

To the House Committee of Ways and Means
Chair Aaron Michlewitz
Vice Chair Denise C. Garlick
State House, Room 243
24 Beacon Street
Boston, MA 02133

February 20, 2020

Re: [Senate Bill 2500, An Act setting next-generation climate policy](#), Sections 16-29

Dear Chair Michlewitz and Vice Chair Garlick:

Our immediate attention has been dominated by coronavirus as it should be. I hope you are well. We still must deal with energy issues, however, which is the focus of this letter to the House Committee of Ways and Means .

I draw your attention to the opportunity to correct a glaring omission in the [MassSave](#) program. It affects every one of the residents and homeowners in your district that have one or both of a gas fired furnace and a gas fired hot water heater. That omission deprives homeowners of direct financial rebates and interest free loans for transiting from gas. It can be remedied by adopting Sections 16-29 in [Senate Bill 2500, An Act setting next-generation climate policy](#), that was referred to you on February 10. Anomalously, those benefits are available for a conversion from an electric furnace and an electric water heater to a heat pump. The [MassSave](#) plan is advised by the [Energy Efficiency Advisory Council](#) before which the undersigned testified on February 12 on behalf of the [Gas Leaks Allies](#).

Correcting this omission will enable more people to move gas out of the home quickly and cost effectively, and thereby (i) improve their own and the public's safety and health and (ii) reduce greenhouse gas emissions of methane and carbon dioxide in compliance with the mandate of the Global Warming Solutions Act. In turn, moving gas out of the home will reduce peak demand for gas for home heating and make gas more available for generating electricity, thereby creating the opportunity to lower electricity costs and further flatten the demand for gas.

The [MassSave rebate program](#) as now configured deprives residents and home owners who are gas customers of (i) any rebate (up to \$600) for converting a gas fired hot water heater to a qualifying heat pump and (ii) any rebate for converting gas, oil, or propane fired heating systems to a qualifying heat pump. Yet the MassSave program does provide rebates (from \$800 to several thousand dollars) for converting an electric fired heating system to a [mini-split heat pump](#) or to a [central heat pump system](#) for air conditioning and heating. Nor does the [HEAT Loan program](#) for up to \$25,000 to \$50,000 interest free loans apply to the conversion of any fossil fueled heating system to a heat pump. It only applies to converting electric customers. **These powerful financial incentives should be available to gas customers also.**

In addition to these powerful financial advantages that could be provided by MassSave rebates and HEAT Loans, the following considerations are crucially important today:

- There is no rational basis today to conclude that gas is more efficient,¹ more cost effective, safer for a home or more consistent with public safety than a heat pump.
- Every conversion of a gas fueled appliance to a heat pump decreases the use of gas.²
- Replacing thermal gas home heating with heat pumps shifts gas out of the home and thereby reduces peak demand for thermal gas for home heating.
- Operation of a heat pump is free of greenhouse gasses, such as methane and carbon dioxide, as well as the other toxic emissions that are produced by gas furnaces and gas hot water heaters.^{3 4}
- Carbon dioxide and other greenhouse gases such as methane are by law pollutants. Massachusetts v. Environmental Protection Agency, 549 U.S. 497.
- A non-emitting heat pump or geothermal system is far more compatible with public safety and health than gas.⁵

¹ Eversource is prepared to deploy three heat pump or geothermal projects and has included in its current rate case a request for the funds to do so. Eversource stated: "We focus on 3 opportunities, one for low income, one for residential, and one for commercial/industrial to test all different environments across the Commonwealth in 3 separate pilots." "At a high level, geothermal technologies take advantage of the relatively stable temperature of the ground to provide heating and cooling. A heat exchanger extracts heat out of the ground in winter and extracts heat out of buildings and pushes it into the ground in summer. Geothermal systems tend to be very efficient, with Coefficients of Performance of 300 to 600 percent. That means that one unit of electricity used to drive the heat pump can extract three to six times the energy from the ground. To deliver space heating and cooling, geothermal systems transfer energy between a building and the earth by circulating water (or a non-freezing liquid)." NSTAR Gas Company d/b/a Eversource Energy D.P.U. 19-120 Exhibit ES-PMC/MRG-1 November 8, 2019 Page 45 of 71

² A customer's decision of whether to move off gas is one in which the gas companies sitting as non-voting members of the Energy Efficiency Advisory Council have a clear, and disclosed, financial interest.

