SENATE DOCKET, NO. 757 FILED ON: 1/16/2019

SENATE . . . . . No. 2005

The Commonwealth of Massachusetts

PRESENTED BY:

Marc R. Pacheco

To the Honorable Senate and House of Representatives of the Commonwealth of Massachusetts in General Court assembled:

The undersigned legislators and/or citizens respectfully petition for the adoption of the accompanying bill:

An Act to secure a clean energy future.

PETITION OF:

NAME:	DISTRICT/ADDRESS:	
Marc R. Pacheco	*First Plymouth and Bristol*	
Ruth B. Balser	*12th Middlesex*	*1/16/2019*
William N. Brownsberger	*Second Suffolk and Middlesex*	*1/17/2019*
Adam G. Hinds	*Berkshire, Hampshire, Franklin and Hampden*	*1/17/2019*
Michael D. Brady	*Second Plymouth and Bristol*	*1/18/2019*
James T. Welch	*Hampden*	*1/18/2019*
Jack Patrick Lewis	*7th Middlesex*	*1/24/2019*
Thomas M. Stanley	*9th Middlesex*	*1/24/2019*
Edward J. Kennedy	*First Middlesex*	*1/24/2019*
Jason M. Lewis	*Fifth Middlesex*	*1/24/2019*
Nick Collins	*First Suffolk*	*1/24/2019*
Michael O. Moore	*Second Worcester*	*1/24/2019*
Paul A. Schmid, III	*8th Bristol*	*1/24/2019*
Antonio F. D. Cabral	*13th Bristol*	*1/24/2019*
Rebecca L. Rausch	*Norfolk, Bristol and Middlesex*	*1/24/2019*
Joanne M. Comerford	*Hampshire, Franklin and Worcester*	*1/30/2019*
Julian Cyr	*Cape and Islands*	*2/7/2019*

Sal N. DiDomenico	*Middlesex and Suffolk*	*1/31/2019*
Diana DiZoglio	*First Essex*	*2/7/2019*
James B. Eldridge	*Middlesex and Worcester*	*1/30/2019*
Paul R. Feeney	*Bristol and Norfolk*	*1/30/2019*
Patricia D. Jehlen	*Second Middlesex*	*1/30/2019*
Michael F. Rush	*Norfolk and Suffolk*	*1/30/2019*
Mike Connolly	*26th Middlesex*	*1/25/2019*
Harriette L. Chandler	*First Worcester*	*1/25/2019*
Tram T. Nguyen	*18th Essex*	*1/26/2019*
Jennifer E. Benson	*37th Middlesex*	*1/29/2019*
Michelle M. DuBois	*10th Plymouth*	*1/29/2019*
Tami L. Gouveia	*14th Middlesex*	*1/29/2019*
Cindy F. Friedman	*Fourth Middlesex*	*1/30/2019*
Mary S. Keefe	*15th Worcester*	*1/31/2019*
José F. Tosado	*9th Hampden*	*1/31/2019*
Anne M. Gobi	*Worcester, Hampden, Hampshire and Middlesex*	*1/31/2019*
Lori A. Ehrlich	*8th Essex*	*2/1/2019*
Bruce E. Tarr	*First Essex and Middlesex*	*2/1/2019*
John F. Keenan	*Norfolk and Plymouth*	*2/1/2019*
Sonia Chang-Diaz	*Second Suffolk*	*2/1/2019*
Mark C. Montigny	*Second Bristol and Plymouth*	*2/1/2019*
Cynthia Stone Creem	*First Middlesex and Norfolk*	*2/1/2019*
James K. Hawkins	*2nd Bristol*	*2/1/2019*
Denise Provost	*27th Middlesex*	*2/1/2019*
Carlos González	*10th Hampden*	*2/1/2019*
Nika C. Elugardo	*15th Suffolk*	*2/4/2019*
Joan B. Lovely	*Second Essex*	*2/11/2019*
Patrick M. O'Connor	*Plymouth and Norfolk*	*2/20/2019*
Dean A. Tran	*Worcester and Middlesex*	*2/27/2019*
Barry R. Finegold	*Second Essex and Middlesex*	*3/20/2019*
Eric P. Lesser	*First Hampden and Hampshire*	*3/27/2019*
Brendan P. Crighton	*Third Essex*	*4/1/2019*
Walter F. Timilty	*Norfolk, Bristol and Plymouth*	*4/1/2019*

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SENATE . . . . . No. 2005

By Mr. Pacheco, a petition (accompanied by bill, Senate, No. 2005) of Marc R. Pacheco, Ruth B. Balser, William N. Brownsberger, Adam G. Hinds and other members of the General Court for legislation to secure a clean energy future. Telecommunications, Utilities and Energy.

The Commonwealth of Massachusetts

In the One Hundred and Ninety-First General Court
(2019-2020)

An Act to secure a clean energy future.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

SECTION 1. Section 9A of chapter 7 of the General Laws, as appearing in the 2016 Official Edition, is hereby amended by striking out the last 4 paragraphs and inserting in place thereof the following 3 paragraphs:

The commonwealth shall ensure that 50 per cent of the motor vehicles owned or leased by the commonwealth in the state fleet, including vehicles owned or leased by quasi-public agencies, shall be zero emission vehicles by June 30, 2025. “Zero emission vehicle” shall mean a battery electric vehicle, a plug-in hybrid vehicle or a fuel cell vehicle. In reaching that requirement, the secretary shall prioritize for electrification any vehicles cited as medium or high priority by the study commissioned by section 6 of chapter 448 of the acts of 2016.

The secretary shall submit to the clerks of the senate and house of representatives and the chairs of the joint committee on transportation a statement annually, not later than July 1, detailing the progress made in meeting the requirements of this section. The report shall include:

(i) a complete listing of vehicles leased, owned or assigned to each agency; and (ii) a description of each vehicle, including the year, make and model, whether the vehicle is powered by an internal combustion engine, a mild hybrid engine, a plug-in hybrid motor, a fully battery electric motor, a hydrogen fuel cell electric motor, a compressed liquefied natural gas engine, a propane engine or other means of propulsion. If a zero emission vehicle is not purchased or leased, the secretary shall provide, in each instance, a specific explanation as to why a zero emission vehicle could not have sufficiently fulfilled the intended functions.

Beginning in fiscal year 2026, the secretary shall ensure that 100 per cent of new motor vehicles purchased or leased each year by the commonwealth shall be zero emission vehicles. The secretary shall provide a written report to the clerks of the senate and house of representatives and the chairs of the joint committee on transportation annually, not later than July 1, explaining in detail all instances where a zero emission vehicle was not purchased or leased and the reasons therefor.

SECTION 2. The first paragraph of subsection (a) of section 11E of chapter 12 of the General Laws, as so appearing, is hereby amended by striking out the second sentence and inserting in place thereof the following sentence:- The attorney general, through the office of ratepayer advocacy, may intervene, appear and participate in administrative, regulatory or judicial proceedings on behalf of any group of consumers in connection with any matter involving a company doing business in the commonwealth and subject to the jurisdiction of the department of public utilities or the department of telecommunications and cable under chapter 164, 164A, 164B, 165 or 166.

