allow JCP&L to benefit through reduced development efforts, sophisticated data integrity and quality control processes, and administrative efficiencies that will lead to reduced costs in delivering reporting services. In addition, the Company will utilize SAP<sup>6</sup> enterprise software for financial management and reporting of program costs.

The T&R System will exchange data with TPIC databases wherever necessary to gather data to upload key program metrics on a routine basis, (e.g., daily, weekly or monthly) and will ensure data integrity through routine reconciliation processes. The Company will work with the TPICs and the Company’s EM&V consultant on a regular basis to verify the accuracy of data transferred from TPIC databases to the T&R System. Not only will this reduce paperwork and minimize data entry, but it will support quality control and allow for easy access to track goal attainment and budget variances.

The T&R System will store various data fields where appropriate, including but not limited to:

- Customer name
- Customer contact info
- Customer type
- Customer ID number
- Account number
- Premise number
- Project/Program name
- Contractor/Retailer
- Measure
- Service address
- Job status
- Completion date
- *Install Date*
- *Heating system type*
- *Square footage*

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<sup>6</sup> SAP, which stands for System Applications and Products, is JCP&Ls Enterprise Resource Planning (ERP) software

- kWh savings
- kW savings
- MWh savings
- MW savings
- Rate Code
- Incentive
- Transaction results
- Measures implemented
- MMBtu savings

## 10.0 PLAN COMPLIANCE AND OTHER INFORMATION

### *10.1 Energy Efficiency as a Resource*

#### PJM EE Potential Determination

The Company provided initial estimates of the PJM Summer and Winter MW EE potential for each PJM delivery year as shown in Appendix F, Table F-1.

These estimates were developed from the MWh savings modeled in the EE&C Plan, with the following additional assumptions and modifications.

- Identified and removed energy savings of all measures not eligible for PJM including:
  - online audits
  - appliance recycling
  - building lighting controls and occupancy sensors
  - smart thermostats, energy management systems or smart homes
  - behavioral programs
  - educational programs
- Assumes utilities retain all Utility EE program Capacity Rights to support their offered EE resources and to ensure no double counting of EE resources by third parties
- Categorized all PJM eligible measures by PJM Program name
- Segregated EE Plan MWh estimates provided for NJ fiscal year (July-June) into the applicable PJM delivery year (June-May)
- Assigned an initial savings load shape to each PJM eligible EE measure
- Estimated the potential KW savings values for each measure for the PJM defined Summer and Winter periods using the appropriate load shape curve values including estimates for HVAC interactive factors and fuel type
- Included T & D line losses to adjust retail kW values to wholesale kW values

The Capacity Performance potential kW would be the lesser of the Summer or Winter kW values by installation period.

#### EE Offer Determination

The Board Order requires participation of EE Resources beginning with PY2 in the 2024/25 Base Residual Auction (“BRA”). All EE sell offer values and buy bids shall remain confidential as they are considered market sensitive information; however, they can be provided to BPU Staff via confidential submission and after the applicable auction results are available.

The Company proposes the following considerations and processes to further evaluate the potential values provided in Appendix F, Table F-1 to facilitate participation in the PJM Capacity Auctions.

- Adjustment of the PJM kW estimates for any Point of Sales (POS), Mid-Stream, and Up-Stream Programs. Measures from these programs require additional PJM EM&V and annual persistence studies to ensure offered EE measures are initially installed in the JCP&L load zone and remain in service during each applicable delivery year.
- The Initial EE Plan values are based on many assumptions including adoption/installation rates, more generic or composite measure savings curve shapes, initial incentives or rebate levels, line losses and current measure baselines. Adjustments to each must be considered for EE offers and subsequent true up of positions.
- Adjustments to recognize that EE resources have a limited offer duration of four years with additional installation period limitations.

EE Offers need to consider Capacity Market rule changes like the pending PJM Minimum Offer Price Rules (MOPR) and Board's finalization of the Resource Adequacy activities. MOPR rules may necessitate the need for more aggressive BRA EE offers to ensure resources with significant floor prices clear versus not clear an Incremental Auction (IA), or, if the Board authorizes the use of an Fixed Resource Requirement (FRR) Alternative Capacity Auction for the Electric Distribution Company (EDCs), PJM Capacity Market EE Offers would not be applicable.

EE Offers are made in Installed Capacity (ICAP) values but clear in Unforced Capacity (UCAP) values based on PJM's Planning Parameters for each specific auction. The UCAP values that clear an auction will remain the obligation for the delivery year regardless of subsequent IA parameter changes. True ups may be needed during incremental auctions or at a minimum the Third IA when parameters become final, to either purchase any shortfall resources or possibly sell any excess resources.

## ***10.2 Customer Access to Current and Historic Energy Usage Data (MFR II.a.vii)***

The Company provides access to energy usage data to its customers through the customer's online accounts where Customers are initially provided 12 months of energy usage data and bar graphs illustrating their usage over time. The Company also provides an "Analyze Usage" function option through the customer online accounts that provides up to 24 months of energy usage data, temperature, and meter reading types along with energy costs. Additionally, hourly energy usage data is available for up to 24 months for customers with interval meters.

In addition to online presentation of energy usage data, the Company also provides a "Green Button" function to customers through their online accounts and "Analyze Usage" function where customers can download their energy usage data in CSV or XML format. Additional historic energy usage data beyond 24 months can be obtained where available using this function.

The Company also provides a billing usage statement to customers who make a request through the Company's contact center. The statement includes 12 months of history including the read date, meter reading, consumption usage, days in billing period, daily use, and read type in addition to other billing information.

## 11.0 APPENDICES

- A. Existing and Proposed Incentives Ranges (MFR II.a.iii, MFR II.a.iv)
  - A-1. Residential Incentives
  - A-2. Commercial & Industrial Incentives
  - A-3. Multifamily & Other Incentives
- B. Customer Financing Options (MFR II.a.vi)
  - B-1. Program Financing Options
- C. Calculation Methods and Assumptions
  - C-1. Cost Assumptions
  - C-2. Measure Assumptions
  - C-3. Number of Units
  - C-4. Measure Eligibility
- D. Projected Participants (MFR II.a.ix, MFR I.c, MFR II.b.iii) and Energy Savings (MFR II.a.x)
  - D-1. Total Portfolio
  - D-2. Total Residential
  - D-3. Total Residential Core
  - D-4. Total Residential Additional Utility
  - D-5. Total Commercial & Industrial
  - D-6. Total Commercial & Industrial Core
  - D-7. Total Commercial & Industrial Additional Utility
  - D-8. Total Multifamily
  - D-9. Total Other
  - D-10. Efficient Products - Efficient Products
  - D-11. Existing Homes – Home Performance with ENERGY STAR
  - D-12. Home Energy Education & Management – Behavioral
  - D-13. Existing Homes - Quick Home Energy Check-up (QHEC)
  - D-14. Existing Homes - Moderate Income Weatherization
  - D-15. Direct Install - Direct Install

D-16. Energy Solutions for Business - Prescriptive / Custom

D-17. Energy Solutions for Business - Energy Management

D-18. Energy Solutions for Business - Engineered Solutions

D-19. Multifamily - Multifamily

D-20. Other - Home Optimization & Peak Demand Reduction

E. Program Budget by Cost Category (MFR II a.xi, MFR II.a.xii, MFR IV.f)

E-1. Total Portfolio

E-2. Total Residential

E-3. Total Residential Core

E-4. Total Residential Additional Utility

E-5. Total Commercial & Industrial

E-6. Total Commercial & Industrial Core

E-7. Total Commercial & Industrial Additional Utility

E-8. Total Multifamily

E-9. Total Other

E-10. Efficient Products - Efficient Products

E-11. Existing Homes – Home Performance with ENERGY STAR

E-12. Home Energy Education & Management – Behavioral

E-13. Existing Homes - Quick Home Energy Check-up (QHEC)

E-14. Existing Homes - Moderate Income Weatherization

E-15. Direct Install - Direct Install

E-16. Energy Solutions for Business - Prescriptive / Custom

E-17. Energy Solutions for Business - Energy Management

E-18. Energy Solutions for Business - Engineered Solutions

E-19. Multifamily - Multifamily

E-20. Other - Home Optimization & Peak Demand Reduction

F. Energy Efficiency as a Resource

F-1. EE Plan PJM MW Potential

## 12.0 LIST OF TABLES

Table 1: Program Portfolio Plan

Table 2: Program Summary Description

Table 3: 2021-2023 Planning Targets

Table 4: Summary of Portfolio Energy and Demand Savings (by sector, program type, year & ttl)

Table 5: Summary of Portfolio Costs (by sector, program type, year & ttl)\_

Table 6: Portfolio Summary of Cost-Effectiveness Results

Table 7: Core Program Names & Descriptions

Table 8: Core Program Portfolio

Table 9: Additional JCP&L Program Names & Descriptions

Table 10: Additional JCP&L Program Portfolio

Table 11: Quantitative Performance Indicators

Table 12: Future Quantitative Performance Indicators

Appendix A: Table A 1: Proposed Incentives Ranges

Residential Incentives				
Program	Subprogram	Measure <sup>1</sup>	Proposed Rebate Strategy <sup>2</sup>	NJCEP Existing Rebate Strategy
Efficient Products		LED Lamps	Up to \$5 std Up to \$7 special	Up to \$3 std Up to \$5 special
		LED Fixtures	Up to \$10	Up to \$8
		Occupancy Sensors	Up to \$7	-
		LED Holiday Lights	Up to \$5	-
		Ceiling Fans	Up to \$35	-
		LED Table/Desk Lamps	Up to \$15	-
		Clothes Washer	Up to \$100	Up to \$75
		Clothes Dryer	Up to \$300	Up to \$300
		Refrigerator	Up to \$100	Up to \$75
		Freezers	Up to \$75	-
		Dishwasher	Up to \$25	-
		Induction Cooktop Stove	Up to \$25	-
		Air Purifier / Cleaner	Up to \$50	Up to \$50
		Room A/C Unit	Up to \$30	Up to \$15
		Dehumidifier	Up to \$35	Up to \$25
		Heat Pump Water Heater	Up to \$1,000	Up to \$750
		Smart Thermostats	Up to \$125 <sup>3</sup>	-
		Pool Pump	Up to \$500	-
		Sound Bars	Up to \$20	-
		Water Cooler	Up to \$25	-
		Electric Vehicle Charger	Up to \$50	-
		Monitors	Up to \$25	-
		Computers	Up to \$25	-
		Imaging	Up to \$25	-
		Smart Strip Plug Outlets	Up to \$40	Up to \$40
		TVs	Up to \$50	-
		Smart Home	Up to \$10	-
		Refrigerator Recycling	Up to \$100	Up to \$50
		Freezer Recycling	Up to \$100	Up to \$50
		Room A/C Unit Recycling	Up to \$35	Up to \$25
		Dehumidifier Recycling	Up to \$35	Up to \$25
		EE Kits	Up to \$60	-
		Central Air Conditioning	Up to \$500	Up to \$500
		Air Source Heat Pump	Up to \$1,000	Up to \$1,000
		Geothermal Heat Pump	Up to \$1500	-
		Ductless Mini-Split Heat Pump	Up to \$400	-
		Ductless Mini Split A/C	Up to \$500	Up to \$500
		Furnace Fans (ECM)	Up to \$100	-
		PTAC - CEE Tier 2 - Multi Family	Up to \$50	-
		PTHP - CEE Tier 2- Multi Family	Up to \$125	-
Circulating Pump	Up to \$75	-		
Bathroom Fan	Up to \$20	-		
HVAC Maintenance	Up to \$100	-		
HVAC Quality Install	Up to \$450	-		
Existing Homes	Home Performance with Energy Star (HPWES)	Home Performance with Energy Star	- Customer must have a minimum savings percentage of 5% based on modeled reduction of consumption Rebate is \$2,000 + \$200 for each percentage point of savings above 5%, up to \$6,000 - Up to \$500 contractor production incentive	- Tiered incentive cash rebate of 50% of the costs of the measures used to calculate Total Energy Saving, up to \$4,000 - \$500 Contractor production incentive
	Quick Home Energy Checkup	Quick Home Energy Checkup (QHEC)	No up front cost to customer for walk through audit with no cost or low cost measures installed at time of audit	-
	Moderate Income Weatherization	Moderate Income Weatherization	No up front cost to customer for BPI-certified audit with up to \$6,000 of direct install and weatherization measures and up to \$1,500 on healthy and safety expenses	-

<sup>1</sup> The utilities reserve the right to include additional measures that are supported by established protocols or evaluation results in the industry to ensure we include a broad range of energy savings measures to maximize energy savings for customers and avoid market disruption (e.g. new NJCEP measures added in FY21)

<sup>2</sup> All rebates will be offered equal to or less than the "Up to" value

<sup>3</sup> The total rebate value for a smart thermostat will be up to \$125 total between both fuel utilities

Appendix A: Table A 2: Proposed Incentives Ranges

## Commercial and Industrial Incentives

Measure <sup>1</sup>	Paid	Rebate Strategy <sup>2</sup>	NJCEP Existing Rebate Strategy
<b>Lighting (Retrofit &amp; New Construction)</b>			
<b>LED TROFFER LUMINAIRES</b>			
New LED linear recessed troffer/panel for 2x2, 1x4 and 2x4 luminaires	Per Fixture	\$100	\$15 to \$25
<b>LED FLAT PANEL LUMINAIRES</b>			
New LED flat panel for 2x2, 1x4 and 2x4 luminaires	Per Panel	\$50	-
<b>LED LINEAR AMBIENT/STAIRWELL LUMINAIRES</b>			
New LED linear ambient luminaire	Per Foot	\$30	\$5 to \$7.50
New LED stairwell luminaire	Per Fixture	\$100	\$45
<b>LED INTERIOR DIRECTIONAL LUMINAIRES</b>			
New LED wall wash luminaire	Per Foot	\$30	\$55 per fixture
New LED track/mono-point luminaire	Per Head	\$40	\$30
<b>LED DISPLAY CASE LUMINAIRES</b>			
New LED display case luminaire, including refrigerator/freezer display	Per Fixture	\$50	\$15 to \$25
<b>LED HIGH/LOW BAY LUMINAIRES</b>			
New LED high/low bay luminaire	Per Fixture	\$600	\$50 to \$150
<b>LED EXTERIOR LUMINAIRES</b>			
New LED luminaire - wall packs, flood lights, canopy, landscape	Per Fixture	\$600	\$50 to \$100
<b>LED RETROFIT KITS</b>			
LED linear retrofit kit for 2x2, 1x4 and 2x4 fixtures	Per Fixture	\$45	\$15 to \$25
LED integrated retrofit kit for 2x2, 1x4 and 2x4 fixtures	Per Fixture	\$120	\$15 to \$25
LED integrated flat panel retrofit kit for 2x2, 1x4 and 2x4 fixtures	Per Panel Kit	\$40	\$15 to \$25
LED retrofit kit for linear ambient luminaire	Per Foot	\$15	\$15 to \$40
LED retrofit kit for high/low bay luminaires	Per Fixture	\$100	-
LED retrofit kit for exterior luminaire	Per Fixture	\$100	-
<b>LED ENERGY STAR FIXTURES</b>			
New LED ENERGY STAR LED fixture - recessed downlight, specialty, cove, under cabinet, vent fan, ceiling mount, etc.	Per Fixture	\$100	\$5 to \$15
<b>LED REPLACEMENT LAMPS</b>			
LED linear replacement lamp with new LED driver for wall pack, flood light, canopy, recessed fixture.	Per Lamp	\$80	\$50 to \$150
LED mogul-screw base replacement for HID lamps and new external driver	Per Lamp	\$100	\$50 to \$150
<b>LED SIGN LIGHTING</b>			
Exterior/Dusk-to-Dawn, Interior and 24 hour application	Per Watt Reduced	\$2	-
<b>OTHER LIGHTING</b>			
Exit Signs	Per Unit	\$23	-
Linear Fluorescent HE T8	Per Fixture	\$15	-
Street/Roadway and Area Lighting	Per Fixture	\$500	\$100 to \$150
<b>Lighting Controls</b>			
<b>NETWORKED LIGHTING CONTROLS</b>			
Networked lighting control system controlling efficient luminaires	Per Watt Controlled	\$0.60	-
Networked lighting control - fixture level control	Per Fixture	\$60	-
<b>DUAL DAYLIGHT/OCCUPANCY CONTROLS</b>			
Dual daylight & occupancy sensor (DOS)	Per Control	\$100	-
<b>DAYLIGHT CONTROLS</b>			
Daylight continuous dimming control	Per Control	\$100	\$45
<b>OCCUPANCY/VACANCY CONTROLS</b>			
Vacancy or Occupancy control	Per Control	\$100	\$20
<b>Unitary HVAC</b>			
<b>AIR CONDITIONERS &amp; HEAT PUMPS</b>			
Air Conditioning (AC) only - all sizes	Per Ton	\$250	\$72 to \$105
Heat Pumps - Air Source and Water Source - all sizes	Per Ton	\$250	\$40 to \$100
<b>WATER-COOLED &amp; EVAPORATIVE COOLING AIR CONDITIONERS</b>			
<5.4 to <11.25 tons	Per Ton	\$250	-
≥11.25 to ≥63.3 tons	Per Ton	\$250	-

