**48:3-51 Definitions relative to competition in certain industries.**

**New**

**“Class III Clean Thermal Energy Efficiency or CTEE”** means the thermal energy produced by a cold climate heat pump from a ground source or air source system.

**“Clean Thermal Energy Efficiency Certificate or CTEEC”** means a certificate representing the environmental or attribute benefits of the pounds of avoided CO2 per unit of thermal energy displaced as produced by a cold climate heat pump including both an air source or ground source.

**“Grid-Interactive Efficient Buildings or GEB”** means an energy efficient building with smart technologies characterized by the active use of distributed energy resources (DER) to optimize energy use for grid services, occupant needs and preferences and cost reductions in a continuous and integrated way.

**NJSA 48:3-87.14 Building electrification roadmap and goals (new Section)**

1. No later than three months after the date of enactment of P.L. xxxxx, the Board of Public Utilities, in consultation with the Department of Community Affairs, the Economic Development Authority and the Department of Environmental Protection, shall together with stakeholders including but not limited to electric and natural gas utilities, third party suppliers, environmental, equity, energy and business organizations, HVAC contractor groups and xxxx , the board shall initiate a proceeding to develop a building electrification roadmap; and within 6 months of initiating the building electrification proceeding shall complete the building electrification roadmap and submit a written report to the Governor and, pursuant to section 2 of P.L. 1991, c.164 (C.52:14-19.1), to the Legislature concerning building electrification needs and opportunities in the State. In developing the building electrification roadmap, the board shall:
2. Study the types of building electrification technologies and systems currently being implemented in the states and elsewhere for residential and commercial buildings;
3. Consider how the building electrification of residential and commercial buildings may impact the electric and natural gas distribution and transmission systems;
4. Consider how Grid-interactive Efficient Buildings or GEB can assist in managing the expansion of electrification impacts on the electric and natural gas distribution and transmission systems;
5. Consider how building electrification will be impacted by the different commercial and residential building types;
6. Consider the benefits and costs to energy users including by not limited to fuel oil, propane, natural gas and electricity;
7. In developing the building electrification roadmap, the board shall consult with the Center for Green Building at Rutgers University Bloustein School of Public Policy, and other public and private entities in the State and in other states that have conducted studies concerning, or are implementing building electrification technologies;
8. The Board shall hold at a minimum two public stakeholder meetings in developing the roadmap, one to solicit input of the development of a draft roadmap and the second on the draft roadmap;
9. The final building electrification roadmap report, as required in a above shall (1) summarize the roadmap, (2) discuss and quantify the potential benefits and costs associated with increased building electrification to meet the goals in the 2019 Energy Master Plan and section g. below, (3) highlight potential barriers and recommend ways to increase building electrification including potential financial incentives to assist in the overall development, this financial incentive could include an increase in the energy efficient portfolio standard as set forth in N.J.S.A. 48:3-48 g. and h. and may include an energy efficiency certification trading program;
10. The board, through the societal benefits charge as set forth at N.J.S.A 48:3-60, shall fund the establishment of a Building Electrification Technology Center (BETC) at the Center for Green Building to be managed and maintained in partnership with NJIT Clean Energy Learning Center and Rowan University Clean Energy Program that shall provide outreach and education on building electrification technology readiness, and product availability, and the installation and operating costs of the various building electrification technologies along with the installation and operating costs of other heating system for residential and commercial buildings to the general public, building management and HVAC contractors. The BETC shall also provide the energy and emissions of the various building electrification technologies along with the energy and emissions of other heating system for residential and commercial buildings;
11. In developing the building electrification roadmap, the board shall require that each electric and natural gas public utility annually file an Integrated Distribution Plan (IDP) that include the upgrades required to achieve the goals of the 2019 EMP and maintenance required to address the impacts on electric and natural gas loads. The IDP shall not just include distribution grid resource upgrades but shall include grid-interactive efficient buildings (GEB) and smart electrification that uses digital technology to enable two-way communication between the utility and its customers that enable the buildings to be flexible loads.
12. The roadmap shall establish a process and funding mechanism for achieving the goals of 100,000 new or existing retrofits residential units by 2025 and 800,000 new or existing retrofits by 2030 which shall include, but not be limited to, the requirements in N.J.S.A 48:3-87.9 new section h of this bill.
13. The board, from time to time by a board order, and after a public stakeholder process that includes, at a minimum, two public meetings; one to solicit input and a second on a draft straw proposal, may increase the goals in g. above in order to achieve the building electrification goals in the 2019 Energy Master Plan.
14. The board pursuant to NJSA 48:3-87.9 h. shall develop and implement a program that provides financial assistance to offset the installation and operating cost of a cold climate heat pump system that results in at a minimum a ten-year payback. The installation cost shall include the capital cost of the system and the upgrade to the buildings electric and ventilation systems. The ten-year payback shall be determined as averaged over the full cold climate heat pump program and does not have to be calculated and implemented for each individual installation for each general residential housing type. The residential housing types and the average ten-year payback shall be determined in consultation with the Building Electrification Technology Center established pursuant to section e. above
15. Any Regional Greenhouse Gas Initiative (RGGI) CO2 allowance auction funds that are acquired over and above the current allocated (RGGI) budget after the enactment of P.L.xxxxx, up to an annual cap of $30,000,000, shall be allocated to fund the electrification of low-income residential dwellings. These additional RGGI funds shall be appropriated to the board and shall represent the amount of funds needed to electrify each low-income home. The amount shall be in addition to any funds for weatherization and energy efficiency available through the Department of Community Affairs Weatherization Assistance Program or the Bord or Public Utility and public utilities Comfort Partners program. The board shall determine the low-income incentive amount and what constitutes an electrified building including but not limited to at a minimum heating, cooling, cooking and hot water in an annual proceeding as part of its annual Clean Energy budget process. Low-income shall have the same meaning and requirements as set forth in the DCA WAP program or the board’s Comfort Partners program. The low-income home electrified shall count to the building electrification goals set in g. above.