SECTION 3. Section 26A of chapter 21 of the General Laws, as so appearing, is hereby amended by inserting after the word “effluent”, in line 67, the following words:- , hydraulic fracturing fluid.

SECTION 4. Section 27 of said chapter 21, as so appearing, is hereby amended by adding the following clause:-

(14) Enforce restrictions on drilling, waste treatment and disposal and mining activities which have been enacted to protect the water quality and the natural resources of the commonwealth.

SECTION 5. Section 42 of said chapter 21, as so appearing, is hereby amended by inserting after the word “commonwealth”, in line 3, the following words:- , or into an injection well or into a treatment works in the commonwealth.

SECTION 6. Said chapter 21 is hereby further amended by inserting after section 53A the following section:-

Section 53B. (a) As used in this section, the following words shall have the following meanings unless the context clearly requires otherwise:-

“Fluid”, any material or substance which flows or moves whether in semi-solid, liquid, sludge, gas or any other form or state.

“Gas”, all natural gas, whether hydrocarbon or nonhydrocarbon, including hydrogen sulfide, helium, carbon dioxide, nitrogen, hydrogen, casinghead gas and all other fluid hydrocarbons not defined as oil.

"Hydraulic fracturing", the process of pumping a fluid into or under the surface of the ground in order to create fractures in rock to produce or recover oil or gas.

"Oil", crude petroleum, oil and all hydrocarbons, regardless of specific gravity, that are in the liquid phase in the reservoir and are produced at the wellhead in liquid form.

"Oil and gas", oil and gas collectively, or either oil or gas, as the context may require to give effect to the purposes of this chapter.

(b) For the period from January 1, 2020 to December 31, 2029, inclusive, no person shall engage in hydraulic fracturing.

(c) For the period from January 1, 2020 to December 31, 2029, inclusive, no person shall collect, store, treat or dispose of wastewater hydraulic fracturing fluid, wastewater solids, drill cuttings or other byproducts from hydraulic fracturing.

SECTION 7. Section 1 of chapter 21N of the General Laws, as appearing in the 2016 Official Edition, is hereby amended by striking out the definition of "Direct emissions" and inserting in place thereof the following definition:-

"Direct emissions", emissions from sources that are owned or operated, in whole or in part, by a person, entity or facility including, but not limited to: (i) emissions from a transportation vehicle; (ii) a building or structure, including but not limited to a residential, commercial, industrial or institutional building or structure; or (iii) an industrial, manufacturing or other business process.

SECTION 8. Said section 1 of said chapter 21N, as so appearing, is hereby further amended by inserting after the definition of “Greenhouse gas emissions source” the following definition:-

“Greenhouse gas-emitting priority”, natural gas, petroleum, coal and any solid, liquid or gaseous fuel derived therefrom,and any other matter identified by the department as a greenhouse gas-emitting priority that emits or is capable of emitting a greenhouse gas when burned.

SECTION 9. Said section 1 of said chapter 21N, as so appearing, is hereby further amended by inserting after the word “of”, in line 50, the following words:- a greenhouse gas-emitting priority or.

SECTION 10. Said section 1 of said chapter 21N, as so appearing, is hereby further amended by striking out the definition of “Market-based compliance mechanism”, in lines 56 to 65, inclusive, and inserting in place thereof the following definition:-

“Market-based compliance mechanism”, any form of price compliance system imposed on sources or categories of sources or any form of pricing mechanism imposed directly on greenhouse gas-emitting priorities or on the distribution or sale of greenhouse gas-emitting priorities which are designed to reduce emissions as required by this chapter including, but not limited to: (i) a system of market-based declining annual aggregate emissions limitations for sources or categories of sources that emit greenhouse gases; (ii) greenhouse gas emissions exchanges, banking, credits and other transactions governed by rules and protocols established by the secretary or a regional program that results in the same greenhouse gas emissions reduction, over the same time period, as direct compliance with a greenhouse gas emissions limit

or emission reduction measure adopted by the executive office pursuant to this chapter; or (iii) a system of charges or exactions imposed to reduce statewide greenhouse gas emissions in whole or in part.

SECTION 11. Subsection (a) of section 2 of said chapter 21N, as so appearing, is hereby amended by striking out the first sentence and inserting in place thereof the following sentence:- The department shall monitor and regulate greenhouse gas-emitting priorities and direct and indirect emissions of greenhouse gases with the goal of reducing emissions in order to achieve greenhouse gas emissions limits established by this chapter.

SECTION 12. Subsection (b) of section 3 of said chapter 21N, as so appearing, is hereby amended by striking out clauses (2) and (3) and inserting in place thereof the following 2 clauses:- (2) a 2030 statewide greenhouse gas emissions limit accompanied by plans to achieve this limit in accordance with said section 4; provided, however, that the 2030 statewide greenhouse gas emissions limit shall maximize the ability of the commonwealth to meet the 2050 statewide greenhouse gas emissions limit; (3) a 2040 statewide greenhouse gas emissions limit accompanied by plans to achieve this limit in accordance with said section 4; provided, however, that the 2040 statewide greenhouse gas emissions limit shall maximize the ability of the commonwealth to meet the 2050 statewide greenhouse gas emissions limit.

SECTION 13. Subsection (a) of section 4 of said chapter 21N, as so appearing, is hereby amended by inserting after the first sentence the following 2 sentences:- The secretary shall further adopt the 2030 statewide greenhouse gas emissions limit pursuant to clause (2) of subsection (b) of section 3, which shall be not less than 50 per cent below the 1990 emissions level and shall plan to achieve that reduction pursuant to subsection (h) of section 4. The

secretary shall further adopt the 2040 statewide greenhouse gas emissions limit pursuant to clause (3) of said subsection (b) of said section 3, which shall be not less than 75 per cent below the 1990 emissions level and shall plan to achieve that reduction pursuant to said subsection (h) of said section 4.

SECTION 14. Said subsection (a) of said section 4 of said chapter 21N, as so appearing, is hereby further amended by striking out the last sentence and inserting in place thereof the following sentence:- The 2020, 2030 and 2040 statewide greenhouse gas emissions limits and implementation plans shall comply with this section.

SECTION 15. Said section 4 of said chapter 21N, as so appearing, is hereby further amended by striking out, in line 17, the word "limit" and inserting in place thereof the following word:- limits.

SECTION 16. Said section 4 of said chapter 21N, as so appearing, is hereby amended by striking out, in line 29, the word "shall" and inserting in place thereof the following words:- , in consultation with the department of public health, shall.

SECTION 17. Said section 4 of said chapter 21N, as so appearing, is hereby further amended by striking out, in line 42, the words "emission limit and implementing plan" and inserting in place thereof the following words:- , 2030 and 2040 statewide greenhouse gas emissions limits and implementing plans.