³ The emissions from natural gas-fired boilers and furnaces include nitrogen oxides (NOx), carbon monoxide (CO), and carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), volatile organic compounds (VOCs), trace amounts of sulfur dioxide (SO2), and particulate matter (PM)." EPA bulletin

⁴ The hazards of gas are well documented in the report by the Gas Leaks Allies called "Rolling the Dice" that is available on-line. See also letter published on February 20, 2020 in Commonwealth magazine about the hazards of gas. "Physicians critique National Grid official's stance" "calling National Grid's president's commentary "on hunger misleading and disingenuous."

⁵ The pernicious nature and prevalence of gas leaks are little appreciated. For example: ⁵ "Two ways natural gas may be escaping at your meter" "by Ingrid Lobet | November 3, 2017 in innewsourc at <https://innewsourc.org/2017/11/03/natural-gas-leaking/> "Natural gas is leaking – sometimes deliberately – from residential gas meters up and down the state of California.

"That surprise is buried in state documents, a review by *innewsourc* has found.

"The leaks don't mean you're in danger of an explosion. But tiny amounts of natural gas escaping from gas meters not only cost you money, they can be the largest single source of leaks for a utility, as they are for San Diego Gas & Electric.

"Renters and owners pay for this gas because utilities are allowed to charge customers for gas that is lost or unaccounted for. The bill for all that lost gas, from meters and otherwise, is about \$20 million a year in California."

The [Energy Efficiency Advisory Council](#) includes as non-voting member representatives of the gas and electric companies and relies on their experience and expertise. The crux of the matter appears to be that the gas companies present to the DPU a narrow view of the phrase “cost effective” to oppose the extension of those financial benefits to the gas furnaces and gas hot water heaters of their customers and the DPU adopts that narrow view.^{6 7}

[MassSave](#) program benefits are part of a three-year plan that each gas company presents for itself to the Department of Public Utilities (DPU) for approval. [The current three-year plan was approved on January 29, 2019 through 2021](#). Using the Eversource Petition to the DPU as an example, Eversource did not petition the DPU to extend the MassSave rebate and HEAT Loan programs to the conversion of gas appliances to heat pumps.⁸ Nor was such an extension discussed in the [195 page order and decision](#).

Sections 16-29 of [Senate bill 2500](#) provides a solution. The Senate bill amends Section 19, 21 and 22 of Gen. L. Chapter 25 by requiring the Department of Public Utilities to⁹

- expand its efficiency considerations to include, the social value of greenhouse gas emissions reductions in determining cost-effectiveness of alternative energy source changes and upgrades such as heat pumps and calculate values for those benefits,
- quantify the benefits provided and incorporate that in the 3 year plans that are now approved by the Department of Public Utilities under the auspices of the [Energy Efficiency Advisory Council](#), and
- construct 3 year plans that exceed the goals set pursuant to [Section 3\(b\) of the Global Warming Solutions Act, Chapter 21N](#).

⁶ The phrase “cost effective” comes from Section 11 of An Act Relative To Green Communities, [Acts of 2008, Chapter 169](#), which set up the MassSave program.

⁷ Section 11 of An Act Relative To Green Communities, [Acts of 2008, Chapter 169](#) provides, for example: “A program included in the plan shall be screened through cost-effectiveness testing which compares the value of program benefits to the program costs to ensure that the program is designed to obtain energy savings and system benefits with value greater than the costs of the program. Program cost effectiveness shall be reviewed periodically by the department and by the energy efficiency advisory council. If a program fails the cost-effectiveness test as part of the review process, it shall either be modified to meet the test or shall be terminated.”