Appendix A: Table A 2: Proposed Incentives Ranges

## Commercial and Industrial Incentives

Measure <sup>1</sup>	Paid	Rebate Strategy <sup>2</sup>	NJCEP Existing Rebate Strategy
<b>GEOHERMAL HEAT PUMPS</b>			
Geothermal Heat Pumps – (Ground Source/Ground Water Source) Tier I or Tier II	Per Ton	\$500	\$80 to \$100
<b>DUCTLESS, MINI SPLIT AIR CONDITIONERS OR HEAT PUMPS - ALL SIZES</b>			
all sizes	Per Ton	\$150	-
<b>PACKAGED TERMINAL AIR CONDITIONERS OR HEAT PUMPS</b>			
all sizes	Per Ton	\$125	\$40
<b>OTHER HVAC EQUIPMENT</b>			
HVAC - Smart Thermostat	Per Unit	\$125 <sup>3</sup>	-
Dual Enthalpy Economizer Controls	Per Unit	\$250	\$85 to \$170
ECM motors for HVAC Applications (fans/pumps) - refer to ECM motors table below			
<b>Chillers</b>			
Air-Cooled Chiller with Condenser	Per Ton	\$300	\$20, plus \$2.75 to \$3.50 performance
Water-Cooled Screw Chiller & Reciprocating Chillers	Per Ton	\$300	\$13 to \$30, plus \$2 to \$2.25 performance
Water-Cooled Centrifugal Chillers	Per Ton	\$300	\$8 to \$24, plus \$2 to \$2.25 performance
<b>Chillers with a VFD</b>			
Air-Cooled Chiller with Condenser	Per Ton	\$300	\$90 to \$92, plus \$4.00 performance
Water-Cooled Screw and Reciprocating Chillers	Per Ton	\$300	\$40 to \$44, plus \$2 to \$2.50 performance
Water-Cooled Centrifugal Chillers	Per Ton	\$300	\$20 to \$30, plus \$2 to \$2.75 performance
<b>Refrigeration</b>			
Anti-Fog Film	Per Sq. Ft.	\$15	-
Anti-Sweat Heat Control	Per Door	\$50	\$50
ECM Evaporator Fan Motor, <1 hp	Per Unit	\$150	\$40
Evaporator/Compressor Controller	Per Cooler	\$1,000	-
Evaporator Fan Controller on Existing Shaded-Pole Motor	Per Unit	\$100	\$75
Night Covers - Open Reach-In Coolers	Per Case	\$500	-
Reach-In Door Closer	Per Unit	\$75	-
Refrigeration Display Case Doors on Open Display Case	Per Case	\$600	-
Gaskets	Per Ln Ft.	\$4	-
Strip Curtains for Walk-In Coolers and Freezers	Per Sq. Ft.	\$5	-
Refrigerator Case Light Sensor	Per Case	\$30	-
<b>VFD - Variable Frequency Drives</b>			
<b>Horse Power</b>			
< 100 hp	Per HP	\$250	\$50 to \$100
≥100 to ≤200	Per HP	\$50	\$35
<b>ECM Motors</b>			
<1 HP	Per unit	\$150	-
1 HP	Per unit	\$150	-
2 HP	Per unit	\$175	-
3-5 HP	Per unit	\$250	-
6-10 HP	Per unit	\$500	-
11+ HP	Per unit	\$750	-
<b>Commercial Kitchen Equipment</b>			
<b>COMMERCIAL DISHWASHERS</b>	Per Unit	\$1,500	\$400 to \$1500
<b>COOKING EQUIPMENT</b>			
Fat Fryers	Per Unit	\$250	\$200
Griddles	Per Unit	\$300	\$300
Insulated Holding Cabinets	Per Unit	\$400	\$200 to \$300
<b>COMBINATION and CONVECTION OVENS</b>			
Convection Ovens	Per Unit	\$400	\$350
Combination Ovens	Per Unit	\$1,200	\$750
<b>STEAM COOKERS</b>	Per Pan	\$150	-
<b>OTHER FOOD SERVICE</b>			
Energy Star Beverage Vending Machine	Per Unit	\$75	-
Food Warmers/Rethermalizer Well/Coffee Pots	Per Unit	\$200	-
Pre-Rinse Spray Valve	Per Unit	\$75	-
<b>ICE MACHINES - CEE Tier I</b>	Per Unit	\$200	\$50 to \$250
<b>ICE MACHINES - CEE Tier II</b>	Per Unit	\$300	\$100 to \$500
<b>SOLID DOOR REACH-IN REFRIGERATORS</b>	Per Unit	\$225	\$50 to \$200
<b>SOLID DOOR REACH-IN FREEZERS</b>	Per Unit	\$500	\$100 to \$600
<b>GLASS DOOR REACH-IN REFRIGERATORS</b>	Per Unit	\$150	\$75 to \$150
<b>GLASS DOOR REACH-IN Freezers</b>	Per Unit	\$300	\$200 to \$1000

Appendix A: Table A 2: Proposed Incentives Ranges

Commercial and Industrial Incentives

Measure <sup>1</sup>	Paid	Rebate Strategy <sup>2</sup>	NJCEP Existing Rebate Strategy
<b>COMMERCIAL APPLIANCES</b>			
<b>CLOTHES WASHER</b>			
CEE Tier 1	Per Unit	\$100	-
CEE Tier 2	Per Unit	\$200	-
<b>WATER HEATING</b>			
Heat Pump Water Heater - C&I	Per Unit	\$1,500	-
<b>PLUG LOAD CONTROLS</b>			
Personal Occupancy Sensor	Per Unit	\$20	-
Hotel Room HVAC Controls	Per Unit	\$90	-
Hotel Room HVAC/Receptacle Control	Per Unit	\$20	-
Smart Power Strip	Per Unit	\$20	-
Electric Vehicle Charger	Per Unit	\$50	-
<b>Vending Machine Controls</b>			
Non-Refrigerated	Per Unit	\$75	-
Refrigerated	Per Unit	\$125	-
<b>OFFICE EQUIPMENT</b>			
Monitors - C&I	Per Unit	\$25	-
Computers - C&I	Per Unit	\$25	-
Uninterruptible Power Supply (UPS)	Per kVA	\$40	-
Imaging - C&I	Per Unit	\$25	-
Small Network PC Controller	Per PC Controlled	\$25	-
<b>AGRICULTURE</b>			
Auto Milker Takeoff	Per Unit	\$90	-
Dairy Scroll Compressor	Per Unit	\$1,000	-
HE Ventilation Fans	Per Unit	\$215	-
Heat Reclaimers	Per Unit	\$1,000	-
High Volume Low Speed Fans (Destratification)	Per Ft of Single Blade	\$25	-
Livestock Waterer	Per Unit	\$60	-
Dairy Vac Pump VSD Controls	Per Unit	\$1,000	-
Low Pressure Irrigation	Per acre	\$100	-
Dairy Refrigeration Tune-Up	Per Unit	\$200	-
Engine Block Heater Timer	Per Unit	\$25	-
<b>RECYCLING</b>			
Dehumidifier Recycling	Per Unit	Refer to Residential Incentive Table	-
Refrigerator Recycling	Per Unit	"	-
Freezer Recycling	Per Unit	"	-
Room A/C Unit Recycling	Per Unit	"	-
<b>RESIDENTIAL APPLIANCES in C&amp;I BUILDING - Non Commercial Duty</b>			
Clothes Washer Tier 2 - C&I	Per Unit	Refer to Residential Incentive Table	-
Clothes Washer Tier 3 - C&I	Per Unit	"	-
Clothes Dryer (w Moisture Snsr) - C&I	Per Unit	"	-
Refrigerators Tier 2 - C&I	Per Unit	"	-
Refrigerators Tier 3 - C&I	Per Unit	"	-
ES Freezer - C&I	Per Unit	"	-
ENERGY STAR Dehumidifier	Per Unit	"	-
ENERGY STAR Room Air Conditioner	Per Unit	"	-
ENERGY STAR Water Cooler	Per Unit	"	-
<b>CUSTOM PROJECTS</b>			
Compressed Air, Refrigeration, Data Center Equipment/Servers, HVAC/Chillers, HVAC Controls, Motors/VFD - Large, Building Improvements, Process Improvements, Agricultural Lighting/Process, Custom Lighting	per kWh	Up to \$0.35	\$0.16 per kWh
<b>ENERGY MANAGEMENT</b>			
RETROCOMMISSIONING (including Virtual and Meter Data Commissioning)	per kWh	Up to \$0.35	-
<b>HVAC TUNE UP</b>			
Single compressor units	Per Unit	\$175	-
Multiple compressor units	Per Unit	\$250	-
PTAC, PTHP, MiniSplits	Per Unit	\$75	-
<b>BUILDING TUNE UP</b>		Up to 70% of Project Cost w project cap of \$75,000	-
<b>BUILDING OPERATIONS TRAINING</b>		Up to 70% of the cost to attend qualified BOC training up to \$1000 per person.	-
<b>ENGINEERED SOLUTIONS</b>			
		Formula buy down based on payback	Formula buy down based on payback

<sup>1</sup> The utilities reserve the right to include additional measures that are supported by established protocols or evaluation results in the industry to ensure we include a broad range of energy savings measures to maximize energy savings for customers and avoid market disruption (e.g. new NJCEP measures added in FY21)

<sup>2</sup> All rebates will be offered equal to or less than the "Up to" value

<sup>3</sup> The total rebate value for a smart thermostat will be up to \$125 total between both fuel utilities

**Appendix A: Table A 3: Proposed Incentives Ranges**

<b>Multifamily Incentives</b>				
<b>Program</b>	<b>Subprogram</b>	<b>Measure<sup>1</sup></b>	<b>Rebate Strategy<sup>2</sup></b>	<b>NJCEP Existing Rebate Strategy</b>
Multifamily	-	Energy Assessment with installation of standard energy savings measures	Energy Assessment with the equipment and installation costs for the standard energy savings measures will be provided to eligible properties with "Up to 100%" of the cost provided by the program.	-
		Prescriptive Equipment replacement and custom retrofit projects	- Same value as incentives offered through the Residential and Commercial & Industrial programs applicable for the prescriptive equipment replacement and custom retrofits. - Includes enhanced incentives offered for properties that are located in qualifying target areas or for LMI qualified customers.	Same value as incentives offered through the Residential and Commercial & Industrial programs applicable for the prescriptive equipment replacement and custom retrofits.
		MF Home Performance with ENERGYSTAR	- Tiered incentive cash rebate not to exceed 50% of the costs of the measures used to calculate Total Energy Savings, up to \$1,500 per unit - Up to \$50 contractor production incentive per unit	- Tiered incentive cash rebate not to exceed 50% of the costs of the measures used to calculate Total Energy Savings, up to \$1,500 per unit - \$50 contractor production incentive per unit
		MF - Engineered Solutions	- No cost ASHRAE Level I, II, or III audit. - Program will buy-down the simple payback of the recommended energy-efficiency project cost for approved measures by up to six years, with the resulting payback not less than three years.	- No cost ASHRAE Level I, II, or III audit. - Program will buy-down the simple payback of the recommended energy-efficiency project cost for approved measures by up to six years, with the resulting payback not less than three years.
<b>Other Incentives</b>				
<b>Program</b>	<b>Subprogram</b>	<b>Measure<sup>1</sup></b>	<b>Rebate Strategy<sup>2</sup></b>	<b>NJCEP Existing Rebate Strategy</b>
Home Optimization & Peak Demand Reduction	Home Optimization & Peak Demand Reduction	Smart Tstat Optimization	\$100	-
		Smart Home Systems	\$100	-

<sup>1</sup> The utilities reserve the right to include additional measures that are supported by established protocols or evaluation results

<sup>2</sup> All rebates will be offered equal to or less than the "Up to" value

**Appendix B, Table B-1: Program Financing Overview**

Program	Eligibility	Terms	
Efficient Products	Efficient program eligible HVAC and water heating equipment	Maximum to be financed	Up to \$15,000
		Minimum to be financed	As low as \$2,500
		Interest Rate	Up to 0.99%
		Term	Up to 7 years
Existing Homes	Comprehensive HPwES projects recommended by the program audit	Maximum to be financed	Up to \$15,000
		Minimum to be financed	As low as \$2,500
		Interest Rate	Up to 0.99%
		Term	Up to 7 years <=\$10,000; Up to 10 years > \$10,000
Multifamily	Prescriptive/Custom equipment, retrofit and comprehensive projects, Engineered Solutions projects	Maximum to be financed	Up to \$3,000/unit with a maximum of up to \$250,000 per project
		Minimum to be financed	As low as \$2,500
		Interest Rate	Up to 0.99%
		Term	Up to 10 years, depending on eligibility
Direct Install	Balance of program eligible project cost	Maximum to be financed	Up to \$75,000
		Minimum to be financed	As low as \$2,500
		Interest Rate	Up to 0.99%
		Term	Up to 5 years
Energy Solutions for Business	Prescriptive/Custom equipment, retrofit and comprehensive projects, Engineered Solutions projects	Maximum to be financed	Up to \$250,000
		Minimum to be financed	As low as \$2,500
		Interest Rate	Up to 0.99%
		Term	Up to 5 years

**Appendix C, Table C-1: Cost Assumptions**

Program cost elements of this Plan include Utility Administration costs associated with utility labor and other costs, Outside Services costs for Third-Party Implementation Contractors, External Legal and Consultants, Utility and Third Party Implementation Contractor Marketing, Measurement and Verification (M&V) costs associated with EMV of the programs, Inspections and Quality Control, and Incentive costs including both rebates and financing. The following details the assumptions for each cost element used in the budget tables of the Plan:

Cost Elements	Description
<b>Utility Administration</b>	Utility Administration costs were based on the Company's estimated Portfolio administration costs. Includes costs incurred by the utility for employee labor and other costs to oversee and manage the portfolio and perform duties associated with activities such as compliance reporting or meetings to support the Plan (Ex. stakeholder meetings, working groups, collaborative meetings. etc.). Other costs, including costs associated with plan development, employee expenses, tracking system software costs, association fees and workforce development initiatives. Utility Administration costs are estimated based on actual costs or Company estimates, allocated to each subprogram based on the estimated direct charges to each subprogram, and summed to the program level.
<b>Marketing</b>	Marketing costs were informed by Company estimates of both Utility and Third-Party Implementation Contractor pricing for the plan, program or subprogram. Utility Marketing was based on estimated annual costs and allocated to each subprogram. Subprogram specific marketing costs were identified by two components, (1) fixed program/sub-program and (2) variable unit cost. Includes costs associated with developing and providing marketing/promotional strategies, advertising space and materials.
<b>Outside Services</b>	Outside Services costs were informed by Company estimates of External Legal and Consultant costs for the Plan and Third-Party Implementation Contractor pricing for the programs or subprograms. External Legal and Consultant costs were based on estimated total costs and allocated to each subprogram. Third-Party Implementation Contractor costs were identified by two components, (1) fixed program/sub-program, and (2) variable unit cost. Includes costs for the management and implementation of programs or subprograms, including staffing, websites(s), data collection and transfers, call centers, incentive processing, quality assurances and control processes, and other activities supporting successful program implementation.
<b>Inspections and Quality Control</b>	Inspections and quality control costs were informed by Company estimates of performing inspections on completed projects for each subprogram to ensure program quality and delivery conforms to program requirements. Inspections and Quality Control costs were identified by two components, (1) fixed program/sub-program, and (2) variable unit cost.
<b>Evaluation (EM&amp;V)</b>	EM&V costs were based on 4% of the Program or subprogram cost. Includes costs for evaluation, measurement and verification activities performed by the Company and the Company's independent third-party evaluator. These funds are spent on evaluation, surveys, M&V processes, data transfer responsibilities and participation in evaluation and working group meetings.
<b>Incentives</b>	Incentives include rebates paid to customers, the costs associated with the value of services or measures provided to customers, or upstream payments to trade allies (retail stores, distributors, contractors, etc.) where applicable. Incentives also includes the cost of interest rate buy downs, loan fees and defaults to provide customers access to low- to no-cost financing for certain program offerings.