SECTION 18. Said section 4 of said chapter 21N, as so appearing, is hereby further amended by striking out subsection (h) and inserting in place thereof the following subsection:-

(h) The secretary shall issue a 2050 emissions reduction plan that shall describe in detail the commonwealth's actions and methods for achieving the 2030, 2040 and 2050 emissions limit required by subsection (b) of section 3. The 2050 emissions reduction plan shall: (i) address all sources and categories of sources that emit greenhouse gas emissions; (ii) take into account the imposition of market-based compliance mechanisms required in section 7A; (iii) indicate for each source or category of sources how, to what extent and when the commonwealth will act to reduce its emissions in order to achieve the 2050 emissions limit required by said subsection (b) of said section 3; and (iv) include or be accompanied by any analysis quantitatively assessing proposed and planned actions, methods, regulations and programs designed to reduce greenhouse gas emissions for their economic, environmental and public health impacts, particularly those that may benefit or burden low-income or moderate-income people. The 2050 emission reduction plan shall be developed following public hearings. The secretary shall evaluate, adjust if necessary and publish updates to the 2050 emissions reduction plan not less than once every 30 months, including assessments of the effectiveness, to date, of all actions, methods, regulations and programs designed to reduce greenhouse gas emissions and the extent to which the actions, methods, regulations and programs disproportionately impact low-income households and minimize administrative burdens and leakage.

SECTION 19. Subpart (4) of subsection (b) of section 3 of chapter 21N of the General Laws, as appearing in the 2016 Official Edition, is hereby amended by striking it out and inserting in place thereof the following:- (4) a 2050 statewide emissions limit that achieves at least net zero statewide greenhouse gas emissions.

SECTION 20. Section 5 of said chapter 21N, as so appearing, is hereby amended by inserting after the word "communities", in line 10, the following words:- including, but not

limited to, economically-distressed manufacturing, economic sectors, economic subsectors or individual employers located within those communities.

SECTION 21. Said chapter 21N is hereby further amended by striking out section 6, as so appearing, and inserting in place thereof the following section:-

Section 6. In implementing its 2050 emissions reduction plan, the commonwealth and its agencies shall promulgate regulations not later than December 31, 2023 regarding all sources or categories of sources and all greenhouse gas-emitting priorities that are consistent with the plan required by subsection (h) of section 4 and sufficient to achieve the statewide emissions limits pursuant to section 3. The regulations shall be designed to ensure that the commonwealth achieves its required emissions reductions equitably and in a manner that protects and, where feasible, improves the condition of low-income and moderate-income persons while creating, where feasible, additional employment and economic development in the commonwealth.

SECTION 22. Said chapter 21N is hereby further amended by inserting after section 7 the following 2 sections:-

Section 7A. The secretary shall promulgate regulations establishing market-based compliance mechanisms for: (i) the transportation sector; provided, however, that the regulations shall, at a minimum, be designed to reduce passenger vehicle and light duty truck emissions; (ii) the commercial, industrial and institutional sectors, including but not limited to buildings and industrial, manufacturing and other business processes; and (iii) the residential building sector.

The market-based compliance mechanisms established pursuant to this section shall: (i) maximize the ability of the commonwealth to achieve the greenhouse gas emissions limits established pursuant to this chapter;(ii) be designed to minimize disproportionate impacts on

low-income households; (iii) be designed to identify, with special attention to manufacturing, economic sectors, economic subsectors or individual employers at risk of serious negative impacts due to the market-based compliance mechanisms established pursuant to this section; and (iv) be designed to mitigate impacts identified in clause (iii). The market-based compliance mechanisms may be established by joining any existing market-based compliance mechanisms. The secretary shall evaluate and adjust, if necessary, all market-based compliance mechanisms adopted pursuant to this section at least once every 30 months to meet the requirements of this section and to achieve greenhouse gas emissions limits. The regulations may be promulgated as part of a coordinated regional effort with other states or Canadian Provinces to implement, expand or join any other market-based compliance mechanisms. The department shall ensure it has adequate resources to implement the requirements of this chapter.

Section 7B. Not later than September 30, 2023 and every 5 years thereafter, the secretary or a designee shall publish a comprehensive energy plan that shall include and be based upon reasonable projections of the commonwealth's energy demands for electricity, transportation and thermal conditioning and shall also include strategies for meeting those demands in a regional context, prioritizing meeting energy demand through conservation, energy efficiency and other demand-reduction resources in a manner that contributes to the commonwealth meeting the limits for 2030 and 2040 pursuant to subsection (b) of section 3.

SECTION 23. Said chapter 21N is hereby further amended by inserting the following section:-

Section 10. For purposes of this section, "energy consumer" shall mean any natural person who, for personal or household consumption: purchases or contracts to purchase

electricity or any form of fossil fuel; or purchases or contracts to purchase vehicular fuel of any kind.

(a) No unit of State, county, or local government shall promulgate any regulatory scheme, public program or public activity affecting energy consumers or authorize, ratify, participate in, or provide public monies for any public or private program or activity affecting energy consumers that –

(1) excludes an energy consumer from participation in, denies an energy consumer the benefits of, or otherwise subjects an energy consumer to discrimination regarding energy services or programs on the basis of any class of protection expressly identified in Chapter 151B, Section 4 of the General Laws; or

(2) has the effect of excluding energy consumers from participation in, denying energy consumers the benefits of, or otherwise subjecting energy consumers to discrimination regarding energy services or programs or undue burdens on the basis of any class of protection expressly identified in Chapter 151B, Section 4 of the General Laws.

(b) Any unit of State, county, or local government that engages in conduct affecting energy consumers described in (a) of this section shall establish –

(1) mechanisms or bodies for investigating and reviewing regulatory schemes, programs, and activities affecting energy consumers and shall set standards reasonably calculated to avoid violations of subsections (a)(1) and (a)(2); and

(2) an impartial and expeditious administrative forum for any one or more energy consumers residing the Commonwealth aggrieved by a violation of subsection (a)(1) or any

group of ten energy consumers residing in the Commonwealth similarly aggrieved by a violation of subsection (a)(2) to seek equitable redress. Any final administrative decision issued under this subsection shall be reviewable by the Superior Court of the county in which the unit of government sits.

(c) Nothing contained in this section shall be construed so as to impair, derogate or diminish any other right or remedy which may be available to any person, but any cause of action herein authorized shall be in addition to any such right or remedy.

SECTION 24. Subsection (b) of section 21 of chapter 25 of the General Laws, as appearing in the 2016 Official Edition, is hereby amended by adding the following paragraph:-

(4) At lease once annually, the natural gas and electric utilities and energy efficiency service companies shall distribute information about MassSave programs via billing statements to their customers.

SECTION 25. Section 3 of chapter 25A, as so appearing, is hereby amended by inserting after the definition of “Energy savings” the following 3 definitions:-

“Environmental justice”, the right to be protected from environmental pollution and to live in and enjoy a clean and healthful environment regardless of race, income, national origin or English language proficiency; provided, however, that “environmental justice” shall include the equal protection and meaningful involvement of all people with respect to the development, implementation and enforcement of environmental laws, regulations and policies and the equitable distribution of environmental benefits.