⁸ The Eversource Petition did not mention conversion of gas furnaces or gas hot water heaters. The Eversource Petition states instead: “The PAs [, Program Administrators who are the gas companies,] will drive awareness through existing marketing channels, education of customers, trade ally direct outreach, and trade shows in order to encourage customers to convert from inefficient electric baseboard or standard heat pumps, oil, and propane systems to cold climate heat pumps.” [NSTAR Gas Company d/b/a Eversource Energy D.P.U. 18-115 Exhibit Eversource Energy-2 October 31, 2018 Page 52 of 94](#).

⁹ Those sections are reproduced in the Addendum A to this letter, and the changes which they propose to Sections 19, 21 and 22 of Chapter 25 are shown in bold in Addendum B.

The House Ways and Means Committee would do well by its constituents to adopt Sections 16-29 of Senate bill 2500, An Act setting next-generation climate policy, so these constituents can transition their homes off gas and also thereby play a direct role in advancing us to a clean energy economy and combatting climate change. That small step would also improve public safety and health, as well as help meet the mandates of the Global Warming Solutions Act.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Edward Woll, Jr.', written in a cursive style.

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ADDENDUM A:

Sections 16-29 of S.2500:

SECTION 16. Section 19 of said chapter 25, as appearing in the 2018 Official Edition, is hereby amended by inserting after the word “practicable”, in line 29, the following words:- ; provided, however, that when determining cost-effectiveness, the calculation of program benefits shall include calculations of the social value of greenhouse gas emissions reductions.

SECTION 17. Said section 19 of said chapter 25, as so appearing, is hereby further amended by inserting after the word “practicable”, in line 41, the following words:- ; provided, however, that when determining cost-effectiveness, the calculation of program benefits shall include calculations of the social value of greenhouse gas emissions reductions.

SECTION 18. Said section 19 of said chapter 25, as so appearing, is hereby further amended by inserting after the word “program”, in line 58, the following words:- ; provided, however, that when determining cost-effectiveness, the calculation of benefits shall include calculations of the social value of greenhouse gas emissions reductions.

SECTION 19. Section 21 of said chapter 25, as so appearing, is hereby amended by inserting after the word “supply”, in line 5, the following words:- ; provided, however, that when determining cost-effectiveness, the calculation of benefits shall include calculations of the social value of greenhouse gas emissions reductions.

SECTION 20. Said section 21 of said chapter 25, as so appearing, is hereby further amended by inserting after the figure “22”, in line 17, the following words:- ; provided, however, that when determining cost-effectiveness, the calculation of benefits shall include calculations of the social value of greenhouse gas emissions reductions.

SECTION 21. Said section 21 of said chapter 25, as so appearing, is hereby further amended by inserting after the word “bodies”, in lines 20 and 21, the following words:- ; provided, however, that when determining cost-effectiveness, the calculation of benefits shall include calculations of the social value of greenhouse gas emissions reductions.

SECTION 22. Said section 21 of said chapter 25, as so appearing, is hereby further amended by inserting after the word “supply”, in line 25, the following words:- ; provided, however, that when determining cost-effectiveness, the calculation of benefits shall include calculations of the social value of greenhouse gas emissions reductions.

SECTION 23. Said section 21 of said chapter 25, as so appearing, is hereby further amended by striking out, in line 69, the words “and (ix)”, and inserting in place thereof the following words:- (ix) an estimate of the social value of greenhouse gas emissions reductions that will result from the plan, including a numerical value of the plan’s contribution to meeting each statewide greenhouse gas emissions limit and sublimit set by statute or regulation, together with provisions for giving each value prominent display in communications and plan documents; and (x).

SECTION 24. Said section 21 of said chapter 25, as so appearing, is hereby further amended by striking out, in line 73, the word “reducing”, the second time it appears, and inserting in place thereof the following words:- greenhouse gas emissions or.

SECTION 25. Said section 21 of said chapter 25, as so appearing, is hereby further amended by inserting after the word “program”, in line 81, the first time it appears, the following words:- ; provided, however, that when determining cost-effectiveness, the calculation of program benefits shall include calculations of the social value of greenhouse gas emissions reductions.