Appendix C, Table C-2: Measure Assumptions																
Sector	Program Type	Program	Sub Program	Measure	Measure Life	Verified kWh	Verified kW	NTG	Incremental Cost	Modeled Rebate	O&M Benefit (\$/Yr)	Gas Savings (Therms/Yr)	Source of Savings	Source of Measure Life	Source of Inc Cost	
Residential	Core Utility	Efficient Products	Efficient Products	Freezer Recycling	4	679	0.10	1.00	\$0.00	\$70.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	N/A	
				Refrigerator Recycling	5	1,043	0.16	1.00	\$0.00	\$70.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	N/A	
				Room Air Conditioner Recycling	3	85	0.09	1.00	\$0.00	\$25.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	N/A	
				Dehumidifier Recycling	3	186	0.11	1.00	\$0.00	\$25.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	N/A	
				Clothes Washer	12	76	0.01	1.00	\$27.59	\$65.00	\$0.00	5.63	NUCEP Prccls	NUCEP Prccls	MA TRM	
				Refrigerators	14	77	0.01	1.00	\$33.60	\$78.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	MA TRM	
				Room Air Conditioner	9	47	0.02	1.00	\$21.00	\$30.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	MA TRM	
				Freezers	11	41	0.01	1.00	\$10.00	\$50.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	MA TRM	
				Clothes Dryer	12	186	0.02	1.00	\$77.00	\$100.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	MA TRM	
				Air Purifier / Cleaner	9	391	0.05	1.00	\$60.00	\$35.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	MA TRM	
				Dehumidifiers	12	83	0.02	1.00	\$60.00	\$33.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	MA TRM	
				Water Heater - Heat Pump	10	1,687	0.26	1.00	\$850.00	\$700.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	MA TRM	
				Pool Pump Variable Speed	10	894	0.34	1.00	\$560.00	\$400.00	\$0.00	-	MA TRM	MA TRM	MA TRM	
				Dishwashers	10	30	0.00	1.00	\$316.39	\$28.00	\$0.00	0.30	MA TRM	MA TRM	MA TRM	
				Water Coolers	10	361	0.02	1.00	\$49.00	\$25.00	\$0.00	-	PA TRM	PA TRM	MA TRM - Dehumd	
				Elec Vehicle Chargers - Res	10	31	0.00	1.00	\$500.00	\$25.00	\$0.00	-	Energy Star	Internet	MA TRM - Elctrcns	
				Monitors	4	24	0.00	1.00	\$2.00	\$25.00	\$0.00	-	MA TRM	MA TRM	MA TRM	
				Computers	4	71	0.08	1.00	\$18.50	\$25.00	\$0.00	-	MA TRM	MA TRM	MA TRM	
				Imaging	6	40	0.01	1.00	\$0.00	\$25.00	\$0.00	-	MA TRM	MA TRM	N/A	
				Smart Strip Plug Outlets	8	103	0.01	1.00	\$18.00	\$25.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	MA TRM	
				TVs	6	32	0.00	1.00	\$10.00	\$50.00	\$0.00	-	MA TRM	MA TRM	MA TRM	
				Sound Bars	10	44	0.00	1.00	\$0.00	\$25.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	N/A	
				Smart Home	15	50	0.00	1.00	\$11.00	\$10.00	\$0.00	(0.15)	MA TRM	MA TRM	MA TRM	
				LED Lamps (Specialty)	15	28	0.00	1.00	\$2.56	\$2.52	\$2.22	(0.44)	NUCEP Prccls	NUCEP Prccls	MA TRM	
				LED Lamps	15	46	0.00	1.00	\$1.63	\$1.50	\$2.34	(0.73)	NUCEP Prccls	NUCEP Prccls	MA TRM	
				LED Fixtures Internal	15	25	0.00	1.00	\$46.00	\$8.00	\$0.00	(0.39)	NUCEP Prccls	NUCEP Prccls	MA TRM	
				LED Fixtures External	15	6	0.00	1.00	\$46.00	\$8.00	\$0.00	(0.10)	NUCEP Prccls	NUCEP Prccls	MA TRM	
				Residential Occupancy Sensors	10	40	0.01	1.00	\$25.00	\$7.00	\$0.00	(0.84)	MA TRM	MA TRM	MA TRM	
				LED Holiday Lights	10	21	-	1.00	\$12.00	\$4.00	\$0.00	-	PA TRM	PA TRM	PA SWE DB	
				Ceiling Fans	15	59	0.01	1.00	\$46.00	\$35.00	\$0.00	-	MA TRM	MA TRM	MA TRM	
				LED Table/Desk Lamps	10	31	0.00	1.00	\$30.00	\$15.00	\$0.00	-	Energy Star	Internet	MA TRM - 66%	
				Air Source Heat Pumps	15	640	0.26	1.00	\$431.50	\$752.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	NJ Util	
				Central Air Conditioners	15	342	0.27	1.00	\$978.00	\$400.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	NJ Util	
				Ductless Mini-Split Heat Pump	17	408	0.06	1.00	\$978.00	\$300.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	NJ Util	
				Ductless Mini-Split A/C	17	154	0.07	1.00	\$978.00	\$400.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	NJ Util	
				PTAC	15	78	0.05	1.00	\$84.00	\$50.00	\$0.00	-	MA TRM	MA TRM	PA SWE DB	
				PTHP	15	199	0.06	1.00	\$84.00	\$125.00	\$0.00	-	MA TRM	MA TRM	PA SWE DB	
				Heat Pump - Water & Geothermal	25	1,557	0.77	1.00	\$1,414.00	\$1,500.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	NJ Util	
				Furnace Fans	15	274	0.02	1.00	\$203.00	\$100.00	\$0.00	-	MA TRM	NUCEP Prccls	MA TRM	
				Smart Thermostat	8	142	-	1.00	\$153.00	\$100.00	\$0.00	25.38	MA TRM	MA TRM	MA TRM	
				HVAC - Custom	5	289	0.10	1.00	\$173.38	\$100.00	\$0.00	-	NUCEP Prccls	50% of Avg	3.6/ kWh	
				Circulating Pump	15	220	-	1.00	\$98.00	\$30.00	\$0.00	-	MN TRM	MN TRM	MN TRM	
				HE Bathroom Fans	19	35	0.00	1.00	\$43.50	\$20.00	\$0.00	-	MA TRM	MA TRM	MA TRM	
				HVAC Quality Install	15	302	0.16	1.00	\$0.00	\$0.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	N/A	
				EE Kits	15	248	0.02	1.00	\$68.89	\$53.00	\$13.43	(2.67)	MA/PA TRMs	MA/PA TRMs	N/A	
Home Performance with Energy Star	15	1,375	0.44	1.00	\$1,323.00	\$4,000.00	\$16.00	276.41	NUCEP Prccls	MD Actuals	MD Actuals					
Quick Home Energy Check-up	15	475	0.06	1.00	\$333.00	\$400.00	\$24.00	20.56	MD Actuals	MD Actuals	N/A					
Moderate Income Weatherization	15	1,250	0.30	1.00	\$6,500.00	\$6,500.00	\$16.00	250.00	NJ Actuals	MA/PA TRMs	N/A					
Behavioral FY22	1	100	0.02	1.00	\$0.00	\$0.00	\$0.00	-	Vendor	Industry Stndrd	N/A					
Behavioral FY23	1	180	0.04	1.00	\$0.00	\$0.00	\$0.00	-	Vendor	Industry Stndrd	N/A					
On-Line Audit	1	124	0.02	1.00	\$0.00	\$0.00	\$0.00	-	EE Consultant	Industry Stndrd	N/A					
Commercial and Industrial	Core Utility	Energy Solutions for Business	Prescriptive / Custom	Direct Install	Audits w DI - CI - Tier 1	15	30,483	6.38	1.00	\$7,620.82	\$12,193.31	\$0.00	-	NJ Actuals	MA/PA TRMs	NJ Actuals
					Audits w DI - CI - Tier 2	15	50,805	10.64	1.00	\$12,701.37	\$20,322.19	\$0.00	-	NJ Actuals	MA/PA TRMs	NJ Actuals
					Auto Milker Takeoff	10	434	0.07	1.00	\$200.00	\$90.00	\$0.00	-	PA TRM	PA TRM	Internet
					Custom - Agricultural	15	9,842	1.12	1.00	\$2,165.21	\$1,000.00	\$0.00	-	Actuals	PA TRM	EE Consultant
					Dairy Refrigeration Tune-Up	1	261	0.03	1.00	\$194.00	\$50.00	\$0.00	-	Wis TRM	Wis TRM	Wis TRM
					Dairy Scroll Compressor	15	974	0.17	1.00	\$1,000.00	\$500.00	\$0.00	-	PA TRM	PA TRM	Emerson
					Dairy Vac Pump VSD Controls	15	19,394	4.15	1.00	\$3,942.50	\$1,000.00	\$0.00	-	PA TRM	PA TRM	PA SWE DB
					Engine Block Heater Timer	15	738	-	1.00	\$25.00	\$10.00	\$0.00	-	PA TRM	PA TRM	Wis TRM
					HE Ventilation Fans	15	974	0.19	1.00	\$250.00	\$100.00	\$0.00	-	PA TRM	PA TRM	Granger
					Heat Reclaimers	15	7,790	1.32	1.00	\$4,353.00	\$1,000.00	\$0.00	-	PA TRM	PA TRM	Internet
					High Volume Low Speed Fans	15	10,936	4.51	1.00	\$816.00	\$400.00	\$0.00	-	PA TRM	PA TRM	Wis TRM
					Livestock Waterer	10	1,250	-	1.00	\$566.73	\$100.00	\$0.00	-	PA TRM	PA TRM	PA SWE DB
					Low Pressure Irrigation	5	3,378	8.78	1.00	\$2,095.00	\$250.00	\$0.00	-	PA TRM	PA TRM	PA SWE DB
					Process Lighting - Agricultural	15	2,216	0.19	1.00	\$950.00	\$222.00	\$48.25	-	MA TRM	MA TRM	Internet
					Clothes Dryer - C&I	12	186	0.02	1.00	\$77.00	\$50.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	MA TRM
					Clothes Washer- C&I	12	75	0.01	1.00	\$37.99	\$30.00	\$0.00	7.98	NUCEP Prccls	NUCEP Prccls	MA TRM
					Dehumidifier - C&I	12	83	0.02	1.00	\$60.00	\$30.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	MA TRM
					Elec Vehicle Chargers - C&I	10	31	0.00	1.00	\$500.00	\$50.00	\$0.00	-	Energy Star	Internet	MA TRM - Elctrcns
					Freezer - C&I	11	41	0.01	1.00	\$10.00	\$50.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	MA TRM
					Pre-Rinse Sprayers	5	1,321	0.01	1.00	\$52.00	\$50.00	\$0.00	54.67	NUCEP Prccls	NUCEP Prccls	Internet
					Refrigerators - C&I	14	92	0.01	1.00	\$46.76	\$32.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	MA TRM
					Water Cooler C&I	10	361	0.02	1.00	\$49.00	\$25.00	\$0.00	-	PA TRM	PA TRM	MA TRM - Dehumd
					Water Heater - Heat Pump - C&I	10	1,649	0.30	1.00	\$1,795.50	\$750.00	\$0.00	-	MA TRM	MA TRM	MA TRM
					Dehumidifier Recycling - C&I	3	186	0.11	1.00	\$0.00	\$25.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	N/A
					Freezer Recycling - C&I	4	10	0.10	1.00	\$0.00	\$70.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	N/A
					Refrigerator Recycling - C&I	5	1,043	0.16	1.00	\$0.00	\$70.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	N/A
					Room Air Conditioner Recycling - C&I	3	85	0.09	1.00	\$0.00	\$25.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	N/A
					Advanced Pwr Strips- C&I	8	103	0.01	1.00	\$18.00	\$8.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	MA TRM
					Computers - C&I	4	71	0.08	1.00	\$18.50	\$5.00	\$0.00	-	MA TRM	MA TRM	MA TRM
					Imaging - C&I	6	89	0.01	1.00	\$0.00	\$0.00	\$0.00	-	PA TRM	PA TRM	MA TRM
					Monitors - C&I	4	24	0.00	1.00	\$2.00	\$5.00	\$0.00	-	MA TRM	MA TRM	MA TRM
					Small Network	5	315	0.04	1.00	\$30.00	\$15.00	\$0.00	-	PA TRM	PA TRM	PA SWE DB
					Uninterruptible Power Supply (UPS)	10	1,020	0.12	1.00	\$295.00	\$200.00	\$0.00	-	CMUA TRM	CMUA TRM	CMUA TRM
					Custom - Compressed Air	13	80,888	9.21	1.00	\$16,987.00	\$23,781.80	\$0.00	-	Actuals	MA/PA TRMs	EE Consultant
					Custom - HVAC/Chgs/Cntrls	15	4,134	2.57	1.00	\$1,368.50	\$1,218.56	\$0.00	1,182.50	NUCEP Prccls	NUCEP Prccls	EE Consultant
					Custom - Process Improvement	15	126,588	14.45	1.00	\$45,305.00	\$37,310.00	\$0.00	-	Actuals	MA/PA TRMs	EE Consultant
					Custom - Refrigeration	15	9,391	1.07	1.00	\$5,041.41	\$2,767.83	\$0.00	-	Actuals	MA/PA TRMs	EE Consultant
					Custom - Equipment/Servers	13	2,751	0.36	1.00	\$984.67	\$810.91	\$0.00	-	PA TRM	PA TRM	EE Consultant
					Custom - Motors - Three Phase	15	1,199	0.22	1.00	\$353.37	\$353.37	\$0.00	-	NUCEP Prccls	NUCEP Prccls	EE Consultant
					Custom - VFDs < 10HP	15	5,680	1.07	1.00	\$2,242.50	\$800.00	\$0.00	-	NUCEP Prccls	NUCEP Prccls	MA TRM