"Environmental justice population", a neighborhood or a population: (i)(A) determined by the executive office of energy and environmental affairs or its subordinate agencies to have experienced a disproportionate environmental impact since Jan, 1, 1998, or to have otherwise been denied its enjoyment of environmental justice; (B) in which the annual median household income is equal to or less than 110 per cent of the statewide median; or (C) in which minorities comprise 25 per cent or more of the population; or (ii) identified by the executive office of energy and environmental affairs or its subordinate agencies in an environmental justice strategy issued pursuant to this chapter; provided, however, that "environmental justice population" shall meet at least 1 of the requirements of subclauses (A) to (C), inclusive, of clause (i).

"Environmental justice household", households within environmental justice populations.

SECTION 26. Said section 3 of said chapter 25A, as so appearing, is hereby further amended by inserting after the definition of "Local government body" the following definition:

"Low-income households", low-income households as defined under section 1 of chapter 40T.

SECTION 27. Subsection (a) of section 11F of chapter 25A of the General Laws, as so appearing, is hereby amended by striking out clauses (4) and (5) and inserting in place thereof the following clause:- and (4) an additional 3 per cent of sales each year thereafter.

SECTION 28. Said chapter 25A is hereby further amended by inserting after section 11I the following section:-

Section 11J. (a) When creating, pursuant to general law, session law or other authority, a solar incentive program, including, but not limited to, the solar incentive program established

pursuant to chapter 75 of the acts of 2016, the department shall design a program whose economic and environmental benefits are equitably shared by low-income households, environmental justice populations and other communities facing barriers to accessing the program. Nothing in this section shall delay the commencement of the program or the implementation prior to the first program review. The department may dedicate part of the program to resolving other barriers to access if such barriers are identified. The department shall specify in program design its plans to reach communities whose primary language is not English.

(b) In designing and modifying the program pursuant to subsection (a), the department shall consider: (i) the proportion of benefits received by low-income households, environmental justice households and other communities with barriers to access compared to benefits received by other communities under the solar incentive program; and (ii) the distribution of benefits received pursuant to other requirements and set-asides in any solar incentive program, including set-asides for solar units less than or equal to 25 kW. In determining the minimum portion, the department shall hold at least 3 public hearings in environmental justice communities or other communities with barriers to access.

SECTION 29. Chapter 25A of the General Laws is hereby amended by adding the following section:-

Section 17. (a) The department shall establish an energy storage system target for the deployment of energy storage systems by distribution company customers, distribution companies and municipal lighting plants to achieve a statewide energy storage deployment target of 2,000 megawatts by January 1, 2030 and a subsequent statewide energy storage deployment target to be achieved by January 1, 2035. The department shall set annual statewide deployment

targets to be achieved in each distribution company's and municipal lighting plant's service territory in order to reach the energy storage system targets required under this section.

(b) To achieve the annual targets established in subsection (a), the department may consider a variety of deployment mechanisms and may require policies to encourage the cost-effective deployment of energy storage systems including, but not limited to: (i) distribution company or municipal lighting plant programs to encourage private deployment of energy storage systems by their customers; (ii) procurement of cost-effective energy storage systems to be owned and operated by a distribution company; provided, however, that any such procurement shall finance the deployment of energy storage systems for the purpose of: (1) a nonwires alternative to investment in distribution; (2) deferring investment in distribution infrastructure that would otherwise be needed to address actual or forecasted overloads on distribution circuits or at substations; or (3) improving the capability of the distribution system to recover from adverse events that otherwise could result in long-term outages in critical areas of the distribution system; (iii) the use of alternative compliance payments collected pursuant to subsection (e)to fund a grant program for private development; and (iv) the use of energy storage to replace fossil generation and the use of energy efficiency funds under section 19 of chapter 25 if the department determines that customer-owned energy storage provides sustainable peak load reductions on either the electric or gas distribution systems and is otherwise consistent with section 11G of this chapter.

(c) A distribution company shall not own or operate energy storage systems equal to more than 20 per cent of the annual target established by the department for the distribution company's service territory established in subsection (a) for the purpose of achieving the annual targets; provided, however, that the department shall ensure that no distribution company shall

prevent or interfere with a customer or developer's ability to enter into agreements to own or operate behind the meter energy storage systems.

(d) Each distribution company and municipal lighting plant shall annually make a map available that identifies areas of critical need for energy storage systems within their service territory. Each distribution company and municipal light plant shall identify on the map areas of actual or forecasted overloads on distribution circuits or at substations. The map shall aggregate system detail as necessary for distribution system security.

(e) The department shall promulgate regulations to: (i) establish a carve-out of the alternative energy portfolio standard obligation under section 11F1/2 for energy storage systems as defined in section 1 of chapter 164; and (ii) allow each distribution company and municipal lighting plant to discharge its obligations under this section by either procuring attributes from energy storage systems that qualify under the carve-out established pursuant to this section or by making an alternative compliance payment in an amount to be established by the department. The regulations shall require distribution companies and municipal lighting plants to annually submit to the department a report that shows it is in compliance with this section.

(f) Annually, not later than December 1, the department shall make available on its website a report on the energy storage system target program.

(g) The department shall promulgate regulations to implement this section.

Section 18. (a) The department shall establish an incentive program to support non-solar renewable energy resources that are less than 5 megawatts and that qualify for the class I renewable energy portfolio standard under section 11F. The program shall be designed to finance the development, construction, and operation of renewable-energy distributed-generation

projects through a fixed price performance-based incentive that is designed to achieve annual megawatt targets at reasonable cost through competitive processes established by the department.

(b) The incentive program shall be tariff-based and the department shall promulgate regulations that, at a minimum: (i) establish the eligibility criteria for facilities to qualify under the program; (ii) establish the methodology for establishing incentives; and (iii) direct the distribution companies to jointly file a model tariff to implement the program with department of public utilities, for its review and approval.

(c) The methodology for establishing incentive levels shall: (i) take into consideration underlying system installation, soft, and fuel costs; (ii) take into account electricity revenues and any federal or state incentives; (iii) rely on market-based mechanisms or price signals as much as possible; (iv) differentiate incentives levels by size, location, and project type; (v) establish annual targets for each technology type; (vi) ensure that the costs of the program are shared collectively among all ratepayers of the distribution companies; and (vii) promote investor confidence through long-term incentive revenue certainty and market stability.

(d) Attributes, as defined by the department, of the Class I renewable energy generating sources that qualify under regulations established pursuant to this section shall be eligible for use by retail electric suppliers pursuant to their obligations under section 11F.

SECTION 30. Chapter 30A of the General Laws is hereby amended by inserting after section 10A the following section:-

Section 10B. Notwithstanding section 10, in any adjudicatory proceeding regarding a petition, request for approval or investigation of a gas company or electric company, as those terms are defined in section 1 of chapter 164, the following shall be permitted to participate as

full parties in the proceeding: (i) a municipality that is within the service area of such company; (ii) a member of the general court whose district includes ratepayers of such company; and (iii) a group of not less than 50 persons who are immediately and significantly impacted by such a petition or request for approval or investigation and whose involvement would not unduly broaden the issues in the proceeding.