SECTION 26. Said section 21 of said chapter 25, as so appearing, is hereby further amended by inserting after the word “accordingly”, in line 113, the following words:- ; provided, however, that when determining cost-effectiveness, the calculation of program benefits shall include calculations of the social value of greenhouse gas emissions reductions.

SECTION 27. Subsection (d) of said section 21 of said chapter 25, as so appearing, is hereby amended by adding the following 2 paragraphs:-

(4) The plans shall be constructed to meet or exceed the goal set by the secretary pursuant to section 3B of chapter 21N.

(5) Not later than 15 months after the conclusion of the final year of each plan, the department shall issue a formal certificate of compliance, drawing upon the most accurate and most complete data and measurements available, that certifies and quantifies the degree to which the activities undertaken pursuant to each plan contributed to meeting greenhouse gas emission limits imposed by statute or regulation.

SECTION 28. Section 22 of said chapter 25, as so appearing, is hereby amended by inserting after the word “date”, in line 63, the following words:- , a quantification of the degree to which the activities undertaken pursuant to each plan contribute to meeting any and all greenhouse gas emission limits imposed by statute or regulation.

SECTION 29. Said section 22 of said chapter 25, as so appearing, is hereby further amended by inserting after the word “year”, in line 69, the following words:- and a quantification of the degree to which the activities undertaken pursuant to each plan contribute to meeting any and all greenhouse gas emission limits imposed by statute or regulation.

ADDENDUM B:

[Chapter 25, Section 19](#): Funding for energy efficiency programs; mandatory charge per kilowatt-hour; other funding; gas energy efficiency programs; allocation of funds

Section 19. (a) The department shall require a mandatory charge of 2.5 mills per kilowatt-hour for all consumers, except those served by a municipal lighting plant, to fund energy efficiency programs including, but not limited to, demand side management programs. The programs shall be administered by the electric distribution companies and by municipal aggregators with energy plans certified by the department under subsection (b) of section 134 of chapter 164. In addition to the aforementioned mandatory charge, such programs shall also be funded, without further appropriation, by: (1) amounts generated by the distribution companies and municipal aggregators under the Forward Capacity Market program administered by ISO-NE, as defined in section 1 of chapter 164; and (2) cap and trade pollution control programs, including, but not limited to, and subject to section 22 of chapter 21A, not less than 80 per cent of amounts generated by the carbon dioxide allowance trading mechanism established under the Regional Greenhouse Gas Initiative Memorandum of Understanding, as defined in subsection (a) of section 22 of chapter 21A, and the NO_x Allowance Trading Program; and (3) other funding as approved by the department after consideration of: (i) the effect of any rate increases on residential and commercial consumers; (ii) the availability of other private or public funds, utility administered or otherwise, that may be available for energy efficiency or demand resources; and (iii) whether past programs have lowered the cost of electricity to residential and commercial consumers. In authorizing such programs, the department shall ensure that they are delivered in a cost-effective manner capturing all available efficiency opportunities, minimizing administrative costs to the fullest extent practicable and utilizing competitive procurement processes to the fullest extent practicable, **provided, however, that when determining cost-effectiveness, the calculation of program benefits shall include calculations of the social value of greenhouse gas emissions reductions.**

(b) The department may approve and fund gas energy efficiency programs proposed by gas distribution companies including, but not limited to, demand side management programs. Energy efficiency activities eligible for funding under this section shall include combined heat and power and geothermal heating and cooling projects. Funding may be supplemented by funds authorized by section 21. The programs shall be administered by the gas distribution companies. In authorizing such programs, the department shall ensure that they are delivered in a cost-effective manner capturing all available efficiency opportunities, minimizing administrative costs to the fullest extent practicable and utilizing competitive procurement processes to the fullest extent practicable, **provided, however, that when determining cost-effectiveness, the calculation of program benefits shall include calculations of the social value of greenhouse gas emissions reductions.**

(c) Electric and gas energy efficiency program funds shall be allocated to customer classes, including the low-income residential subclass, in proportion to their contributions to those funds; provided, however, that at least 10 per cent of the amount expended for electric energy efficiency programs and at least 20 per cent of the amount expended for gas energy efficiency programs shall be spent on comprehensive low-income residential demand side management and education programs. The low-income residential demand side management and education programs shall be implemented through the low-income weatherization and fuel assistance program network and shall be coordinated with all electric and gas distribution companies in the commonwealth with the objective of standardizing implementation. Such programs shall be screened only through cost-effectiveness testing which compares the value of program benefits to program costs to ensure that a program is designed to obtain energy savings and system benefits with value greater than the costs of the program; **provided, however, that when**

determining cost-effectiveness, the calculation of program benefits shall include calculations of the social value of greenhouse gas emissions reductions.