Appendix C, Table C-2: Measure Assumptions																		
Sector	Program Type	Program	Sub Program	Measure	Measure Life	Verified kWh	Verified kW	NTG	Incremental Cost	Modeled Rebate	O&M Benefit (\$/Yr)	Gas Savings (Therms/Yr)	Source of Savings	Source of Measure Life	Source of Inc Cost			
Commercial and Industrial	Core Utility	Energy Solutions for Business	Prescriptive / Custom	Custom - VFDs > 10 HP	15	85,204	16.08	1.00	\$8,532.00	\$3,750.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	MA TRM			
				Custom - Audit & Education	0	-	-	1.00	\$5,000.00	\$5,000.00	\$0.00	-	N/A	-	N/A	N/A	N/A	
				Custom - Bldg Improvements	15	41,460	4.73	1.00	\$3,491.36	\$12,219.78	1.00	\$0.00	-	Actuals	MA/PA TRMs	EE Consultant	EE Consultant	
				Anti Sweat Heater Controls	12	687	0.06	1.00	\$417.80	\$50.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				Beverage Vending Machine - Controls	5	1,410	0.16	1.00	\$180.00	\$100.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	PA SWE DB	Internet	
				Beverage Vending Machine - Energy Star	14	125	-	1.00	\$500.00	\$100.00	1.00	\$0.00	-	PA TRM	PA TRM	MA TRM	Internet	
				Coffee Brewers	15	1,331	0.15	1.00	\$200.00	\$100.00	1.00	\$0.00	-	Energy Star	MA/PA TRMs	Internet	Internet	
				Combination Oven	12	11,462	2.70	1.00	\$2,512.00	\$500.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	PA SWE DB	PA SWE DB	
				Convection Oven	12	1,880	0.52	1.00	\$374.00	\$250.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	PA SWE DB	MA TRM	
				Dishwasher - C&I	15	2,928	0.33	1.00	\$881.67	\$200.00	1.00	\$0.00	280.83	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				ECM Evap Fan Motor	15	1,538	0.18	1.00	\$61.00	\$30.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				Evap Fan Controls	16	1,396	0.07	1.00	\$532.00	\$100.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				Refrigerators - Reach In	12	1,577	0.18	1.00	\$321.95	\$200.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	PA SWE DB	PA SWE DB	
				Freezers - Reach In	12	6,307	0.72	1.00	\$211.27	\$200.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	PA SWE DB	MA TRM	
				Fryers	12	2,691	0.63	1.00	\$210.00	\$150.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	MA TRM	Internet	
				Griddles	12	2,656	0.63	1.00	\$500.00	\$250.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	Internet	Internet	
				Hot Food Holding Cabinet	12	2,927	0.69	1.00	\$895.00	\$250.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	PA SWE DB	PA SWE DB	
				Ice Machines	10	2,355	0.36	1.00	\$345.00	\$125.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	MD IC DB	MD IC DB	
				Induction Warmer/Rethermalizer Well	15	400	0.05	1.00	\$500.00	\$200.00	1.00	\$0.00	-	Mfg Data	MA/PA TRMs	MA TRM	MA TRM	
				Refrigerated Case Cover	5	292	-	1.00	\$42.00	\$30.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	MD IC DB	MD IC DB	
				Steam Cookers	12	10,741	2.53	1.00	\$460.00	\$450.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				Strip Curtains	4	177	0.02	1.00	\$3.80	\$3.00	1.00	\$0.00	-	PA TRM	PA TRM	PA SWE DB	PA SWE DB	
				Air Conditioning (>5.4 <20 Ton) - C&I	15	481	0.26	1.00	\$1,357.90	\$500.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	PA SWE DB	PA SWE DB	
				Air Conditioning (<=5.4 Ton) - C&I	15	979	0.55	1.00	\$1,013.98	\$1,100.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	PA SWE DB	PA SWE DB	
				Air Conditioning (>=20 Ton) - C&I	15	1,723	0.96	1.00	\$921.50	\$1,900.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	PA SWE DB	PA SWE DB	
				Circulating Pump - C&I	15	1,030	-	1.00	\$98.00	\$75.00	1.00	\$0.00	-	PA TRM	PA TRM	MA TRM	MA TRM	
				Ductless Mini-Split Heat Pump - C&I	18	326	0.03	1.00	\$624.00	\$300.00	1.00	\$0.00	-	MA TRM	MA TRM	MA TRM	MA TRM	
				Ductless Mini-Split A/C - C&I	17	154	0.07	1.00	\$978.00	\$400.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	NJ Util	NJ Util	
				Furnace Fans - C&I	18	223	0.03	1.00	\$287.00	\$150.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	Internet	Internet	
				Heat Pump (<=5.4 Ton) - C&I	15	1,134	0.26	1.00	\$460.00	\$375.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				Heat Pumps - Wtr & GeoT - C&I	15	970	0.32	1.00	\$10,916.50	\$1,750.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				HVAC - Custom C&I	5	52,792	6.03	1.00	\$32,731.06	\$12,142.17	1.00	\$0.00	-	Actuals	MA/PA TRMs	EE Consultant	EE Consultant	
				HVAC - Maintenance - C&I	5	414	0.23	1.00	\$175.00	\$175.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				PTAC - C&I	15	94	0.05	1.00	\$156.00	\$60.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				PTHP - C&I	15	199	0.05	1.00	\$255.00	\$60.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	PA SWE DB	PA SWE DB	
				Room Air Conditioner - C&I	12	129	0.04	1.00	\$20.00	\$15.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				Smart Thermostat - C&I	8	205	-	1.00	\$204.00	\$75.00	1.00	\$0.00	8.06	MA TRM	MA TRM	MA TRM	MA TRM	
				Exit Signs	5	86	0.01	1.00	\$32.50	\$10.00	1.00	\$26.92	(0.54)	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				LED Channel Signage	15	193	0.04	1.00	\$35.00	\$26.66	1.00	\$0.00	(1.22)	NJCEP Prtcls	NJCEP Prtcls	PA SWE DB	PA SWE DB	
				LED Fixture External	15	421	0.01	1.00	\$290.00	\$150.00	1.00	\$41.42	-	NJCEP Prtcls	NJCEP Prtcls	MD IC DB	MD IC DB	
				LED Fixture Internal	15	243	0.05	1.00	\$2.40	\$2.00	1.00	\$5.74	(1.53)	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				LED Lamps - C&I	15	130	0.03	1.00	\$2.03	\$1.00	1.00	\$11.44	(0.82)	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				LED Linear	15	141	0.03	1.00	\$118.00	\$40.00	1.00	\$8.32	(0.89)	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				LED Reach in Refrigerator / Freezer Lights	16	69	0.01	1.00	\$23.00	\$12.50	1.00	\$2.17	-	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				Lighting - Custom	15	85,288	9.74	1.00	\$18,763.46	\$23,880.77	1.00	\$0.00	-	Actuals	MA/PA TRMs	EE Consultant	EE Consultant	
				Lighting - Other	15	85,288	9.74	1.00	\$18,763.46	\$23,880.77	1.00	\$0.00	-	Actuals	MA/PA TRMs	EE Consultant	EE Consultant	
				Lighting Controls (Daylight & Occupancy)	8	1,043	0.28	1.00	\$100.00	\$34.00	1.00	\$0.00	(1.14)	NJCEP Prtcls	NJCEP Prtcls	PA SWE DB	PA SWE DB	
				Lighting Controls (Network)	10	115	0.03	1.00	\$152.10	\$36.00	1.00	\$0.00	(0.00)	MA TRM	MA TRM	MA TRM	MA TRM	
				Linear Fluorescent	15	87	0.02	1.00	\$6.00	\$3.00	1.00	\$0.00	(0.55)	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				Linear Lamps - Mnt-C&I	15	30	0.01	1.00	\$22.67	\$5.00	1.00	\$0.00	(0.19)	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				High/Low Bays Lamps - Mnt-C&I	15	1,165	0.24	1.00	\$134.00	\$80.00	1.00	\$23.27	(73.65)	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				LED Fixture - Mnt-C&I	15	242	0.05	1.00	\$92.00	\$12.00	1.00	\$10.86	(1.53)	NJCEP Prtcls	NJCEP Prtcls	MA TRM	MA TRM	
				Street & Area Lighting	15	573	0.02	1.00	\$75.00	\$150.00	1.00	\$30.00	-	MA TRM	MA TRM	MA TRM	MA TRM	
				Virtual/Meter Data Commissioning	15	30,965	3.53	1.00	\$9,778.40	\$3,259.47	1.00	\$0.00	-	ComEd	MA/PA TRMs	ComEd	ComEd	
				Retrocommissioning	8	378,779	86.48	1.00	\$0.00	\$71,768.57	1.00	\$0.00	-	BGE Actuals	EE Consultant	N/A	N/A	
				Building Operation Training	5	51,754	6.94	1.00	\$2,500.00	\$1,000.00	1.00	\$0.00	-	MD Evaluation	MD Evaluation	Expenses	Expenses	
				Building Tune Up Large	15	130,421	41.39	1.00	\$21,965.71	\$43,931.43	1.00	\$0.00	-	BGE Actuals	MA/PA TRMs	BGE Actuals	BGE Actuals	
				Building Tune Up Small	15	65,211	20.70	1.00	\$10,982.86	\$21,965.71	1.00	\$0.00	-	BGE Actuals	MA/PA TRMs	BGE Actuals	BGE Actuals	
				Unitary HVAC Maintenance	5	394	0.21	1.00	\$175.00	\$175.00	1.00	\$0.00	-	NJCEP Prtcls	NJCEP Prtcls	N/A	N/A	
				Strategic Energy Management	0	-	-	1.00	\$0.00	\$0.00	1.00	\$0.00	-	N/A	N/A	N/A	N/A	
				ESB - Engineered Solutions - 1	15	820,000	67.26	1.00	\$180,400.00	\$615,000.00	1.00	\$0.00	62,453.68	NJ Util	MA/PA TRMs	EE Consultant	EE Consultant	
				ESB - Engineered Solutions - 2	15	275,000	25.76	1.00	\$60,500.00	\$206,250.00	1.00	\$0.00	20,944.83	NJ Util	MA/PA TRMs	EE Consultant	EE Consultant	
				MF - Tenant - DI	15	475	0.06	1.00	\$300.00	\$300.00	1.00	\$24.00	15.17	MD Actuals	MD Actuals	N/A	N/A	
				MF - Tenant - Prescriptive	12	110	0.01	1.00	\$30.00	\$60.00	1.00	\$0.00	0.70	MA TRM	MA TRM	MA TRM	MA TRM	
				MF - Tenant - Custom	15	139	0.05	1.00	\$84.00	\$90.00	1.00	\$0.00	-	MA TRM	MA TRM	PA SWE DB	PA SWE DB	
				MF - Common - DI	12	350	0.02	1.00	\$195.00	\$822.00	1.00	\$20.00	-	MA TRM	MA TRM	MA TRM	MA TRM	
				MF - Common - Prescriptive	12	350	0.02	1.00	\$117.00	\$92.00	1.00	\$20.00	-	MA TRM	MA TRM	MA TRM	MA TRM	
				MF - Common - Custom	15	43,642	4.98	1.00	\$3,491.36	\$12,000.00	1.00	\$0.00	-	Actuals	MA/PA TRMs	EE Consultant	EE Consultant	
				MF - Engineered Solutions	15	75,125	8.58	1.00	\$18,043.01	\$37,550.00	1.00	\$0.00	5,700.00	Actuals	MA/PA TRMs	EE Consultant	EE Consultant	
				Smart 1st/2nd Optimization	1	249	1.20	1.00	\$100.00	\$100.00	1.00	\$0.00	51.75	MA TRM	DR	NJ Util	NJ Util	
				Smart Home Systems	8	142	-	1.00	\$100.00	\$50.00	1.00	\$0.00	-	25.38	MA TRM	MA TRM	NJ Util	NJ Util

Appendix C, Table C-3: Number of Units

Sector	Program Type	Program	Sub Program	Measure Name	Participants/Units		
					2021	2022	2023
Residential	Core Utility	Efficient Products	Efficient Products	Freezer Recycling	625	725	850
				Refrigerator Recycling	3,000	3,400	4,000
				Room Air Conditioner Recycling	175	250	340
				Dehumidifier Recycling	125	175	225
				Clothes Washer	200	825	950
				Refrigerators	90	361	456
				Room Air Conditioner	5	9	12
				Freezers	30	120	150
				Clothes Dryer	80	325	500
				Air Purifier / Cleaner	7	9	12
				Dehumidifiers	80	120	150
				Water Heater - Heat Pump	65	95	120
				Pool Pump Variable Speed	2	10	15
				Dishwashers	7	25	32
				Water Coolers	4	10	15
				Elec Vehicle Chargers - Res	3	9	12
				Monitors	70	270	350
				Computers	45	75	100
				Imaging	5	20	27
				Smart Strip Plug Outlets	20	28	36
				TVs	200	790	975
				Sound Bars	15	60	75
				Smart Home	1	1	1
				LED Lamps (Speciality)	300,000	600,000	775,000
				LED Lamps	750,000	357,500	176,750
				LED Fixtures Internal	25,000	35,000	40,000
				LED Fixtures External	1,900	7,500	8,250
				Residential Occupancy Sensors	140	200	200
				LED Holiday Lights	1,000	1,500	2,000
				Ceiling Fans	250	1,000	1,300
				LED Table/Desk Lamps	200	750	1,000
				Air Source Heat Pumps	295	1,180	1,460
				Central Air Conditioners	350	1,415	1,725
				Ductless Mini-Split Heat Pump	40	162	210
				Ductless Mini-Split A/C	12	46	55
				PTAC	10	30	38
				PTHP	15	47	50
				Heat Pump - Water & Geothermal	15	45	56
				Furnace Fans	145	310	410
				Smart Thermostat	7,500	15,000	15,000
HVAC - Custom	1	1	1				
Circulating Pump	10	15	20				
HE Bathroom Fans	45	185	255				
HVAC Quality Install	6	9	12				
EE Kits	70,000	100,000	100,000				