SECTION 31. Section 16 of chapter 71 of the General Laws, as appearing in the 2016 Official Edition, is hereby amended by adding the following subsection:-

(s) To lease or license land to a business or other organization for periods not exceeding 30 years for the purpose of generating renewable energy; provided, however, that such use shall not interfere with the educational programs being conducted by the district; provided further, that no lease or license shall be executed until the expiration of 60 days after the date on which the lease or license was voted on by the district committee; and provided further, that before the expiration of this period, any member town of the regional school district may hold a town meeting to express disapproval of the lease or license authorized by the district committee and if at that meeting a majority of the voters present and voting disapprove of the lease or license authorized by the district committee, the lease or license shall not be executed.

SECTION 32. Chapter 111 of the General Laws is hereby amended by inserting after section 142O the following section:-

Section 142P. There shall be at least 1 air monitoring station within a 1-mile radius of a working natural gas compressor station to collect data and verify compliance with the National Ambient Air Quality Standards. Construction and maintenance of air monitoring stations shall be funded through the building permit paid for by the operating energy corporation to the

department of environmental protection. Personnel shall be staffed through that department to collect data on a weekly basis, varying between morning and evening collection times.

SECTION 33. Section 1B of chapter 164 of the General Laws, as appearing in the 2016 Official Edition, is amended by adding the following subsection:

(g)(1) Each distribution company shall offer to residential and small commercial and industrial customers at least 1 option for a time-of-use rate, including differentials for energy supply, transmission and distribution that is designed to reflect the cost of providing electricity at different times of the day and year, but shall not include demand charges. Peak time periods for each rate shall not be longer than 6 hours in length per day and, as consistent with cost causation, price differentials shall be sufficient to motivate customer response. Each distribution company shall provide each customer, at least once annually, a summary of available rate options with a calculation of expected bill impacts under each option. Options for a time-of-use rate shall be posted prominently on the website of each distribution company, including the ability to opt into such a rate online, and additional educational material. If a customer opts into a time-of-use rate, the distribution company shall install all necessary equipment within 60 days after the notice to opt in. A customer may choose a different rate schedule after 1 year.

(2) If the department approves rates that include time-varying pricing on an opt-out basis, the opt-in time of use rate structure may be discontinued but each distribution company shall offer a time-varying rate to all residential and all small commercial and industrial customers at all times. In considering an opt-out time-varying rate structure, the department shall consider the impacts of such a structure on low-income and vulnerable consumers and shall take appropriate mitigating actions, including the consideration of continuing low-income discount and other

selected categories of customers on non-time-varying rate structures and allowing these categories of customers to opt into time-varying rates.

(3) The department shall promulgate rules and regulations necessary to carry out this subsection which shall include, but not be limited to: (i) the procedure for procurement of time-varying default service offerings; and (ii) separately accounting for the reconciliation of expenses for time-varying default service procurement from customers on time-varying default service.

SECTION 34. Said chapter 164 is hereby further amended by inserting after section 1K the following section:-

Section 1L. (a) As used in this section, the following words shall have the following meanings unless the context clearly requires otherwise:

"Low-income customer", a retail customer who is on a residential low-income discount distribution rate as set forth in subsection (4) of section 1F or who participates in a low-income energy assistance program.

"Residential retail customer", a retail customer in the commonwealth who is on a residential distribution rate.

(b) No supplier or entity acting on the supplier's behalf shall:

(1) extend an electricity supply agreement with a residential retail customer beyond the agreement's stated term without receiving the customer's affirmative written consent to do so at least 2 months prior to the end of the electricity supply agreement's stated term unless the rate provided for the extended term is equal to or less than the rate applied to the stated terms; or

(2) charge a cancellation fee of greater than $50 to a residential retail customer.

(c) As a condition of licensure under paragraph (1) of section 1F, each supplier shall:

(1) not less than quarterly, provide to the department: (i) a list detailing each rate the supplier charged to residential retail customers; and (ii) the number of residential retail customers charged each rate included in such list by rate class; provided, however, that the department shall publish the list on the department's website, energyswitchma.gov, or a successor website;

(2) not less than annually, provide data to the department concerning any renewable energy certificates retired in connection with the generation service provided to individual residential retail customers; provided, however, that such data shall include the geographic location and fuel type of each such renewable energy certificate, the total cost of each renewable energy certificate and whether each certificate is RPS Class I eligible pursuant to section 11F of chapter 25A; and provided further, that the department shall publish such information on its website, energyswitchma.gov, or a successor website;

(3) provide on its bills, if the electric supplier chooses to provide its own billing and collection services, at a minimum, the requirements listed in subsection (d); and

(4) guarantee that each low-income customer shall pay a rate that is either equal to or less than the fixed basic service rate charged by the low-income customer's electric distribution company for the same period of time.

(d) Each electric distribution company that bills on behalf of a supplier pursuant to section 1D shall include the following information on the first page of each bill for each residential customer receiving electric generation service from a supplier:

(i) the electric generation service rate;

(ii) the term and expiration date of such rate;

(iii) the cancellation fee, if applicable;

(iv) notification that such rate is variable, if applicable;

(v) the fixed basic service rate for the same period;

(vi) the term and expiration date of the fixed basic service rate;

(vii) the dollar amount that would have been billed for the electric generation service component had the residential retail customer been receiving fixed basic service;

(viii) an electronic link or internet web site address to the department's website, energyswitchma.gov, or a successor website and a toll-free telephone number and other information necessary to enable the residential retail customer to obtain further information or make the switch to another supplier or to basic service; and

(ix) if a residential retail customer is enrolled in automatic electronic bill payments and does not receive a bill through United States mail, a link to the customer's bill in electronic mail with confirmation of bill payment.

An electric distribution company that implements the billing information requirements of this subsection may recover from electric suppliers all reasonable costs for such implementation.

(e) Each electric distribution company shall submit a report to the department and to the attorney general semi-annually that details the numbers of low-income customers and all other residential retail customers, by supplier, for each zip code in the electric distribution company's

service territory. This report shall be published on the department's website, energyswitch.gov or a successor website.

(f) A violation of the conditions of licensure under this section shall be punished pursuant according to subsection (7) of section 1F of not less than $1,000 per violation per day. In addition, the attorney general may bring an action under section 4 of chapter 93A to enforce the consumer protection provisions of this section and to obtain restitution, civil penalties, injunctive relief and any other relief awarded pursuant to said chapter 93A.

(g) Not less than quarterly, the department shall publish each supplier's complaint data, sourced from complaints made to the department and those made to the attorney general and the distribution companies, as provided to the department annually, on the department's website, energyswitchma.gov or a successor website. The complaint data shall include, but not be limited to, the total number of complaints received regarding the supplier, the number of complaints received for misleading or false marketing, the number of complaints for unauthorized switching, the number of complaints for Do Not Call list violations and the number of complaints for aggressive marketing.

(h) This section shall not apply to a supplier in the course of providing generation services pursuant to sections 134, 136 and 137.