Chapter 25, Section 21: Energy efficiency and demand reduction resources cost-effective or less expensive than supply preferred; energy and natural gas efficiency investment plans; failure to reasonably comply with plan

Section 21. (a) To mitigate capacity and energy costs for all customers, the department shall ensure that, subject to subsection (c) of section 19, electric and natural gas resource needs shall first be met through all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply; **provided, however, that when determining cost-effectiveness, the calculation of benefits shall include calculations of the social value of greenhouse gas emissions reductions.** The cost of supply shall be determined by the department with consideration of the average cost of generation to all customer classes over the previous 24 months.

(b)(1) Every 3 years, on or before April 30, the electric distribution companies and municipal aggregators with certified efficiency plans shall jointly prepare an energy efficiency investment plan and the natural gas distribution companies shall jointly prepare a natural gas efficiency investment plan. Each plan shall provide for the acquisition of all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply and shall be prepared in coordination with the energy efficiency advisory council established by section 22; **provided, however, that when determining cost-effectiveness, the calculation of benefits shall include calculations of the social value of greenhouse gas emissions reductions.** Each plan shall provide for the acquisition, with the lowest reasonable customer contribution, of all of the cost effective energy efficiency and demand reduction resources that are available from municipalities and other governmental bodies; **provided, however, that when determining cost-effectiveness, the calculation of benefits shall include calculations of the social value of greenhouse gas emissions reductions.**

(2) A plan shall include: (i) an assessment of the estimated lifetime cost, reliability and magnitude of all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply; **provided, however, that when determining cost-effectiveness, the calculation of benefits shall include calculations of the social value of greenhouse gas emissions reductions;** (ii) the amount of demand resources, including efficiency, conservation, demand response and load management, that are proposed to be acquired under the plan and the basis for this determination; (iii) the estimated energy cost savings that the acquisition of such resources will provide to electricity and natural gas consumers, including, but not limited to, reductions in capacity and energy costs and increases in rate stability and affordability for low-income customers; (iv) a description of programs, which may include, but which shall not be limited to: (A) efficiency and load management programs, including energy storage and other active demand management technologies, and strategic electrification, such as measures that are designed to result in cost-effective reductions in greenhouse gas emissions through the use of expanded electricity consumption while minimizing ratepayer costs; (B) demand response programs; (C) programs for research, development and commercialization of products or processes which are more energy-efficient than those generally available; (D) programs for development of markets for such products and processes, including recommendations for new appliance and product efficiency standards; (E) programs providing support for energy use assessment, real time monitoring systems, engineering studies and services related to new construction or major building renovation, including integration of such assessments, systems, studies and services with building energy codes programs and processes, or those regarding the development of high performance or sustainable buildings that exceed code; (F) programs for the