Appendix C, Table C-3: Number of Units

Sector	Program Type	Program	Sub Program	Measure Name	Participants/Units		
					2021	2022	2023
Residential	Core Utility	Existing Homes	Home Performance with Energy Star	Home Performance with Energy Star	500	1,000	1,260
			Quick Home Energy Checkup	Quick Home Energy Checkup (QHEC)	1,500	2,500	3,960
			Moderate Income Weatherization	MI Weatherization	300	500	600
	Additional Utility	Home Energy Education and Management	Behavioral	Behavioral FY22	-	139,200	-
				Behavioral FY23	-	-	139,200
				On-Line Audit	1,650	2,400	3,100
Commercial and Industrial	Core Utility	Direct Install	Direct Install	Audits w DI - CI - Tier 1	100	475	500
				Audits w DI - CI - Tier 2	20	75	100
				Auto Milker Takeoff	1	2	5
		Energy Solutions for Business	Prescriptive / Custom	Custom - Agricultural	1	1	1
				Dairy Refrigeration Tune-Up	1	1	6
				Dairy Scroll Compressor	1	2	8
				Dairy Vac Pump VSD Controls	1	2	6
				Engine Block Heater Timer	2	5	10
				HE Ventilation Fans	6	12	30
				Heat Reclaimers	1	1	3
				High Volume Low Speed Fans	1	3	6
				Livestock Waterer	1	2	6
				Low Pressure Irrigation	1	1	3
				Process Lighting - Agricultural	19	38	38
				Clothes Dryer - C&I	8	12	15
				Clothes Washer- C&I	25	50	65
				Dehumidifier - C&I	25	40	50
				Elec Vehicle Chargers - C&I	14	21	30
				Freezer - C&I	25	40	50
				Pre-Rinse Sprayers	25	40	50
				Refrigerators - C&I	25	40	50
				Water Cooler C&I	25	40	50
				Water Heater - Heat Pump - C&I	7	9	12
				Dehumidifier Recycling - C&I	4	6	8
				Freezer Recycling - C&I	140	204	258
				Refrigerator Recycling - C&I	559	817	1,031
				Room Air Conditioner Recycling - C&I	48	70	89
				Advanced Pwr Strips- C&I	67	98	124
				Computers - C&I	96	141	178
				Imaging - C&I	174	254	321
				Monitors - C&I	257	376	475
				Small Network	257	376	475
				Uninterruptible Power Supply (UPS)	35	51	64
				Custom - Compressed Air	2	5	7
				Custom - HVAC/Chlrs/Cntrls	10	20	25
				Custom - Process Improvement	7	15	20
				Custom - Refrigeration	7	15	20
				Custom - Equipment/Servers	22	45	55

Appendix C, Table C-3: Number of Units

Sector	Program Type	Program	Sub Program	Measure Name	Participants/Units		
					2021	2022	2023
Commercial and Industrial	Core Utility	Energy Solutions for Business	Prescriptive / Custom	Custom - Motors - Three Phase	10	20	26
				Custom - VFDs < 10HP	22	45	60
				Custom - VFDs > 10 HP	5	10	15
				Custom - Audit & Education	1	1	1
				Custom - Bldg Improvements	1	1	6
				Anti Sweat Heater Controls	19	28	36
				Beverage Vending Machine - Controls	6	9	12
				Beverage Vending Machine - Energy Star	23	33	42
				Coffee Brewers	2	3	4
				Combination Oven	3	5	6
				Convection Oven	3	4	5
				Dishwasher - C&I	1	1	1
				ECM Evap Fan Motor	7	10	13
				Evap Fan Controls	7	10	13
				Refrigerators - Reach In	11	16	60
				Freezers - Reach In	3	5	20
				Fryers	5	8	10
				Griddles	4	5	7
				Hot Food Holding Cabinet	5	8	10
				Ice Machines	6	9	12
				Induction Warmer/Rethermalizer Well	7	10	12
				Refrigerated Case Cover	152	223	281
				Steam Cookers	4	6	8
				Strip Curtains	212	310	392
				Air Conditioning (>5.4 < 20 Ton) - C&I	22	44	56
				Air Conditioning (<=5.4 Ton) - C&I	5	11	14
				Air Conditioning (>=20 Ton) - C&I	1	1	2
				Circulating Pump - C&I	37	78	98
				Ductless Mini-Split Heat Pump - C&I	9	19	24
				Ductless Mini-Split A/C - C&I	1	1	3
				Furnace Fans - C&I	2	4	6
				Heat Pump (<=5.4 Ton) - C&I	1	2	2
				Heat Pumps - Wtr & GeoT - C&I	1	2	2
				HVAC - Custom C&I	1	1	1
				HVAC - Maintenance - C&I	2	4	5
				PTAC - C&I	10	21	26
				PTHP - C&I	2	4	5
				Room Air Conditioner - C&I	6	12	15
				Smart Thermostat - C&I	275	400	515
				Exit Signs	500	750	1,000
				LED Channel Signage	1,750	2,750	3,500
				LED Fixture External	3,750	5,750	7,250
				LED Fixture Internal	600	900	1,100
				LED Lamps - C&I	3,250	5,500	6,750
				LED Linear	150,000	200,000	225,000
LED Reach in Refrigerator / Freezer Lights	1,200	1,750	2,200				
Lighting - Custom	1	2	2				
Lighting - Other	1	2	2				

Appendix C, Table C-3: Number of Units

Sector	Program Type	Program	Sub Program	Measure Name	Participants/Units		
					2021	2022	2023
Commercial and Industrial	Core Utility	Energy Solutions for Business	Prescriptive / Custom	Lighting Controls (Daylight & Occupancy)	6,750	10,000	12,500
				Lighting Controls (Network)	150	225	275
				Linear Fluorescent	2,500	3,500	4,000
				Linear Lamps - Mnt-C&I	45,000	60,000	60,000
				High/Low Bays Lamps - Mnt-C&I	2,000	2,375	2,375
				LED Fixture - Mnt-C&I	3,000	3,750	3,750
				Street & Area Lighting	20,000	20,000	20,000
	Additional Utility		Energy Management	Virtual/Meter Data Commissioning	-	3	16
				Retrocommissioning	-	-	8
				Building Operation Training	-	2	6
				Building Tune Up Large	-	2	9
				Building Tune Up Small	-	10	35
				Unitary HVAC Maintenance	-	50	175
				Strategic Energy Management	1	1	1
				Engineered Solutions	ESB - Engineered Solutions - 1	-	2
ESB - Engineered Solutions - 2	1	4	7				
Multifamily	Core Utility	Multifamily	Multifamily	MF - Tenant - DI	1,500	1,750	2,000
				MF - Tenant - Prescriptive	1	1	1
				MF - Tenant - Custom	1	1	1
				MF - Common - DI	1	1	1
				MF - Common - Prescriptive	1	1	1
				MF - Common - Custom	1	1	1
				MF - Engineered Solutions	3	3	3
Other	Additional Utility	Home Optimization & Peak Demand Reduction	Home Optimization & Peak Demand Reduction	Smart Tstat Optimization	-	-	11,000
				Smart Home Systems	-	-	1

Appendix C, Table C-4: Measure Eligibility					
Sector	Program Type	Program	Sub Program	Measure Name	Energy Efficiency Eligibility / Description
Residential	Core Utility	Efficient Products	Efficient Products	Freezer Recycling	Removal of an existing inefficient unit generally older than 10 years from service prior to end of useful life via recycling.
				Refrigerator Recycling	Removal of an existing inefficient unit generally older than 10 years from service prior to end of useful life via recycling.
				Room Air Conditioner Recycling	This measure involves the removal of an existing inefficient room air conditioner from service prior to end of useful life via recycling.
				Dehumidifier Recycling	This measure involves the removal of an existing inefficient dehumidifier from service prior to end of useful life via recycling.
				Clothes Washer	Purchase and installation of a clothes washer meeting or exceeding ENERGY STAR specifications.
				Refrigerators	Purchase and installation of a new refrigerator meeting or exceeding ENERGY STAR specifications.
				Room Air Conditioner	Purchase and installation of a new room air conditioner meeting or exceeding either ENERGY STAR specifications or CEE Advanced Tier.
				Freezers	Purchase and installation of a freezer meeting or exceeding ENERGY STAR specifications.
				Clothes Dryer	Purchase and installation of a clothes dryer meeting or exceeding ENERGY STAR specifications with moisture sensor or a heat pump type clothes dryer.
				Air Purifier / Cleaner	Purchase and installation of a new air purifier meeting or exceeding ENERGY STAR specifications.
				Dehumidifiers	Purchase and installation of a new dehumidifier meeting or exceeding ENERGY STAR specifications.
				Water Heater - Heat Pump	Purchase and installation of a new Heat Pump water heater or Solar water heater meeting or exceeding ENERGY STAR specifications in place of a standard electric water heater.
				Pool Pump Variable Speed	Purchase and installation of a variable speed swimming pool pump motor to replace a single speed motor.
				Dishwashers	Purchase and installation of a new dishwasher meeting or exceeding ENERGY STAR specifications.
				Water Coolers	Purchase and installation of a new water cooler meeting or exceeding ENERGY STAR specifications.
				Elec Vehicle Chargers - Res	Purchase and installation of a new EV Charger Cord meeting or exceeding ENERGY STAR specifications.
				Monitors	Purchase and installation of a new monitor meeting or exceeding ENERGY STAR specifications.
				Computers	Purchase and installation of a new computer meeting or exceeding ENERGY STAR specifications.
				Imaging	Purchase and installation of a new imaging equipment meeting or exceeding ENERGY STAR specifications.
				Smart Strip Plug Outlets	Purchase and use of a Current-Sensing Master/Controlled Advanced Power Strip (APS) in place of a standard power strip.
				TVs	Purchase and installation of a new television meeting or exceeding ENERGY STAR specifications or 2020 Most Efficient, as applicable.
				Sound Bars	Purchase and installation of a new sound bar meeting or exceeding ENERGY STAR specifications.
				Smart Home	Purchase and installation of connected devices that allows for remote user control.
				LED Lamps (Speciality)	Purchase and installation of ENERGY STAR or DLC rated LED lamps, exempt from EISA.
				LED Lamps	Purchase and installation of an ENERGY STAR LED lamps that are non-exempt from EISA.
				LED Fixtures Internal	Purchase and installation of LED lighting fixture meeting or exceeding ENERGY STAR specifications.
				LED Fixtures External	Purchase and installation of LED lighting fixture meeting or exceeding ENERGY STAR specifications.
				Residential Occupancy Sensors	Purchase and installation of a wall, fixture, or remote-mounted occupancy sensor for interior or common area applications.
				LED Holiday Lights	Purchase and installation of LED holiday lights replacing traditional incandescent holiday lights.
				Ceiling Fans	Purchase and installation of a ceiling fan meeting or exceeding ENERGY STAR specifications with integral LED lamps.
				LED Table/Desk Lamps	Purchase of an ENERGY STAR rated lighting products, including desk, table or floor lamps.
				Air Source Heat Pumps	Purchase and installation of Single Package or Split System central unit w/ SEER ratings > or = 16, 13 EER, HSPF > or =9. Includes variable flow (VRF) systems.
				Central Air Conditioners	Replacement of ducted split central units prior to end of life w/ ENERGY STAR qualifying units w/ SEER ratings > or = 16 or 13 EER. Includes variable refrigerant flow (VRF) systems.
				Ductless Mini-Split Heat Pump	Purchase and installation of a new or replacement ENERGY STAR qualifying unit w/ SEER >= 20, EER >=12.5 or HSPF >= 10.
				Ductless Mini-Split A/C	Purchase and installation of a new or replacement ENERGY STAR qualifying unit w/ SEER >= 20, EER >=12.5.
				PTAC	Purchase and installation of packaged terminal unit exceeding ASHRAE Std. 90.1 – 2013 by 7.5%, as applicable. Includes variable flow (VRF) systems.
PTHP	Purchase and installation of packaged terminal unit exceeding ASHRAE Std. 90.1 – 2013 by 7.5%, as applicable. Includes variable flow (VRF) systems.				
Heat Pump - Water & Geothermal	Purchase and installation of a Ground Source Heat Pump meeting or exceeding ENERGY STAR specifications.				

Appendix C, Table C-4: Measure Eligibility						
Sector	Program Type	Program	Sub Program	Measure Name	Energy Efficiency Eligibility / Description	
Residential	Core Utility	Efficient Products	Efficient Products	Furnace Fans	Purchase and installation of a high efficiency brushless permanent magnet fan motor (BPM or ECM) to replace a permanent split capacitor (PSC) motor.	
				Smart Thermostat	The purchase and installation of a smart thermostat that has earned ENERGY STAR certification.	
				HVAC - Custom	Replacement or retrofit of existing HVAC equipment or process changes or enhancements that results in electric energy savings.	
				Circulating Pump	Replacement of existing single speed circulation pump or new circulation pump with variable speed motor and/or controls to automatically change pump speed to produce flow rates that match system heating requirements.	
				HE Bathroom Fans	Purchase and installation of a new high efficiency bathroom fan that meets or exceeds ENERGY STAR specifications.	
				HVAC Quality Install	Implementation of proper sizing techniques which requires Manual J calculations, following of ENERGY STAR HVAC Quality Installation procedures, or similar calculations.	
				EE Kits	Energy efficiency kits to encourage customers to adopt energy efficient behaviors to conserve and save energy in their homes.	
	Additional Utility	Existing Homes	Home Performance with Energy Star	Home Performance with Energy Star	In-Home Audit w/ direct install measures. Also provides incentive for comprehensive measures including but not limited to: Windows, Duct Sealing, and Wall & Attic Insulation, Smart Thermostats etc.	
			Quick Home Energy Check-up	Quick Home Energy Checkup (QHEC)	In-Home Audit w/ direct install measures. Eligible to single family home customers.	
			Moderate Income Weatherization	MI Weatherization	In-Home Audit w/ direct install measures. Also provides incentive for comprehensive measures including but not limited to: Windows, Duct Sealing, and Wall & Attic Insulation, etc.	
		Home Energy Education and Management	Behavioral	Behavioral FY22	Behavioral FY23	Reports containing energy usage comparisons, recommendations and education emphasizing key points, general conservation tips and information on tools and resources supporting implementation of measures and efficiencies behaviors that reduces consumption of energy and demand.
				Behavioral FY23	Behavioral FY23	Reports containing energy usage comparisons, recommendations and education emphasizing key points, general conservation tips and information on tools and resources supporting implementation of measures and efficiencies behaviors that reduces consumption of energy and demand.
				On-Line Audit	On-Line Audit	Online Audit process including recommendations and education emphasizing key points, general conservation tips and information on tools and resources supporting implementation of measures and efficiency behaviors that reduces consumption of energy and demand.
Commercial and Industrial	Core Utility	Direct Install	Direct Install	Audits w DI - CI - Tier 1	Provides an audit with the installation of standard energy efficiency measures and a expedited simple solution for small business sector customers.	
				Audits w DI - CI - Tier 2	Provides an audit with the installation of standard energy efficiency measures and a expedited simple solution for small business sector customers.	
		Energy Solutions for Business	Prescriptive / Custom	Auto Milker Takeoff	Purchase and installation of a new automatic milker takeoffs to replace pre-existing manual takeoffs on dairy milking vacuum pump systems.	
				Custom - Agricultural	Replacement or retrofit of existing agricultural growing/harvesting type equipment or process changes or enhancements that results in electric energy savings. Grow house/indoor agriculture process also qualify under this measure.	
				Dairy Refrigeration Tune-Up	Tune up of refrigeration systems for agriculture applications.	
				Dairy Scroll Compressor	Purchase and installation of a new or replacement of existing reciprocating compressor with a scroll compressor.	
				Dairy Vac Pump VSD Controls	Purchase and installation of VFD and controls on dairy vacuum pumps, or the purchase of dairy vacuum pumps with variable speed capability. Pre-existing pumps with VSD's are not eligible for this measure.	
				Engine Block Heater Timer	Purchase and installation of an engine block heater timer.	
				HE Ventilation Fans	Purchase and installation of a new or replacement of standard efficiency ventilation fans with high efficiency ventilation fans.	
				Heat Reclaimers	Purchase and installation of heat reclaim units on dairy parlor milk refrigeration systems. Addition of heat reclaimer on new milk refrigeration system also qualifies under this measure.	
				High Volume Low Speed Fans	Purchase and installation of new or replacement of conventional circulating fans with High Volume Low Speed (HVLS) fans. HVLS fans are a minimum of 16 feet long in diameter and move more cubic feet of air per watt than conventional circulating fans.	
				Livestock Waterer	Purchase and installation of an energy efficient livestock waterer that is thermostatically controlled and has a minimum of two inches of factory-installed insulation.	
				Low Pressure Irrigation	Purchase and Installation of Low Pressure Irrigation System.	
				Process Lighting - Agricultural	Purchase and installation of new or replacement of lighting equipment to a higher efficiency than existing or designed for agriculture grow processes.	
				Clothes Dryer - C&I	Purchase and installation of an ENERGY STAR rated clothes dryer.	
				Clothes Washer- C&I	Purchase and installation of a clothes washer meeting ENERGY STAR.	
				Dehumidifier - C&I	Purchase and installation of a new dehumidifier meeting ENERGY STAR.	
				Elec Vehicle Chargers - C&I	Purchase and installation of ENERGY STAR rated EV Charger Cord.	
				Freezer - C&I	Purchase and installation of a new ENERGY STAR rated freezer.	
				Pre-Rinse Sprayers	Replacement of existing sprayer with new unit that use 1.6 GPM or less, on/off squeeze lever, and cleaning of performance of at least 26 seconds. Electric water heating only.	
				Refrigerators - C&I	Purchase and installation of a new ENERGY STAR refrigerator.	
				Water Cooler C&I	Purchase and installation of an ENERGY STAR water cooler.	
				Water Heater - Heat Pump - C&I	Purchase and installation of a Heat Pump domestic water heater in place of a standard electric water heater, EF>2.0.	
				Dehumidifier Recycling - C&I	Removal of an existing inefficient dehumidifier from service prior to end of useful life via recycling.	
				Freezer Recycling - C&I	Removal of an existing inefficient unit generally older than 10 years from service prior to end of useful life via recycling.	
				Refrigerator Recycling - C&I	Removal of an existing inefficient unit generally older than 10 years from service prior to end of useful life via recycling.	