**48:3-87.9 Public utility to reduce use of electricity, natural gas in territory.**

3. a. No later than one year after the date of enactment of P.L.2018, c.17 (C.48:3-87.8 et al.), the Board of Public Utilities shall require each electric public utility and gas public utility to reduce the use of electricity, or natural gas, as appropriate, within its territory, by its customers, below what would have otherwise been used. For the purposes of this section, a gas public utility shall reduce the use of natural gas for residential, commercial, and industrial uses, but shall not be required to include a reduction in natural gas used for distributed energy resources such as combined heat and power. For the purposes of this section, an electric public utility shall reduce the use of electricity for residential, commercial, and industrial uses, but shall not be required to include a reduction in electricity used for electric cold climate heat pumps net the difference of electric generation from distributed renewable energy. The board shall determine this formula annually in consultation with the Building Electrification Technology Center established in P.L. xxxxxx section g (N.J.S.A. 48:3-87.14e.) of this bill. The board shall require the refiling of any approved electric and natural gas public utility energy efficiency program to re-evaluate the overall budgets and incentive levels for cold climate heat pumps that assist in achieving the goals for building electrification as set in section g of P.L xxxxx c zz.

Each electric public utility shall be required to achieve annual reductions in the use of electricity of two percent of the average annual usage in the prior three years within five years of implementation of its electric energy efficiency program. Each natural gas public utility shall be required to achieve annual reductions in the use of natural gas of 0.75 percent of the average annual usage in the prior three years within five years of implementation of its gas energy efficiency program. The amount of reduction mandated by the board that exceeds two percent of the average annual usage for electricity and 0.75 percent of the average annual usage for natural gas for the prior three years shall be determined pursuant to the study conducted pursuant to subsection b. of this section until the reduction in energy usage reaches the full economic, cost-effective potential in each service territory, as determined by the board.

b. No later than one year after the date of enactment of P.L.2018, c.17 (C.48:3-87.8 et al.), the board shall conduct and complete a study to determine the energy savings targets for full economic, cost-effective potential for electricity usage reduction and natural gas usage reduction as well as the potential for peak demand reduction by the customers of each electric public utility and gas public utility and the timeframe for achieving the reductions. The energy savings targets for each electric public utility and gas public utility shall be reviewed every three years to determine if the targets should be adjusted. The board, in conducting the study, shall accept comments and suggestions from interested parties.