design, manufacture, commercialization and purchase of energy-efficient appliances and heating, air conditioning and lighting devices; (G) programs for planning and evaluation; (H) programs providing commercial, industrial and institutional customers with greater flexibility and control over demand side investments funded by the programs at their facilities; (I) programs for public education regarding energy efficiency and demand management; and (J) programs that result in customers switching to renewable energy sources or other clean energy technologies; provided, however, that not more than 1 per cent of the fund shall be expended for items (C) and (D) collectively, without authorization from the advisory council; (v) a proposed mechanism which provides performance incentives to the companies based on their success in meeting or exceeding the goals in the plan; (vi) the budget that is needed to support the programs; (vii) a fully reconciling funding mechanism which may include, but which shall not be limited to, the charge authorized by section 19; (viii) the estimated amount of reduction in peak load that will be reduced from each option and any estimated economic benefits for such projects, including job retention, job growth or economic development; and (ix) **an estimate of the social value of greenhouse gas emissions reductions that will result from the plan, including a numerical value of the plan's contribution to meeting each statewide greenhouse gas emissions limit and sublimit set by statute or regulation, together with provisions for giving each value prominent display in communications and plan documents;** and (x) data showing the percentage of all monies collected that will be used for direct consumer benefit, such as incentives and technical assistance to carry the plan. With the approval of the council, the plan may also include a mechanism to prioritize projects that have substantial benefits in reducing peak load, reducing **greenhouse gas emissions** or the energy consumption or costs of municipalities or other governmental bodies, or that have economic development, job creation or job retention benefits.

(3) A program included in the plan shall be screened through cost-effectiveness testing which compares the value of program benefits to the program costs to ensure that the program is designed to obtain energy savings and other benefits with value greater than the costs of the program; **provided, however, that when determining cost-effectiveness, the calculation of program benefits shall include calculations of the social value of greenhouse gas emissions reductions.** Program cost effectiveness shall be reviewed periodically by the department and by the energy efficiency advisory council. For the purposes of reviewing cost effectiveness, programs shall be aggregated by sector. Any sector with a benefit cost ratio greater than 1.0 indicating benefits are greater than costs shall be considered cost-effective. If a sector fails the cost-effectiveness test as part of the review process, its component programs shall either be modified so that the sector meets the test or shall be terminated.

(c) Each plan prepared under subsection (b) shall be submitted for approval and comment by the energy efficiency advisory council every 3 years on or before April 30. The electric and natural gas distribution companies and municipal aggregators shall provide any additional information requested by the council that is relevant to the consideration of the plan. The council shall review the plan and any additional information and shall submit its approval or comments to the electric and natural gas distribution companies and municipal aggregators not later than 3 months after submission of the plan. The electric and natural gas distribution companies and municipal aggregators may make any changes or revisions to reflect the input of the council.

(d)(1) The electric and natural gas distribution companies and municipal aggregators shall submit their respective plans, together with the council's approval or comments and a statement of any unresolved issues, to the department every 3 years on or before October 31. The department shall consider the plans and shall provide an opportunity for interested parties to be heard in a public hearing.

(2) Not later than 90 days after submission of a plan, the department shall issue a decision on the plan which ensures that the electric and natural gas distribution companies have identified and shall capture

all energy efficiency and demand reduction resources that are cost effective or less expensive than supply and shall approve, modify and approve, or reject and require the resubmission of the plan accordingly; **provided, however, that when determining cost-effectiveness, the calculation of program benefits shall include calculations of the social value of greenhouse gas emissions reductions.** The department shall approve a fully reconciling funding mechanism for the approved plan and, in the case of municipal aggregators, a fully reconciling funding mechanism that requires coordination between the distribution company and municipal aggregator to ensure that program costs are collected, allocated and distributed in a cost effective, fair and equitable manner. The department shall determine the effectiveness of the plan on an annual basis.

(4) The plans shall be constructed to meet or exceed the goal set by the secretary pursuant to section 3B of chapter 21N.

(5) Not later than 15 months after the conclusion of the final year of each plan, the department shall issue a formal certificate of compliance, drawing upon the most accurate and most complete data and measurements available, that certifies and quantifies the degree to which the activities undertaken pursuant to each plan contributed to meeting greenhouse gas emission limits imposed by statute or regulation.

(3) Each electric and natural gas plan shall be in effect for 3 years.

(e) If an electric or natural gas distribution company or municipal aggregator has not reasonably complied with the plan, the department may open an investigation. In any such investigation, the utility company or aggregator shall have the burden of proof to show whether it had good cause for failing to reasonably comply with the plan. If the utility company or aggregator does not meet its burden, the department may levy a fine of not more than the product of \$0.05 per kilowatt-hour or \$1 per therm times the shortfall of kilowatt-hours saved or therms saved, as applicable, depending upon the facts and circumstances and degree of fault, which shall be paid to the Massachusetts clean energy technology center within 60 days after the end of the year in which the department levies the fine. The fine shall not impact ratepayers. The department of energy resources shall oversee the use of the funds held by the Massachusetts clean energy technology center under this subsection so as to maximize the amount of energy efficiency achieved.