Appendix C, Table C-4: Measure Eligibility					
Sector	Program Type	Program	Sub Program	Measure Name	Energy Efficiency Eligibility / Description
Commercial and Industrial	Core Utility	Energy Solutions for Business	Prescriptive / Custom	Room Air Conditioner Recycling - C&I	Removal of an existing inefficient room air conditioner from service prior to end of useful life via recycling.
				Advanced Pwr Strips- C&I	Purchase and use of a Current-Sensing Master/Controlled Advanced Power Strip (APS) in place of a standard power strip.
				Computers - C&I	Purchase and installation of a new computer meeting ENERGY STAR.
				Imaging - C&I	Purchase and installation of a new imaging equipment meeting ENERGY STAR.
				Monitors - C&I	Purchase and installation of a new monitor meeting ENERGY STAR.
				Small Network	The purchase and installation of network level software that controls desktop computers and monitors power settings with the network. Software must be capable of measuring and managing power consumption of each desktop computer and monitor. Laptops are eligible but savings assume workstation includes desktop monitor, laptop computer with laptop screen in use.
				Uninterruptible Power Supply (UPS)	Replacement or new installation of a UPS (less than 12 kW) that exceeds the minimum average efficiency standard as determined by Table 1 of the Energy Star UPS standard. Table 2 of the standard shall be used in calculating the loading of the UPS.
				Custom - Compressed Air	Purchase and installation of new or replacement or retrofit of existing air compressor systems, including but no limited to: new compressors, air dryers, or increased storage capacity. Other efficiency measures such as: leak repair, controls, high efficiency nozzles, piping enhancements, and no loss drains are also eligible. Retrofit of compressor with a VFD is also eligible.
				Custom - HVAC/Chlrs/Cntrls	Purchase and installation of HVAC controls/controllers that optimizes ventilation and economization control schemes of a building's HVAC system based on occupancy or sensor level inputs.
				Custom - Process Improvement	Replacement or retrofit of existing equipment, process changes or process enhancements that results in more energy efficient usage or electric energy.
				Custom - Refrigeration	Purchase and installation of new or retrofit of refrigeration measures on commercial walk-in refrigerators and coolers, including, but not limited to: high efficiency fan motors, evaporator fan controllers, floating head pressure controls, evaporator coil defrost controls and variable speed compressor motors.
				Custom - Equipment/Servers	Purchase and installation of more efficient data center equipment (servers, UPS, HVAC, etc.) the optimization optimization of those systems to decrease energy usage. The measure is for retrofit applications.
				Custom - Motors - Three Phase	Purchase and installation of a new premium efficiency motor as a direct replacement or early replacement
				Custom - VFDs < 10HP	Purchase and installation of a new VFD for an existing motor (less than 10 hp) driving fans, pumps and other suitable applications. VFD retrofits are not eligible.
				Custom - VFDs > 10 HP	Purchase and installation of a new VFD for an existing motor (greater than 10 hp) driving fans, pumps and other suitable applications. VFD retrofits are not eligible.
				Custom - Audit & Education	Comprehensive Energy Audit for commercial/industrial facilities or manufacturing processes recommending installation of efficient equipment, building shell/envelop improvements, manufacturing process changes, building operating changes, or other energy efficiency improvements. Audit must meet minimum audit requirements for buildings or for process equipment.
				Custom - Bldg Improvements	Retrofit of existing building shell, electrical & electric mechanical retrofits to greater efficiency components and processes, including but not limited to: wall and ceiling insulation, windows, reduction of conditioned CF w/ SF of floor space remaining the same, reduction in window size w/ improved R value, installation of building energy management systems.
				Anti Sweat Heater Controls	Purchase and installation of door heater controls on commercial glass door coolers for refrigerators, coolers or freezers utilizing either ON/OFF or micro pulse controls in place of no controls.
				Beverage Vending Machine - Controls	Retrofit controls for a non ENERGY STAR rated vending machine.
				Beverage Vending Machine - Energy Star	The purchase and installation of an ENERGY STAR certified beverage vending machine.
				Coffee Brewers	Replacement or new installation of an Energy Star Type II small, medium or large coffee brewer.
				Combination Oven	Replacement or new installation of ENERGY STAR qualified electric units.
				Convection Oven	Replacement or new installation of ENERGY STAR qualified electric units.
				Dishwasher - C&I	Replacement or new installation of ENERGY STAR qualified stationary or conveyor type commercial dishwasher.
				ECM Evap Fan Motor	Purchase and installation of a ECM motor to replace a permanent split capacitor or shaded pole motor in a commercial refrigeration unit.
				Evap Fan Controls	Purchase and installation of ON/OFF controls or multispeed controls for an uncontrolled ECM or permanent split capacitor or shaded pole motor in a commercial refrigeration unit.
				Refrigerators - Reach In	Purchase and installation of a new high efficiency packaged commercial refrigerator meeting ENERGY STAR.
				Freezers - Reach In	Purchase and installation of a new high efficiency packaged commercial freezer meeting ENERGY STAR.
				Fryers	Replacement or new installation of ENERGY STAR qualified electric units.
				Griddles	Replacement or new installation of Energy Star qualified electric units.
				Hot Food Holding Cabinet	Replacement or new installation of full, three quarter and half sized ENERGY STAR qualified units with idle energy rate of 0.04 kW/CF.
				Ice Machines	Purchase and installation of new ENERGY STAR qualified ice machine.
				Induction Warmer/Rethernalizer Well	Replacement or new installation of a energy efficient Rethernalizer & Food Warmers.
				Refrigerated Case Cover	Installation of refrigerated case covers.
				Steam Cookers	Replacement or new installation of ENERGY STAR electric commercial steam cooker.
				Strip Curtains	Replacement or new installation of polyethylene strip curtains on walk in freezers and coolers covering the entire door fame. Eligible units must be open a least 2.5 hrs./day.
				Air Conditioning (>5.4 < 20 Ton) - C&I	Installation of Single Package or Split System central unit exceeding ASHRAE Std. 90.1 – 2013 by 5%, as applicable. Includes variable flow (VRF) systems.
				Air Conditioning (<=5.4 Ton) - C&I	Replacement of ducted split central units prior to end of life w/ ENERGY STAR qualifying units w/ SEER ratings > or = 16 or 13 EER. Includes variable refrigerant flow (VRF) systems.
				Air Conditioning (>=20 Ton) - C&I	Installation of Single Package or Split System central unit exceeding ASHRAE Std. 90.1 – 2013 by 5%, as applicable. Includes variable flow (VRF) systems.
				Circulating Pump - C&I	Replacement of existing circulation pump with permanent split capacitor motor or installation of a new circulation pump < 1HP with a variable speed motor (ECM) and/or controls to automatically change pump speed to produce flow rates that match system heating requirements.

Appendix C, Table C-4: Measure Eligibility					
Sector	Program Type	Program	Sub Program	Measure Name	Energy Efficiency Eligibility / Description
Commercial and Industrial	Core Utility	Energy Solutions for Business	Prescriptive / Custom	Ductless Mini-Split Heat Pump - C&I	Purchase and installation of a new or replacement ENERGY STAR qualifying unit w/ SEER >= 20, EER >=12 or HSPF >= 10.
				Ductless Mini-Split A/C - C&I	Purchase and installation of a new or replacement ENERGY STAR qualifying unit w/ SEER >= 20, EER >=12.5.
				Furnace Fans - C&I	Purchase and installation of a high efficiency brushless permanent magnet fan motor (BPM or ECM) to replace a permanent split capacitor (PSC) motor.
				Heat Pump (<=5.4 Ton) - C&I	Installation of Single Package or Split System central unit w/ SEER ratings > or = 16, 13 EER, HSPF > or =9. Includes variable flow (VRF) systems.
				Heat Pumps - Wtr & GeoT - C&I	Purchase and installation of Energy Star qualified Water or Ground Source Heat Pump exceeding ASHRAE Std. 90.1 – 2013, as applicable.
				HVAC - Custom C&I	Purchase and installation of HVAC controls/controllers that optimizes ventilation and economization control schemes of a building's HVAC system based on occupancy or sensor level inputs.
				HVAC - Maintenance - C&I	Provides for tune-up of commercial HVAC unit.
				PTAC - C&I	Installation of packaged terminal unit exceeding ASHRAE Std. 90.1 – 2013 by 7.5%, as applicable. Includes variable flow (VRF) systems.
				PTHP - C&I	Installation of packaged terminal unit exceeding ASHRAE Std. 90.1 – 2013 by 7.5%, as applicable. Includes variable flow (VRF) systems.
				Room Air Conditioner - C&I	Purchase and installation of new unit meeting ENERGY STAR standard.
				Smart Thermostat - C&I	The purchase and installation of a smart thermostat that has earned ENERGY STAR certification.
				Exit Signs	Replacement of incandescent or fluorescent exit signs w/ LED type exit sign.
				LED Channel Signage	Replacement, retrofit or new installation of channel letter signs w/ LED technology. Must meet ENERGY STAR or DLC, as applicable.
				LED Fixture External	Replacement or new installation of a lighting fixture wired for exclusive use with LED lamps installed in an exterior setting. Must meet ENERGY STAR or DLC, as applicable.
				LED Fixture Internal	Replacement or new installation of a lighting fixture wired for exclusive use with LED lamps installed in an interior setting. Must meet ENERGY STAR or DLC, as applicable.
				LED Lamps - C&I	Purchase and installation of an ENERGY STAR LED lamps, including A-Line and specialty lamps.
				LED Linear	Replacement or new installation of linear LED lighting equipment to a higher efficiency than existing or designed. Must meet ENERGY STAR or DLC, as applicable.
				LED Reach in Refrigerator / Freezer Lights	Purchase and installation of LED luminaires in vertical and horizontal refrigerated display cases replacing linear fluorescent lamp technology. Must meet ENERGY STAR or DLC, as applicable.
				Lighting - Custom	Replacement or new installation of lighting to a higher efficiency than existing or designed lighting equipment. Specialty lighting applications may be eligible, but will require approval by the Company.
				Lighting - Other	Replacement or new installation of lighting to a higher efficiency than existing or designed lighting equipment. Must meet ENERGY STAR or DLC, as applicable.
				Lighting Controls (Daylight & Occupancy)	New installation of non-networked lighting controls including, but not limited to: daylight On/Off, dimming, occupancy sensors (wall plate, remote & fixture mounted), time clocks and switching controls.
				Lighting Controls (Network)	New installation of a networked lighting control system by applying, but not limited to: occupancy sensors, photo sensors, and dimming controls where the system must dim or turn off individual fixtures based on local occupancy and/or light levels. The control system must include luminaire-level lighting control (LLLC) that can switch lights on and off based on occupancy and is capable of full-range dimming based on local light levels.
				Linear Fluorescent	Replacement of existing T8 lamps with high performance T8 lamps to a higher efficiency than existing or designed.
				Linear Lamps - Mnt-C&I	Midstream delivery of maintenance replacement lamps and fixtures. Must meet ENERGY STAR or DLC, as applicable.
	High/Low Bays Lamps - Mnt-C&I	Midstream delivery of maintenance replacement lamps and fixtures. Must meet ENERGY STAR or DLC, as applicable.			
	LED Fixture - Mnt-C&I	Midstream delivery of maintenance replacement lamps and fixtures. Must meet ENERGY STAR or DLC, as applicable.			
	Street & Area Lighting	Replacement or new installation of Street and Area lighting equipment to a greater efficiency than existing or designed. Must meet Energy Star or DLC, as applicable.			
	Additional Utility	Energy Management	Virtual/Meter Data Commissioning	Assessment of energy usage using meter data and analytics, engineering and building modeling to determine energy saving strategies for the upgrade and/or replacement of building systems including, but not limited to: lighting, HVAC, refrigeration, compressed air and other operational energy savings. Additionally, the measure will utilize pre and post enrollment meter usage data to further evaluate building energy savings.	
			Retrocommissioning	Adjusting electrical, electro-mechanical, mechanical and control system set points to improve system performance to existing building conditions and use, including the implementation of energy savings measures identified through facility audit or building operations training.	
			Building Operation Training	Obtain Building Operations Certification (BOC) by attending a certified training program or other training programs as related to the efficient design, operations and maintenance of buildings.	
			Building Tune Up Large	Portfolio of measures and services that focus on the adjustment, maintenance and improvement of building systems to achieve maximum operating efficiency, including the installation of energy efficiency measures.	
			Building Tune Up Small	Portfolio of measures and services that focus on the adjustment, maintenance and improvement of building systems to achieve maximum operating efficiency, including the installation of energy efficiency measures.	
			Unitary HVAC Maintenance	Provides for tune-up of commercial HVAC unit.	
Strategic Energy Management			Management and optimization of energy consumption for C&I customers through long term management of major energy using systems.		
Engineered Solutions			ESB - Engineered Solutions - 1	Provides tailored energy-efficiency assistance using customized energy solutions to public service entities, such as municipalities, universities, schools, hospitals ("MUSH"), and non-profit entities. Energy efficiency improvements that are eligible include, but not limited to: lighting, HVAC, motors and drives, refrigeration, appliances, etc.	
	ESB - Engineered Solutions - 2	Provides tailored energy-efficiency assistance using customized energy solutions to public service entities, such as municipalities, universities, schools, hospitals ("MUSH"), and non-profit entities. Energy efficiency improvements that are eligible include, but not limited to: lighting, HVAC, motors and drives, refrigeration, appliances, etc.			