SECTION 35. Section 69H of said chapter 164, as appearing in the 2016 Official Edition, is hereby amended by inserting after the word "environment", in line 6, the following words:- and public health.

SECTION 36. Said section 69H of said chapter 164, as so appearing, is hereby further amended by striking out, in lines 20 and 21, the words "2 commissioners of the commonwealth

utilities commission" and inserting in place thereof the following words:- the commissioner of public health, 1 commissioner of public utilities.

SECTION 37. Section 94A of said chapter 164, as so appearing, is hereby amended by adding the following 2 paragraphs:-

Nothing in this section shall be construed to authorize the department to review and approve contracts for natural gas pipeline capacity filed by electric companies.

As part of the review of a contract with a term of more than 1 year for new gas pipeline capacity, the department shall determine whether such contract is in the public interest. The department shall not approve such a contract unless, as part of its public interest determination, the department finds that: (i) such contract is necessary to satisfy demand for gas by, and is cost-effective for, in-state ratepayers; (ii) such contract compares favorably to other reasonably available options in terms of its impact on rates, the economy, environment, climate, local communities, public health, safety and welfare; (iii) the parties to the proposed contract have attempted, in good faith, to identify and evaluate alternatives that would reduce or eliminate the need for private land takings or public land disposition including, but not limited to, expanded and more long-term utilization of existing gas infrastructure, distribution system repairs and upgrades, contracts for gas storage along unconstrained pipeline corridors, enhancement of peak-shaving measures and colocation of gas infrastructure with major roadways; and (iv) for contracts exceeding a term of 3 years, the parties to the proposed contract have attempted, in good faith, to identify and evaluate demand-side options to reduce or eliminate the need for new gas infrastructure.

SECTION 38. Section 134 of said chapter 164, as so appearing, is hereby amended by adding the following subsection:-

(c)(1) As used in this subsection, the following words shall have the following meanings unless the context clearly requires otherwise:

"Alternative compliance payment" or "ACP", an amount established by the department of energy resources that retail electricity suppliers may pay in order to discharge their renewable energy portfolio standard obligation required under section 11F of chapter 25A.

"Community empowerment contract" or "contract", an agreement between a municipality and the developer, owner or operator of a renewable energy project.

"Customer", an electricity end-use customer of an electric utility distribution company regardless of how that customer receives energy supply services.

"Department", the department of public utilities.

"Large commercial customer", a large commercial, industrial or institutional customer, as further defined by the department of energy resources utilizing existing usage-based tariff structures.

"Municipality", a city or town or a group of cities or towns that is not served by a municipal lighting plant and meet the eligibility criteria under paragraph (9).

"Participant", a customer within a municipality that has entered into a community empowerment contract; provided, however, that the customer did not opt out of, or is prevented from participating in, the community empowerment contract under subsection (d).

"Renewable energy certificate", a certificate representing the environmental attributes of 1 megawatt hour of electricity generated by a renewable energy project, the creation, use and retirement of which is administered by ISO New England, Inc.

"Renewable energy portfolio standard", the renewable energy portfolio standard established in section 11F of chapter 25A.

"Renewable energy project" or "project", a facility that generates electricity using a Class 1 renewable energy resource and is qualified by the department of energy resources as eligible to participate in the renewable energy portfolio standard and to sell renewable energy certificates under the program.

"Residential customer", a utility distribution customer that is a private residence or group of residences, as further defined by the department of energy resources, utilizing existing usage-based tariff structures.

"Small commercial customers", a small or medium commercial, industrial or institutional utility distribution customer, as further defined by the department of energy resources, utilizing existing usage-based tariff structures.

(2) A municipality may, on behalf of the electricity customers within the municipality, enter into a community empowerment contract with a company that proposes to construct a renewable energy project. A municipality may enter into more than 1 community empowerment contract and may enter into new contracts at any time.

(3) A community empowerment contract shall be subject to the following conditions:

(i) the contract shall be between the municipality and the company proposing to construct a renewable energy project; provided, however, that this section shall not authorize a municipality to utilize its collateral, credit or assets as collateral or credit support to the counterparty of the contract and a municipality may do so only as otherwise authorized by law;

(ii) the renewable energy project specified in the contract shall not have begun construction prior to the contract having been entered into by the municipality;

(iii) the contract shall be structured as a contract for differences so as to stabilize electricity prices for participants and shall specify a fixed price for the energy and renewable energy certificates to be generated by the project; provided, however, that the contract shall also specify a means by which the project's contracted amount of energy and renewable energy certificates shall be sold to a third party, at a price established by the wholesale market or an index and as agreed by the parties to the contract, and the proceeds from which shall be credited to the amount owed from the participants to the project; provided further, that if the amount earned in a sale exceeds the agreed fixed price, the participants shall be credited from the project for the difference between the sale price and the contracted fixed price; and provided further, that a contract shall not be an agreement to physically deliver electric energy to the participants but it may require delivery of renewable energy certificates;

(iv) the contract shall specify whether renewable energy certificates from the renewable energy project are to be provided and, if so provided, shall specify how the renewable energy certificates are to be transmitted and disposed of or retired; provided, however, that renewable energy certificates purchased through a contract may be: (A) assigned to the load of each participant or subset of participants, as stipulated in the contract, so as to increase the amount of

renewable energy attributed to use by the participants in the aggregate; or (B) sold in a transparent, competitive process, the proceeds from which shall be applied to the contract for differences mechanism under clause (iii); and provided further, that a renewable energy certificate purchased through a contract shall not be used by a basic service supply provider or competitive supply provider to meet its requirements under the renewable energy portfolio standard unless the renewable energy certificate is first sold to the supplier in a competitive, transparent process under this clause;

(v) the contract shall have a term of not less than 10 years from the time the specified renewable energy project commences operation;

(vi) the contract shall describe the calculations by which a charge or credit to a participant or to the renewable energy project are calculated based on the contract for differences mechanism under clause (iii); provided, however, that the calculations shall ensure full payment or credit to the renewable energy project even if a participant does not make full payment of the participant's distribution utility bill; provided further, that if there is a nonpayment of all or a portion of a distribution utility bill, an increase in charges to the contract participants may be used to ensure sufficient revenue to meet obligations to the project; and provided further, that the contract shall specify a contract administrator who shall perform the calculations under this subsection and determine, for implementation by the distribution utility, the charges and credits due to the project, participants, distribution utility and others as required by the contract; and

(vii) the contract may exempt for differences mechanism residents of the municipality who receive low-income electric rates.

(4) A town may enter into a community empowerment contract upon authorization by a majority vote of town meeting, town council or other municipal legislative body. A city may authorize a community empowerment contract by a majority vote of the city council or municipal legislative body, with the approval of the mayor or the city manager in a Plan D or Plan E form of government. Two or more municipalities may initiate a process jointly to authorize community empowerment contracting by a majority vote of each municipality under this paragraph. Prior to an authorizing vote, a public hearing shall be held to inform the municipalities of the proposed contract, the impact on residents and information on how to opt out of the contract if it proceeds. This hearing shall specify the proposed project under the contract and the length of the contract. An entity that is not a party to the contract shall estimate the contract's rate impacts under reasonable scenarios for future energy prices and the estimates shall be presented. The proposed project and contract information, estimated rate impact on constituents, procedure for customers to opt out of the proposed contract and information regarding the public hearing shall also be mailed to the residents of the municipalities 30 days before the hearing.