c. No later than one year after the date of enactment of P.L.2018, c.17 (C.48:3-87.8 et al.), the board shall adopt quantitative performance indicators pursuant to the "Administrative Procedure Act," P.L.1968, c.410 (C.52:14B-1 et seq.) for each electric public utility and gas public utility, which shall establish reasonably achievable targets for energy usage reductions and peak demand reductions and take into account the public utility's energy efficiency measures and other non-utility energy efficiency measures including measures to support the development and implementation of building code changes, appliance efficiency standards, the Clean Energy program, any other State-sponsored energy efficiency or peak reduction programs, and public utility energy efficiency programs that exist on the date of enactment of P.L.2018, c.17 (C.48:3-87.8 et al.). In establishing quantitative performance indicators, the board shall use a methodology that incorporates weather, economic factors, customer growth, outage-adjusted efficiency factors, and any other appropriate factors to ensure that the public utility's incentives or penalties determined pursuant to subsection e. of this section and section 13 of P.L.2007, c.340 (C.48:3-98.1) are based upon performance, and take into account the growth in the use of cold climate heat pumps, electric vehicles, microgrids, and distributed energy resources. In establishing quantitative performance indicators, the board shall also consider each public utility's customer class mix and potential for adoption by each of those customer classes of energy efficiency programs offered by the public utility or that are otherwise available. The board shall review each quantitative performance indicator every three years. A public utility may apply all energy savings attributable to programs available to its customers, including demand side management programs, other measures implemented by the public utility, non-utility programs, including those available under energy efficiency programs in existence on the date of enactment of P.L.2018, c.17 (C.48:3-87.8 et al.), building codes, and other efficiency standards in effect, to achieve the targets established in this section.

d. (1) Each electric public utility and gas public utility shall establish energy efficiency programs and peak demand reduction programs to be approved by the board no later than 30 days prior to the start of the energy year in order to comply with the requirements of this section. The energy efficiency programs and peak demand reduction programs adopted by each public utility shall comply with quantitative performance indicators adopted by the board pursuant to subsection c. of this section.

(2) The energy efficiency programs and peak demand reduction programs shall have a benefit-to-cost ratio greater than or equal to 1.0 at the portfolio level, considering both economic and environmental factors, and shall be subject to review during the stakeholder process established by the board pursuant to subsection f. of this section. The methodology, assumptions, and data used to perform the benefit-to-cost analysis shall be based upon publicly available sources and shall be subject to stakeholder review and comment. A program may have a benefit-to-cost ratio of less than 1.0 but may be appropriate to include within the portfolio if implementation of the program is in the public interest, including, but not limited to, benefitting low-income customers or promoting emerging energy efficiency technologies.

(3) Each electric public utility and gas public utility shall file with the board implementation and reporting plans as well as evaluation, measurement, and verification strategies to determine the energy usage reductions and peak demand reductions achieved by the energy efficiency programs and peak demand reduction programs approved pursuant to this section. The filings shall include details of expenditures made by the public utility and the resultant reduction in energy usage and peak demand. The board shall determine the appropriate level of reasonable and prudent costs for each energy efficiency program and peak demand reduction program.

e. (1) Each electric public utility and gas public utility shall file an annual petition with the board to demonstrate compliance with the energy efficiency and peak demand reduction programs, compliance with the targets established pursuant to the quantitative performance indicators, and for cost recovery of the programs, including any performance incentives or penalties, pursuant to section 13 of P.L.2007, c.340 (C.48:3-98.1). Each electric public utility and gas public utility shall file annually with the board a petition to recover on a full and current basis through a surcharge all reasonable and prudent costs incurred as a result of energy efficiency programs and peak demand reduction programs required pursuant to this section, including but not limited to recovery of and on capital investment, and the revenue impact of sales losses resulting from implementation of the energy efficiency and peak demand reduction schedules, which shall be determined by the board pursuant to section 13 of P.L. 2007, c. 340 (C.48:3-98.1).

(2) If an electric public utility or gas public utility achieves the performance targets established in the quantitative performance indicators, the public utility shall receive an incentive as determined by the board through an accounting mechanism established pursuant to section 13 of P.L.2007, c.340 (C.48:3-98.1) for its energy efficiency measures and peak demand reduction measures for the following year. The incentive shall scale in a linear fashion to a maximum established by the board that reflects the extra value of achieving greater savings.

(3) If an electric public utility or gas public utility fails to achieve the reductions in its performance target established in the quantitative performance indicators, the public utility shall be assessed a penalty as determined by the board through an accounting mechanism established pursuant to section 13 of P.L.2007, c.340 (C.48:3-98.1) for its energy efficiency measures and peak demand reduction measures for the following year. The penalty shall scale in a linear fashion to a maximum established by the board that reflects the extent of the failure to achieve the required savings.