Appendix C, Table C-4: Measure Eligibility

Sector	Program Type	Program	Sub Program	Measure Name	Energy Efficiency Eligibility / Description
Multifamily	Core Utility	Multifamily	Multifamily	MF - Tenant - DI	Multi-Family Tenant Space Audit w/ direct install measures. Smart Thermostats eligible for a prescriptive incentive.
				MF - Tenant - Prescriptive	Removal with recycle of inefficient appliances and/or the purchase and installation of ENERGY STAR rated appliances or equipment.
				MF - Tenant - Custom	Retrofit of existing building shell, electrical & electric mechanical retrofits to greater efficiency components and processes, including but not limited to wall and ceiling insulation, windows, reduction of conditioned CF w/ SF of floor space remaining the same, reduction in window size w/ improved R value, installation of building energy management systems.
				MF - Common - DI	Multi-Family Common Space Audit w/ direct install measures. Smart Thermostats eligible for a prescriptive incentive.
				MF - Common - Prescriptive	Removal with recycle of inefficient appliances and/or the purchase and installation of ENERGY STAR rated appliances or equipment.
				MF - Common - Custom	Retrofit of existing building shell, electrical & electric mechanical retrofits to greater efficiency components and processes, including but not limited to wall and ceiling insulation, windows, reduction of conditioned CF w/ SF of floor space remaining the same, reduction in window size w/ improved R value, installation of building energy management systems.
				MF - Engineered Solutions	Provides tailored energy-efficiency assistance using customized energy solutions to multi-family buildings. Energy efficiency improvements that are eligible include, but not limited to: lighting, HVAC, motors and drives, refrigeration, appliances, etc.
Other	Additional Utility	Home Optimization & Peak Demand Reduction	Home Optimization & Peak Demand Reduction	Smart Tstat Optimization	The control of a Smart Thermostat by using additional energy management strategies, which can include, but not limited to: external temperature/humidity adjustments, occupancy patterns, behavioral and remote energy management.
				Smart Home Systems	The control of a home end use devices by applying Smart Home Energy Management System (SHEMS) technology.

<b>Appendix D, Table D-1: Projected Participants and Energy Savings</b>			
<b>Total Portfolio<sup>2</sup></b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Estimated Participants	1,410,615	1,599,081	1,650,358
Projected Net Annual Natural Gas Savings (therms)	(671,724)	(78,998)	903,983
Projected Net Lifetime Natural Gas Savings (therms)	(11,470,300)	(4,002,815)	2,778,814
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	(156,892)	(222,494)	(222,139)
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	124,221,059	174,385,132	208,848,211
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	1,752,890,047	2,264,412,668	2,530,828,653
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	16,345,309	23,110,789	27,140,866
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	15,330	25,784	46,326
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	208,535	317,880	389,592

<sup>1</sup> Values are Retail Net Electricity Savings. To reflect actual realized system-wide savings at the wholesale/generator level, line loss savings would need to be added to the retail net electricity savings.

<sup>2</sup> Projections include participation of small commercial customers.

<b>Appendix D, Table D-2: Projected Participants and Energy Savings</b>			
<b>Total Residential</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Estimated Participants	1,165,738	1,275,207	1,281,315
Projected Net Annual Natural Gas Savings (therms)	(439,081)	32,287	212,241
Projected Net Lifetime Natural Gas Savings (therms)	(8,006,172)	(2,369,862)	327,140
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	(156,892)	(222,494)	(222,139)
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	68,456,009	84,756,312	95,047,250
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	977,829,427	1,012,157,660	1,001,646,341
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	16,345,309	23,110,789	27,140,866
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	6,006	9,756	12,845
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	83,803	100,066	106,016

<b>Appendix D, Table D-3: Projected Participants and Energy Savings</b>			
<b>Total Residential Core</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Estimated Participants	1,162,288	1,130,607	1,134,455
Projected Net Annual Natural Gas Savings (therms)	(544,924)	(144,116)	(19,183)
Projected Net Lifetime Natural Gas Savings (therms)	(9,593,805)	(5,015,916)	(3,144,210)
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	(156,892)	(222,494)	(222,139)
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	67,164,734	68,727,412	66,977,400
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	961,313,152	970,753,760	936,742,491
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	16,345,309	23,110,789	23,540,866
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	5,794	6,626	6,801
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	81,072	92,736	94,125

<b>Appendix D, Table D-4: Projected Participants and Energy Savings</b>			
<b>Total Residential Additional Utility</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Estimated Participants	3,450	144,600	146,860
Projected Net Annual Natural Gas Savings (therms)	105,842	176,404	231,423
Projected Net Lifetime Natural Gas Savings (therms)	1,587,633	2,646,054	3,471,350
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	-	-	-
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	1,291,275	16,028,900	28,069,850
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	16,516,275	41,403,900	64,903,850
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	-	-	3,600,000
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	211	3,130	6,045
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	2,731	7,330	11,891

<sup>1</sup> Values are Retail Net Electricity Savings. To reflect actual realized system-wide savings at the wholesale/generator level, line loss savings would need to be added to the retail net electricity savings.

Appendix D, Table D-5: Projected Participants and Energy Savings			
Total Commerical & Industrial <sup>2</sup>	2021	2022	2023
Estimated Participants	243,369	322,116	356,033
Projected Net Annual Natural Gas Savings (therms)	(272,498)	(154,933)	75,060
Projected Net Lifetime Natural Gas Savings (therms)	(4,061,951)	(2,287,662)	1,170,672
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	-	-	-
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	54,782,583	88,527,604	109,842,420
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	760,326,049	1,235,739,187	1,508,145,740
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	-	-	-
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	9,211	15,902	20,140
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	123,032	215,909	268,264

Appendix D, Table D-6: Projected Participants and Energy Savings			
Total Commercial & Industrial Core <sup>2</sup>	2021	2022	2023
Estimated Participants	243,367	322,042	355,771
Projected Net Annual Natural Gas Savings (therms)	(293,443)	(363,620)	(383,823)
Projected Net Lifetime Natural Gas Savings (therms)	(4,376,123)	(5,417,962)	(5,712,562)
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	-	-	-
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	54,507,583	84,658,564	96,456,156
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	756,201,049	1,178,935,540	1,332,357,668
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	-	-	-
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	9,186	15,339	17,699
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	122,646	207,717	237,282

Appendix D, Table D-7: Projected Participants and Energy Savings			
Total Commercial & Industrial Additional Utility <sup>2</sup>	2021	2022	2023
Estimated Participants	2	74	262
Projected Net Annual Natural Gas Savings (therms)	20,945	208,687	458,882
Projected Net Lifetime Natural Gas Savings (therms)	314,172	3,130,301	6,883,234
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	-	-	-
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	275,000	3,869,040	13,386,264
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	4,125,000	56,803,647	175,788,072
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	-	-	-
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	26	563	2,441
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	386	8,192	30,982

<sup>1</sup> Values are Retail Net Electricity Savings. To reflect actual realized system-wide savings at the wholesale/generator level, line loss savings would need to be added to the retail net electricity savings.

<sup>2</sup> Projections include participation of small commercial customers.

<b>Appendix D, Table D-8: Projected Participants and Energy Savings</b>			
<b>Total Multifamily<sup>2</sup></b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Estimated Participants	1,508	1,758	2,008
Projected Net Annual Natural Gas Savings (therms)	39,855	43,647	47,440
Projected Net Lifetime Natural Gas Savings (therms)	597,823	654,709	711,594
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	-	-	-
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	982,467	1,101,217	1,219,967
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	14,734,571	16,515,821	18,297,071
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	-	-	-
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	113	127	141
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	1,700	1,906	2,112

<b>Appendix D, Table D-9: Projected Participants and Energy Savings</b>			
<b>Total Other</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Estimated Participants	-	-	11,001
Projected Net Annual Natural Gas Savings (therms)	-	-	569,242
Projected Net Lifetime Natural Gas Savings (therms)	-	-	569,407
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	-	-	-
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	-	-	2,738,574
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	-	-	2,739,500
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	-	-	-
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	-	-	13,200
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	-	-	13,200

<sup>1</sup> Values are Retail Net Electricity Savings. To reflect actual realized system-wide savings at the wholesale/generator level, line loss savings would need to be added to the retail net electricity savings.

<sup>2</sup> Projections include participation of small commercial customers.

<b>Appendix D, Table D-10: Projected Participants and Energy Savings</b>			
<b>Efficient Products - Efficient Products</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Estimated Participants	1,161,788	1,129,607	1,133,195
Projected Net Annual Natural Gas Savings (therms)	(683,128)	(420,526)	(367,459)
Projected Net Lifetime Natural Gas Savings (therms)	(11,666,877)	(9,162,059)	(8,368,351)
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	(156,892)	(222,494)	(222,139)
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	66,477,468	67,352,881	65,245,491
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	951,004,166	950,135,789	910,763,848
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	16,345,309	23,110,789	23,540,866
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	5,575	6,188	6,249
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	77,788	86,168	85,850

<b>Appendix D, Table D-11: Projected Participants and Energy Savings</b>			
<b>Existing Homes - Home Performance with ENERGY STAR</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Estimated Participants	500	1,000	1,260
Projected Net Annual Natural Gas Savings (therms)	138,205	276,410	348,276
Projected Net Lifetime Natural Gas Savings (therms)	2,073,072	4,146,143	5,224,141
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	-	-	-
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	687,266	1,374,531	1,731,910
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	10,308,985	20,617,971	25,978,643
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	-	-	-
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	219	438	552
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	3,284	6,568	8,275

<b>Appendix D, Table D-12: Projected Participants and Energy Savings</b>			
<b>Home Energy Education &amp; Management - Behavioral</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Estimated Participants	1,650	141,600	142,300
Projected Net Annual Natural Gas Savings (therms)	-	-	-
Projected Net Lifetime Natural Gas Savings (therms)	-	-	-
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	-	-	-
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	203,775	14,216,400	25,438,850
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	203,775	14,216,400	25,438,850
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	-	-	3,600,000
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	31	2,830	5,627
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	31	2,830	5,627

<sup>1</sup> Values are Retail Net Electricity Savings. To reflect actual realized system-wide savings at the wholesale/generator level, line loss savings would need to be added to the retail net electricity savings.

<b>Appendix D, Table D-13: Projected Participants and Energy Savings</b>			
<b>Existing Homes - Quick Home Energy Check-up (QHEC)</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Estimated Participants	1,500	2,500	3,960
Projected Net Annual Natural Gas Savings (therms)	30,842	51,404	81,423
Projected Net Lifetime Natural Gas Savings (therms)	462,633	771,054	1,221,350
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	-	-	-
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	712,500	1,187,500	1,881,000
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	10,687,500	17,812,500	28,215,000
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	-	-	-
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	90	150	238
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	1,350	2,250	3,564

<b>Appendix D, Table D-14: Projected Participants and Energy Savings</b>			
<b>Existing Homes - Moderate Income Weatherization</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Estimated Participants	300	500	600
Projected Net Annual Natural Gas Savings (therms)	75,000	125,000	150,000
Projected Net Lifetime Natural Gas Savings (therms)	1,125,000	1,875,000	2,250,000
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	-	-	-
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	375,000	625,000	750,000
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	5,625,000	9,375,000	11,250,000
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	-	-	-
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	90	150	180
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	1,350	2,250	2,700

<sup>1</sup> Values are Retail Net Electricity Savings. To reflect actual realized system-wide savings at the wholesale/generator level, line loss savings would need to be added to the retail net electricity savings.

<b>Appendix D, Table D-15: Projected Participants and Energy Savings</b>			
<b>Direct Install - Direct Install<sup>2</sup></b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Estimated Participants	120	550	600
Projected Net Annual Natural Gas Savings (therms)	-	-	-
Projected Net Lifetime Natural Gas Savings (therms)	-	-	-
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	-	-	-
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	4,064,438	18,289,969	20,322,188
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	60,966,565	274,349,542	304,832,825
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	-	-	-
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	851	3,829	4,255
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	12,764	57,439	63,821

<b>Appendix D, Table D-16: Projected Participants and Energy Savings</b>			
<b>Energy Solutions for Business - Prescriptive / Custom<sup>2</sup></b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Estimated Participants	243,247	321,492	355,171
Projected Net Annual Natural Gas Savings (therms)	(293,443)	(363,620)	(383,823)
Projected Net Lifetime Natural Gas Savings (therms)	(4,376,123)	(5,417,962)	(5,712,562)
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	-	-	-
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	50,443,145	66,368,594	76,133,967
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	695,234,484	904,585,998	1,027,524,844
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	-	-	-
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	8,335	11,510	13,444
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	109,882	150,278	173,461

<b>Appendix D, Table D-17: Projected Participants and Energy Savings</b>			
<b>Energy Solutions for Business - Energy Management</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Estimated Participants	1	68	250
Projected Net Annual Natural Gas Savings (therms)	-	-	-
Projected Net Lifetime Natural Gas Savings (therms)	-	-	-
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	-	-	-
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	-	1,129,040	7,361,264
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	-	15,703,647	85,413,072
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	-	-	-
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	-	325	1,925
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	-	4,628	23,233

<sup>1</sup> Values are Retail Net Electricity Savings. To reflect actual realized system-wide savings at the wholesale/generator level, line loss savings would need to be added to the retail net electricity savings.

<sup>2</sup> Projections include participation of small commercial customers.

<b>Appendix D, Table D-18: Projected Participants and Energy Savings</b>			
<b>Energy Solutions for Business - Engineered Solutions</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Estimated Participants	1	6	12
Projected Net Annual Natural Gas Savings (therms)	20,945	208,687	458,882
Projected Net Lifetime Natural Gas Savings (therms)	314,172	3,130,301	6,883,234
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	-	-	-
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	275,000	2,740,000	6,025,000
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	4,125,000	41,100,000	90,375,000
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	-	-	-
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	26	238	517
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	386	3,563	7,749

<b>Appendix D, Table D-19: Projected Participants and Energy Savings</b>			
<b>Multifamily - Multifamily<sup>2</sup></b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Estimated Participants	1,508	1,758	2,008
Projected Net Annual Natural Gas Savings (therms)	39,855	43,647	47,440
Projected Net Lifetime Natural Gas Savings (therms)	597,823	654,709	711,594
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	-	-	-
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	982,467	1,101,217	1,219,967
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	14,734,571	16,515,821	18,297,071
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	-	-	-
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	113	127	141
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	1,700	1,906	2,112

<b>Appendix D, Table D-20: Projected Participants and Energy Savings</b>			
<b>Other - Home Optimization &amp; Peak Demand Reduction</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Estimated Participants	-	-	11,001
Projected Net Annual Natural Gas Savings (therms)	-	-	569,242
Projected Net Lifetime Natural Gas Savings (therms)	-	-	569,407
Projected Net Lifetime Natural Gas Savings from Qualifying Low-Income Customers (therms)	-	-	-
Projected Net Annual Electric Savings <sup>1</sup> (kWh)	-	-	2,738,574
Projected Net Lifetime Electric Savings <sup>1</sup> (kWh)	-	-	2,739,500
Projected Net Lifetime Electric Savings from Qualifying Low-Income Customers <sup>1</sup> (kWh)	-	-	-
Projected Net Annual Peak Demand Savings <sup>1</sup> (kW)	-	-	13,200
Projected Net Lifetime Peak Demand Savings <sup>1</sup> (kW)	-	-	13,200

<sup>1</sup> Values are Retail Net Electricity Savings. To reflect actual realized system-wide savings at the wholesale/generator level, line loss savings would need to be added to the retail net electricity savings.

<sup>2</sup> Projections include participation of small commercial customers.