(5) The electricity customers within a municipality shall be required to participate in a community empowerment contract; provided, however, that a customer may opt not to participate in a contract if the customer provides notice to an administrator designated by the municipality within 90 days after the vote authorizing a contract or, in the case of a residential user receiving a low-income electric rate, at any time. No customer shall be a participant in a contract if that customer uses more than 5 per cent of the total annual electricity usage of the electricity customers located within a single municipality that is a party to the contract or, in the case of a contract with a group of municipalities, 5 per cent of the total annual electricity usage

of the electricity customers located in the group of municipalities that are parties to the contract. Residential and small commercial customers that establish service within a municipality after the municipality enters into a community empowerment contract shall be required to participate in any community empowerment contracts in effect for the municipality at the time the new service is established. A large commercial customer within a municipality may become a participant unless otherwise prohibited and, upon electing to become a participant, shall remain a participant for the remainder of the community empowerment contract as long as the large commercial customer continues to be located within the municipality.

(6) The department shall promulgate regulations, guidelines or orders that:

(i) establish the manner in which a municipality may request from a distribution utility, and which the distribution utility shall provide in a timely manner, the summary historic load and payment information of the electricity customers within the municipality that is necessary for a municipality to request and analyze a proposal for a community empowerment contract; provided, however, that the distribution utility may charge the municipality for verifiable, reasonable and direct costs associated with providing the information as approved by the department generally or on a case-by-case basis;

(ii) establish a procedure by which a municipality shall have a community empowerment contract approved by the department; provided, however, that a community empowerment contract shall not take effect until so approved and the department shall be obligated to and shall approve a contract that meets the requirements under this section; and provided further, that in establishing the approval procedure, the department shall adopt means to minimize the administrative and legal costs to municipalities to the maximum extent possible;

(iii) establish guidelines or standards by which the contract administrator under clause (vi) of paragraph (3) shall: (A) provide utility adjustments to charges to the distribution or credits to participants via a line item on the distribution utility bill; and (B) provide information to the distribution utility that is necessary to enable it to make or receive payments to or from the project and to others as necessary; provided, however, that each community empowerment contract shall be indicated on a participant's distribution utility bill by a line item specific to the contract; provided further, that a distribution utility may recover verifiable and reasonable costs for the implementation of this subsection from a contract party or participant except as provided for in clause (iv); provided further, that should implementation of this subsection require changes to the distribution utility company's billing system that would not otherwise be incurred, the cost of implementing such changes shall, upon approval by the department as being verifiable, reasonable and necessary to implement this subsection, be paid for by ACP funds or, if available ACP funds are insufficient, by the Massachusetts Renewable Energy Trust Fund established under section 9 of chapter 23J.

(iv) establish guidelines or standards by which distribution company customers may receive or access accurate energy source disclosure information, taking into account the renewable energy certificates that may be ascribed to each customer's electricity usage and regardless of the source from which the renewable energy certificates were supplied or purchased; provided, however, that should implementation of this subsection require changes to the distribution utility company's billing system that would not otherwise be incurred, the cost of implementing such changes shall, upon approval by the department as being verifiable, reasonable and necessary to implement this subsection, be paid for by ACP funds or, if available

ACP funds are insufficient, by the Massachusetts Renewable Energy Trust Fund established under section 9 of chapter 23J.

(7) The department of energy resources shall promulgate regulations or guidelines that:

(i) establish the manner in which, in the case of a community empowerment contract in which the renewable energy certificates are to be assigned to participants, the renewable energy certificates may be transmitted and retired appropriately and the energy source disclosure information accurately provided to participants; and

(ii) establish recommended practices to ensure transparency and accountability on the part of a municipality in entering into and managing a community empowerment contract, including the means by which an executed community empowerment contract shall be available for public inspection and recommendations for a municipality to follow in order to ensure compliance with the requirements for entering into a community empowerment contract.

The department of energy resources shall also provide technical assistance to a municipality regarding a community empowerment contract upon request.

(8) A community empowerment contract shall be in addition to, and aside from, an electricity supply contract that a customer may have at the time of the contract or that that the customer may later seek to establish. A municipality that enters into a community empowerment contract under this subsection shall not be considered a wholesale or retail electricity supplier. A community empowerment contract shall not require participants to change their choice of electricity supplier regardless of whether the supplier is a competitive supplier or a basic service supplier.

SECTION 39. Section 138 of said chapter 164, as so appearing, is hereby amended by inserting after the word “entity”, in line 96, the following words:- or publicly-assisted housing or its residents.

SECTION 40. Said section 138 of said chapter 164, as so appearing, is hereby further amended by striking out, in lines 122 and 123, the words “is assigned 100 per cent of the output” and inserting in place thereof the following words:- or publicly-assisted housing or its residents are assigned 100 per cent of the output or net metering credits.

SECTION 41. Said section 138 of said chapter 164, as so appearing, is hereby further amended by inserting after the definition of “Net metering facility of a municipality or other governmental entity” the following definition:-

“Publicly-assisted housing”, housing as defined in section 1 of chapter 40T.

SECTION 42. Section 139 of said chapter 164, as so appearing, is hereby amended by striking out, in lines 62 and 63, the words “and that are located in the same ISO-NE load zone to” and inserting in place thereof the following words:- , regardless of which ISO-NE load zone the customers are located in, to.

SECTION 43. Said section 139 of chapter 164 of the General Laws, as so appearing, is hereby amended by striking out subsection (f) and inserting in place thereof the following subsection:-

(f) No aggregate net metering cap shall apply to a solar net metering facility; provided, however, that the maximum amount of generating capacity eligible for net metering by a municipality or other governmental entity shall be 10 megawatts.

SECTION 44. Subsection (i) of said section 139 of said chapter 164, as so appearing, is hereby amended by adding the following 3 sentences:- Any facility which is at least 75 per cent owned by, or at least 75 per cent of which is producing net metering credits for, 3 or more individual residential customers, including a neighborhood net metering facility, in which no one residential customer owns more than 60 kilowatts of design capacity or receives more credits than the amount of credits produced annually by a facility with a 60 kilowatt design capacity shall be exempt from subsections (b½) and (k) and may net meter and accrue Class I net metering credits. Any such facility shall also be exempt from any limit on the aggregate net metering capacity set by subsection (f). An agricultural net metering facility utilizing anaerobic digestion technology or an anaerobic digestion net metering facility shall be exempt from aggregate net metering capacity caps under subsection (f) and may net meter and accrue Class I, II, or III net metering credits.

SECTION 45. Section 16 of chapter 298 of the acts of 2008 is hereby amended by striking out, in lines 3 and 4, the words “, and shall expire on December 31, 2020”.