Chapter 25, Section 22: Energy efficiency advisory council; membership; duties; quarterly report to council

Section 22. (a) The department shall appoint and convene an energy efficiency advisory council which shall consist of 15 members, including 1 person representing each of the following: (1) residential consumers, (2) the low-income weatherization and fuel assistance program network, (3) the environmental community, (4) businesses, including large C&I end-users, (5) the manufacturing industry, (6) energy efficiency experts, (7) organized labor, (8) the department of environmental protection, (9) the attorney general, (10) the executive office of housing and economic development, (11) the Massachusetts Non-profit Network, (12) a city or town in the commonwealth, (13) the Massachusetts association of realtors, (14) a business employing fewer than 10 persons located in the commonwealth that performs energy efficiency services and (15) the department of energy resources. Interested parties shall apply to the department for designation as members. Members shall serve for terms of 5 years and may be reappointed. The commissioner of energy resources shall serve as chair of the council. A member who is a representative of energy efficiency experts shall not have a contractual relationship with an electric or natural gas distribution company doing business in the commonwealth or any affiliate of such company, or any municipal aggregator. There shall be 1 non-voting, ex-officio

member from each of the electric and natural gas distribution companies, 1 from each of the approved municipal aggregators, 1 from the heating oil industry, 1 from ISO New England and 1 from energy efficiency businesses.

(b) The council shall, as part of the approval process by the department, seek to maximize net economic benefits through energy efficiency and load management resources and to achieve energy, capacity, climate and environmental goals through a sustained and integrated statewide energy efficiency effort. The council shall review and approve demand resource program plans and budgets, work with program administrators in preparing energy resource assessments, determine the economic, system reliability, climate and air quality benefits of efficiency and load management resources, conduct and recommend relevant research, and recommend long term efficiency and load management goals to maximize economic savings and achieve environmental goals. Approval of efficiency and demand resource plans and budgets shall require a two-thirds majority vote. The council shall, as part of its review of plans, examine opportunities to offer joint programs providing similar efficiency measures that save more than 1 fuel resource or to coordinate programs targeted at saving more than one fuel resource. Any costs for joint programs shall be allocated equitably among the efficiency programs.

(c) The council may retain expert consultants; provided, however, that such consultants shall not have any contractual relationship with an electric or natural gas distribution company doing business in the commonwealth or any affiliate of such company.

The council shall annually submit to the department a proposal regarding the level of funding required for the retention of expert consultants and reasonable administrative costs. The proposal shall be approved by the department either as submitted or as modified by the department. The department shall allocate funds sufficient for these purposes from the natural gas and electric efficiency funding authorized under section 19; provided, however, that such allocation shall not exceed 1 per cent of such funding on an annual basis. The consultants used under this section shall be experts in energy efficiency and shall be independent.

(d) The electric and natural gas distribution companies and municipal aggregators shall provide quarterly reports to the council on the implementation of their respective plans. The reports shall include a description of the program administrator's progress in implementing the plan, a summary of the savings secured to date, **a quantification of the degree to which the activities undertaken pursuant to each plan contribute to meeting any and all greenhouse gas emission limits imposed by statute or regulation and such other information as the council shall determine.** The council shall provide an annual report to the department and the joint committee on telecommunications, utilities and energy on the implementation of the plan which includes descriptions of the programs, expenditures, cost-effectiveness and savings and other benefits during the previous year **and a quantification of the degree to which the activities undertaken pursuant to each plan contribute to meeting any and all greenhouse gas emission limits imposed by statute or regulation.**

(e) A business employing fewer than 10 persons located in the commonwealth that performs energy efficiency services may only be appointed to the energy efficiency advisory council, under subsection (a), if the business is elected by a majority of businesses performing energy efficiency services in the Mass Save program.