<b>Appendix E, Table E-1: Program Budget by Cost Category</b>			
<b>Total Portfolio</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$8,488,565	\$4,952,856	\$4,952,712
Marketing	\$4,167,368	\$4,424,527	\$4,500,152
Outside Services	\$11,973,312	\$12,099,600	\$14,546,139
Incentives- Rebates and Other	\$25,242,470	\$44,102,559	\$54,870,723
Incentives- Financing	\$2,909,748	\$8,151,150	\$10,784,249
Inspections and Quality Control	\$607,041	\$1,014,694	\$1,231,023
Evaluation	\$2,436,630	\$3,869,179	\$4,818,774
<b>Total</b>	<b>\$55,825,134</b>	<b>\$78,614,566</b>	<b>\$95,703,773</b>

<b>Appendix E, Table E-2: Program Budget by Cost Category</b>			
<b>Total Residential</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$5,505,565	\$2,943,525	\$2,652,046
Marketing	\$3,137,047	\$3,198,878	\$3,139,048
Outside Services	\$7,651,447	\$7,084,515	\$7,578,851
Incentives- Rebates and Other	\$11,891,203	\$19,657,998	\$22,664,797
Incentives- Financing	\$1,505,604	\$4,788,582	\$5,929,756
Inspections and Quality Control	\$58,250	\$103,750	\$143,700
Evaluation	\$1,335,626	\$1,990,572	\$2,277,481
<b>Total</b>	<b>\$31,084,742</b>	<b>\$39,767,819</b>	<b>\$44,385,678</b>

<b>Appendix E, Table E-3: Program Budget by Cost Category</b>			
<b>Total Residential Core</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$4,348,777	\$2,004,918	\$1,788,963
Marketing	\$2,571,495	\$2,520,137	\$2,484,157
Outside Services	\$6,011,266	\$4,607,094	\$4,872,128
Incentives- Rebates and Other	\$9,341,203	\$15,407,998	\$17,180,797
Incentives- Financing	\$1,505,604	\$4,788,582	\$5,929,756
Inspections and Quality Control	\$20,000	\$40,000	\$50,400
Evaluation	\$1,097,595	\$1,654,231	\$1,885,401
<b>Total</b>	<b>\$24,895,940</b>	<b>\$31,022,959</b>	<b>\$34,191,601</b>

<b>Appendix E, Table E-4: Program Budget by Cost Category</b>			
<b>Total Residential Additional Utility</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$1,156,787	\$938,608	\$863,083
Marketing	\$565,552	\$678,741	\$654,891
Outside Services	\$1,640,182	\$2,477,421	\$2,706,723
Incentives- Rebates and Other	\$2,550,000	\$4,250,000	\$5,484,000
Incentives- Financing	\$0	\$0	\$0
Inspections and Quality Control	\$38,250	\$63,750	\$93,300
Evaluation	\$238,031	\$336,341	\$392,080
<b>Total</b>	<b>\$6,188,802</b>	<b>\$8,744,860</b>	<b>\$10,194,077</b>

<b>Appendix E, Table E-5: Program Budget by Cost Category</b>			
<b>Total Commerical &amp; Industrial</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$2,610,827	\$1,665,450	\$1,719,431
Marketing	\$889,623	\$984,994	\$1,022,343
Outside Services	\$3,744,638	\$4,078,319	\$5,031,962
Incentives- Rebates and Other	\$12,775,554	\$23,793,848	\$30,380,162
Incentives- Financing	\$1,359,674	\$3,318,098	\$4,810,023
Inspections and Quality Control	\$530,482	\$890,379	\$1,064,502
Evaluation	\$1,027,065	\$1,784,329	\$2,346,562
<b>Total</b>	<b>\$22,937,862</b>	<b>\$36,515,417</b>	<b>\$46,374,986</b>

<b>Appendix E, Table E-6: Program Budget by Cost Category</b>			
<b>Total Commercial &amp; Industrial Core</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$2,484,516	\$1,420,053	\$1,335,334
Marketing	\$829,760	\$834,137	\$814,326
Outside Services	\$3,587,334	\$3,437,781	\$3,826,620
Incentives- Rebates and Other	\$12,569,304	\$21,410,799	\$24,034,304
Incentives- Financing	\$1,304,262	\$2,765,961	\$3,588,208
Inspections and Quality Control	\$497,781	\$804,525	\$887,619
Evaluation	\$993,177	\$1,538,577	\$1,780,242
<b>Total</b>	<b>\$22,266,134</b>	<b>\$32,211,834</b>	<b>\$36,266,654</b>

<b>Appendix E, Table E-7: Program Budget by Cost Category</b>			
<b>Total Commercial &amp; Industrial Additional Utility</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$126,311	\$245,396	\$384,097
Marketing	\$59,863	\$150,857	\$208,016
Outside Services	\$157,304	\$640,538	\$1,205,343
Incentives- Rebates and Other	\$206,250	\$2,383,048	\$6,345,858
Incentives- Financing	\$55,413	\$552,137	\$1,221,815
Inspections and Quality Control	\$32,701	\$85,854	\$176,884
Evaluation	\$33,888	\$245,752	\$566,321
<b>Total</b>	<b>\$671,728</b>	<b>\$4,303,583</b>	<b>\$10,108,333</b>

<b>Appendix E, Table E-8: Program Budget by Cost Category</b>			
<b>Total Multifamily</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$372,173	\$241,579	\$237,478
Marketing	\$140,698	\$151,778	\$151,326
Outside Services	\$577,227	\$691,258	\$809,061
Incentives- Rebates and Other	\$575,714	\$650,714	\$725,714
Incentives- Financing	\$44,470	\$44,470	\$44,470
Inspections and Quality Control	\$18,309	\$20,565	\$22,821
Evaluation	\$73,940	\$76,811	\$84,431
<b>Total</b>	<b>\$1,802,530</b>	<b>\$1,877,174</b>	<b>\$2,075,301</b>

<b>Appendix E, Table E-9: Program Budget by Cost Category</b>			
<b>Total Other</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$0	\$102,303	\$343,756
Marketing	\$0	\$88,878	\$187,436
Outside Services	\$0	\$245,508	\$1,126,265
Incentives- Rebates and Other	\$0	\$0	\$1,100,050
Incentives- Financing	\$0	\$0	\$0
Inspections and Quality Control	\$0	\$0	\$0
Evaluation	\$0	\$17,468	\$110,300
<b>Total</b>	<b>\$0</b>	<b>\$454,156</b>	<b>\$2,867,807</b>

<b>Appendix E, Table E-10: Program Budget by Cost Category</b>			
<b>Efficient Products - Efficient Products</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$3,557,715	\$1,504,762	\$1,290,707
Marketing	\$2,120,112	\$2,047,089	\$2,005,866
Outside Services	\$4,917,768	\$3,332,173	\$3,337,931
Incentives- Rebates and Other	\$7,341,203	\$11,407,998	\$12,140,797
Incentives- Financing	\$942,166	\$3,661,704	\$4,509,890
Inspections and Quality Control	\$0	\$0	\$0
Evaluation	\$854,900	\$1,265,792	\$1,408,843
<b>Total</b>	<b>\$19,733,863</b>	<b>\$23,219,518</b>	<b>\$24,694,033</b>

<b>Appendix E, Table E-11: Program Budget by Cost Category</b>			
<b>Existing Homes - Home Performance with ENERGY STAR</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$791,062	\$500,156	\$498,257
Marketing	\$451,383	\$473,048	\$478,291
Outside Services	\$1,093,498	\$1,274,921	\$1,534,197
Incentives- Rebates and Other	\$2,000,000	\$4,000,000	\$5,040,000
Incentives- Financing	\$563,439	\$1,126,878	\$1,419,866
Inspections and Quality Control	\$20,000	\$40,000	\$50,400
Evaluation	\$242,695	\$388,439	\$476,558
<b>Total</b>	<b>\$5,162,077</b>	<b>\$7,803,441</b>	<b>\$9,497,569</b>

<b>Appendix E, Table E-12: Program Budget by Cost Category</b>			
<b>Home Energy Education &amp; Management - Behavioral</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$117,922	\$442,283	\$371,714
Marketing	\$52,784	\$204,171	\$176,245
Outside Services	\$136,113	\$1,241,469	\$1,244,301
Incentives- Rebates and Other	\$0	\$0	\$0
Incentives- Financing	\$0	\$0	\$0
Inspections and Quality Control	\$0	\$0	\$0
Evaluation	\$12,273	\$75,517	\$71,690
<b>Total</b>	<b>\$319,091</b>	<b>\$1,963,440</b>	<b>\$1,863,951</b>

<b>Appendix E, Table E-13: Program Budget by Cost Category</b>			
<b>Existing Homes - Quick Home Energy Check-up (QHEC)</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$517,912	\$228,074	\$237,735
Marketing	\$242,026	\$214,852	\$221,475
Outside Services	\$756,258	\$556,723	\$693,500
Incentives- Rebates and Other	\$600,000	\$1,000,000	\$1,584,000
Incentives- Financing	\$0	\$0	\$0
Inspections and Quality Control	\$26,250	\$43,750	\$69,300
Evaluation	\$85,698	\$81,736	\$112,240
<b>Total</b>	<b>\$2,228,144</b>	<b>\$2,125,135</b>	<b>\$2,918,250</b>

<b>Appendix E, Table E-14: Program Budget by Cost Category</b>			
<b>Existing Homes - Moderate Income Weatherization</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$520,954	\$268,250	\$253,633
Marketing	\$270,743	\$259,718	\$257,171
Outside Services	\$747,810	\$679,230	\$768,923
Incentives- Rebates and Other	\$1,950,000	\$3,250,000	\$3,900,000
Incentives- Financing	\$0	\$0	\$0
Inspections and Quality Control	\$12,000	\$20,000	\$24,000
Evaluation	\$140,060	\$179,088	\$208,149
<b>Total</b>	<b>\$3,641,567</b>	<b>\$4,656,285</b>	<b>\$5,411,876</b>

<b>Appendix E, Table E-15: Program Budget by Cost Category</b>			
<b>Direct Install - Direct Install</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$640,759	\$543,391	\$496,775
Marketing	\$230,661	\$300,945	\$283,933
Outside Services	\$886,583	\$1,256,146	\$1,352,171
Incentives- Rebates and Other	\$1,625,775	\$7,315,988	\$8,128,875
Incentives- Financing	\$92,466	\$416,097	\$462,330
Inspections and Quality Control	\$150,307	\$385,437	\$420,649
Evaluation	\$159,035	\$471,601	\$515,656
<b>Total</b>	<b>\$3,785,587</b>	<b>\$10,689,605</b>	<b>\$11,660,388</b>

<b>Appendix E, Table E-16: Program Budget by Cost Category</b>			
<b>Energy Solutions for Business - Prescriptive / Custom</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$1,843,757	\$876,662	\$838,560
Marketing	\$599,099	\$533,192	\$530,394
Outside Services	\$2,700,751	\$2,181,635	\$2,474,449
Incentives- Rebates and Other	\$10,943,529	\$14,094,812	\$15,905,429
Incentives- Financing	\$1,211,796	\$2,349,864	\$3,125,878
Inspections and Quality Control	\$347,474	\$419,088	\$466,970
Evaluation	\$834,142	\$1,066,976	\$1,264,585
<b>Total</b>	<b>\$18,480,546</b>	<b>\$21,522,229</b>	<b>\$24,606,266</b>

<b>Appendix E, Table E-17: Program Budget by Cost Category</b>			
<b>Energy Solutions for Business - Energy Management</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$0	\$149,310	\$242,341
Marketing	\$0	\$81,263	\$119,297
Outside Services	\$0	\$423,328	\$795,572
Incentives- Rebates and Other	\$0	\$328,048	\$1,827,108
Incentives- Financing	\$0	\$5,997	\$22,702
Inspections and Quality Control	\$0	\$29,168	\$88,472
Evaluation	\$0	\$41,591	\$127,250
<b>Total</b>	<b>\$0</b>	<b>\$1,058,705</b>	<b>\$3,222,741</b>

<b>Appendix E, Table E-18: Program Budget by Cost Category</b>			
<b>Energy Solutions for Business - Engineered Solutions</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$126,311	\$96,086	\$141,756
Marketing	\$59,863	\$69,594	\$88,719
Outside Services	\$157,304	\$217,211	\$409,770
Incentives- Rebates and Other	\$206,250	\$2,055,000	\$4,518,750
Incentives- Financing	\$55,413	\$546,140	\$1,199,114
Inspections and Quality Control	\$32,701	\$56,686	\$88,412
Evaluation	\$33,888	\$204,161	\$439,070
<b>Total</b>	<b>\$671,728</b>	<b>\$3,244,878</b>	<b>\$6,885,591</b>

<b>Appendix E, Table E-19: Program Budget by Cost Category</b>			
<b>Multifamily - Multifamily</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$372,173	\$241,579	\$237,478
Marketing	\$140,698	\$151,778	\$151,326
Outside Services	\$577,227	\$691,258	\$809,061
Incentives- Rebates and Other	\$575,714	\$650,714	\$725,714
Incentives- Financing	\$44,470	\$44,470	\$44,470
Inspections and Quality Control	\$18,309	\$20,565	\$22,821
Evaluation	\$73,940	\$76,811	\$84,431
<b>Total</b>	<b>\$1,802,530</b>	<b>\$1,877,174</b>	<b>\$2,075,301</b>

<b>Appendix E, Table E-20: Program Budget by Cost Category</b>			
<b>Other - Home Optimization &amp; Peak Demand Reduction</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Utility Administration	\$0	\$102,303	\$343,756
Marketing	\$0	\$88,878	\$187,436
Outside Services	\$0	\$245,508	\$1,126,265
Incentives- Rebates and Other	\$0	\$0	\$1,100,050
Incentives- Financing	\$0	\$0	\$0
Inspections and Quality Control	\$0	\$0	\$0
Evaluation	\$0	\$17,468	\$110,300
<b>Total</b>	<b>\$0</b>	<b>\$454,156</b>	<b>\$2,867,807</b>

**Appendix F, Table F-1: EE Plan PJM MW Potential<sup>1</sup>**

EE Installation Period	EE Plan Potential Summer MW	EE Plan Potential Winter MW	EE Plan Potential CP MW	Potential DY 24/25 CP MW	Potential 25/26 CP MW	Potential 26/27 EE CP MW	Potential 27/28 CP MW	Potential 28/29 CP MW	Potential 29/30 CP MW
20/21	0.0	0.0	0.0	n/a	n/a	n/a	n/a	n/a	n/a
21/22	18.7	15.8	15.8	15.8	15.8	n/a	n/a	n/a	n/a
22/23	27.0	21.1	21.1	21.1	21.1	21.1	n/a	n/a	n/a
23/24	30.4	23.5	23.5	23.5	23.5	23.5	23.5	n/a	n/a
24/25	2.5	2.0	2.0	n/a	2.0	2.0	2.0	2.0	n/a
25/26	0.0	0.0	0.0	n/a	n/a	n/a	n/a	n/a	0.0
26/27	0.0	0.0	0.0	n/a	n/a	n/a	n/a	n/a	n/a
<b>Totals</b>	<b>78.6</b>	<b>62.3</b>	<b>62.3</b>	<b>60.3</b>	<b>62.3</b>	<b>46.5</b>	<b>25.4</b>	<b>2.0</b>	<b>0.0</b>

<sup>1</sup> All MW values are estimated EE Plan Potential MW values and do not represent actual EE values to be offered into PJM's capacity market. These estimates are based on planning projections prior to any adjustments except for the addition of line losses and eliminating non-PJM eligible measures. These estimates are presented for information purposes only and are subject to change for many reasons, including but not limited to, changes in program participation, baselines, measurement and verification protocols and PJM rules. The utilities will determine the actual EE Resource offers applicable to each PJM auction.

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**Workpapers for Plan**

- Measures Assumptions Workpapers [public/attached]
- EE Model Workpapers [Confidential/redacted (to be provided on execution of NDA)]
- PJM Estimator Workpapers [Confidential/redacted (to be provided on execution of NDA)]