(4) The adjustments made pursuant to this subsection may be made through adjustments of the electric public utility's or gas public utility's return on equity related to the energy efficiency or peak demand reduction programs only, or a specified dollar amount, reflecting the incentive structure as established in this subsection. The adjustments shall not be included in a revenue or cost in any base rate filing and shall be adopted by the board pursuant to the "Administrative Procedure Act."

f. (1) The board shall establish a stakeholder process to evaluate the economically achievable energy efficiency and peak demand reduction requirements, rate adjustments, quantitative performance indicators, and the process for evaluating, measuring, and verifying energy usage reductions and peak demand reductions by the public utilities. As part of the stakeholder process, the board shall establish an independent advisory group to study the evaluation, measurement, and verification process for energy efficiency and peak demand reduction programs, which shall include representatives from the public utilities, the Division of Rate Counsel, and environmental and consumer organizations, to provide recommendations to the board for improvements to the programs.

(2) Each electric public utility and gas public utility shall conduct a demographic analysis as part of the stakeholder process to determine if all of its customers are able to participate fully in implementing energy efficiency measures, to identify market barriers that prevent such participation, and to make recommendations for measures to overcome such barriers. The public utility shall be entitled to full and timely recovery of the costs associated with this analysis.

g. For the purposes of this section, the board shall only consider usage for which public utility energy efficiency programs are applicable.

h. Notwithstanding any provisions of the "Administrative Procedure Act," P.L.1968, c.410 (C.52:14B-1 et seq.) to the contrary, the board shall initiate a proceeding and shall adopt, after notice, provision of the opportunity for comment, and public hearing, a Class III clean thermal energy efficiency portfolio standard that shall assist in achieving the goals for building electrification set forth at in P.L. xxxxxx section g (N.J.S.A. 48:3-87.14e.) of this bill including the following:

1. The Class III clean thermal energy efficiency certificate shall be measured as pounds of CO2 per unit of thermal energy.
2. The Class III clean thermal energy efficiency portfolio standard requirement shall apply, at a minimum, to the replacement of an existing natural gas heating system with a new cold climate heat pump system that is either air or ground source and may apply to the replacement of other fueled heating systems with a new cold climate heat pump system either air or ground source as determined by the board as part of the Class III clean thermal energy efficiency portfolio standard proceeding;
3. The value of the Class III clean thermal energy certificate shall be determined by the board but, at a minimum, shall provide for a payback of 10-years and shall be provided to the customer installing the cold climate heat pump annually over, at a minimum, a 10-year period.
4. Notwithstanding the requirements of this subsection, the board shall ensure that the cost to customers of the Class III clean thermal energy requirement imposed pursuant to this subsection shall not exceed xxx percent of the total paid for natural gas by all customers in the State for the year.
5. In calculating the cost to customers of the Class III clean thermal energy requirement, the board shall reflect any energy and environmental savings attributable to the Class III program in its calculation, which shall include, but not be limited to, the social cost of carbon dioxide emissions at a value no less than the most recently published three percent discount rate scenario of the United States Government Interagency Working Group on Social Cost of Greenhouse Gases. The board shall take any steps necessary to prevent the exceedance of the cap on the cost to customers including, but not limited to, adjusting the Class I renewable energy requirement.
6. A natural gas utility may satisfy the requirements of this subsection by participating in a thermal energy trading program approved by the board in consultation with the Department of Environmental Protection;
7. The board shall establish a multi-year Class III CTEC schedule, applicable to each natural gas utility in this State as a percentage of natural gas sales, beginning with the one-year period commencing on January 1, 2023, and continuing for each subsequent one-year period up to and including, the one-year period commencing on January 1, 2030 that assists in achieving the goals for building electrification as set forth at in P.L. xxxxxx section g (N.J.S.A. 48:3-87.14e.) of this bill.
8. No later than one year after the effective date of enactment of P.L.xxxxxx, c.zz (C.48:3-87.8 et al.), the board shall adopt rules and regulations for the Class III clean thermal
9. The cost of the Class III clean thermal energy program shall be apportioned to natural gas ratepayers using a methodology approved by the board. The methodology shall be similar to that by which the board apportions the costs of SRECs and other renewable energy certificates pursuant to section 38 of P.L.1999, c.23 (C.48:3-87) and consistent with the competitive retail market established by the "Energy Discount and Energy Competition Act," P.L.1999, c.23 (C.48:3-49 et al.).