SECTION 46. The secretary of energy and environmental affairs shall conduct a detailed, quantitative modeling and analysis of the commonwealth’s energy economy and emissions, which shall be sufficient to identify multiple technically and economically-feasible pathways to reduce statewide emissions consistent with the 2050 emissions limit required by subsection (b) of section 3 of chapter 21N of the General Laws. Such modeling and analysis shall include back-casting planning considerations and may be conducted in conjunction with other states or regional entities as part of an analysis of reducing regional emissions by 2050 to a level consistent with those required by said chapter 21N. The secretary shall publish the results of its modeling and analysis and shall make the model, all model assumptions and all input and output

data available for public inspection and use. The secretary shall file a report of its findings with the clerks of the senate and house of representatives, the senate and house committees on ways and means and the joint committee on telecommunications, utilities and energy not later than December 31, 2020.

SECTION 47. (a) Notwithstanding any general or special law to the contrary, the department of energy resources shall investigate the necessity, benefits and costs of requiring distribution companies, as defined in section 1 of chapter 164 of the General Laws, to jointly and competitively conduct additional offshore wind generation solicitations and procurements of up to approximately 2,800 megawatts of aggregate nameplate capacity, in addition to the solicitations and procurements required by section 83C of chapter 169 of the acts of 2008, as amended by chapter 188 of the acts of 2016, and section 21 of chapter 227 of the acts 2018 and shall require said additional solicitations and procurements by December 31, 2035; provided, however, that for said solicitations and procurements, as outlined in this section, the department of energy resources may also require distribution companies to jointly and competitively solicit and procure proposals for offshore wind energy transmission sufficient to deliver energy generation procured pursuant to this section from designated wind energy areas for which a federal lease was issued on or after January 1, 2012 that may be developed independent of such offshore wind energy generation; provided further, that such transmission service shall be made available for use by more than 1 wind energy generation project and shall not exceed the generation capacity authorized by this section; provided further, that any selection of offshore wind energy transmission shall be the most cost-effective mechanism for procuring reliable, low-cost offshore wind energy transmission service for ratepayers in the commonwealth

(b) Notwithstanding any general or special law to the contrary, the department of energy resources may analyze and recommend clean energy generation solicitations and procurements for more than the 9,450,000 megawatts-hours as required by section 83D of chapter 169 of the acts of 2008 if the department, after investigation, makes a written finding that doing so is consistent with the commonwealth's energy policy, including the policies established in said chapter 169 and chapter 298 of the acts of 2008 and after consideration of the economic benefits of additional clean energy generation and the impact on ratepayers, including distribution company customers. The department shall publish a plan to effectuate any such additional solicitations and procurements. Notwithstanding the requirements of this section, as part of the plan, the department may require different solicition, evaluation and selection of parties as required by said section 83D of said chapter 169 if such changes are recommended by the joint procurement taskforce or will benefit distribution company customers. The department shall hold at least 1 public hearing to consider the economic benefits of more than 9,450,000 megawatts-hours of clean energy generation and the impact of such subsequent solicitations and procurements on the commonwealth's energy policies under this subsection and on ratepayers, including distribution company customers. The plan required to be published under this subsection shall be filed with the clerks of the senate and the house of representatives.

SECTION 48. (a) The department of environmental protection shall promulgate regulations requiring producers, importers and wholesale distributors that sell, supply or offer for sale transportation fuels in the commonwealth to report to the department all sales of transportation fuel sales made in the commonwealth and the source of any fuel sold to the department. The regulations shall require the Department of Environmental Protection to compute and track the individual and collective lifecycle greenhouse gas emissions of all fuels,

as well as the carbon intensity of each fuel, that are reported by regulated entities on an annual basis.

(b) All sales, lifecycle greenhouse gas emissions and carbon intensity data collected or computed by the department pursuant to the regulations required by subsection (a) shall be published by the department in an annual report that shall be made available to the public.

SECTION 49. The Massachusetts Department of Transportation, in consultation with the department of state police, shall conduct a feasibility study on authorizing an electric vehicle as defined in section 16 of chapter 25A of the General Laws to travel in lanes designated for use by high-occupancy vehicles notwithstanding the number of occupants in the vehicle. The study shall include, but not be limited to: (i) an examination of existing capacity in lanes designated for use by high-occupancy vehicles; (ii) the impact of additional electric vehicles in the lanes; and (iii) a plan to properly differentiate eligible electric vehicles to ensure appropriate access to the designated lanes. The department shall file a report on the results of the study with the clerks of the senate and the house of representatives and the chairs of the joint committee on transportation not later than July 31, 2020.

SECTION 50. The Massachusetts Department of Transportation, in consultation with the executive office of energy and environmental affairs, shall develop and implement a program to promote private electric vehicle ownership with the goal of ensuring that 25 per cent of motor vehicles owned or leased in the commonwealth shall be electric vehicles by December 31, 2030. The department shall promulgate regulations necessary to implement this program.

SECTION 51. Notwithstanding any general or special law to the contrary, the department of public utilities, in consultation with the department of energy resources, shall develop a plan

to facilitate the authorization and regulation of the creation of new municipal light districts in municipalities that choose to undertake such action. The plan shall include, but not be limited to, the acquisition or creation of the necessary infrastructure and mechanisms to acquire and deliver electricity to customers within the district. The department shall submit the plan to the clerks of the senate and the house of representatives and the chairs of the joint committee on telecommunications, utilities and energy not later than December 31, 2020.

SECTION 52. Notwithstanding any general or special law to the contrary, no new natural gas compressor station shall be located in an area that is less than 0.5 miles in linear distance from: (i) a playground;(ii) a licensed day care center; (iii) a school; (iv) a church; (v) an environmental justice population neighborhood; (vi) an area of critical environmental concern as determined by the secretary of environmental affairs under 301 CMR 12.00; (vii) a waterway preserved and protected for water-dependent uses under chapter 91; or (viii) an area occupied by residential housing. Linear distance shall be measured from any point along a natural gas compressor station to the outermost point of buildings or areas in clauses (i) to (viii), inclusive; provided, however, that repairs or replacements that do not increase the capacity of a natural gas compressor station in operation prior to January 1, 2020, shall not be subject to this section. For the purposes of this section, “environmental justice population neighborhood” shall mean a neighborhood with an annual median household income of not more than 65 per cent of the statewide median income or with a segment of the population that consists of residents that is not less than 25 per cent minority, foreign born or lacking in English language proficiency based on the most recent United States census.

SECTION 53. (a) As used in this section, the following words shall have the following meanings unless the context clearly requires otherwise:

"Board", the pension reserves investment management board established in section 23 of chapter 32 of the General Laws.

"Company", a sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, limited liability company or other entity or business association, including all wholly-owned subsidiaries, majority-owned subsidiaries, parent companies or affiliates of such entities or business associations that exist for profit-making purposes.

"Direct holdings", all securities of a company held directly by the public fund or in an account or fund in which the public fund owns all shares or interests.

"Fossil fuel company", a company identified by a Global Industry Classification System code in 1 of the following sectors: (i) coal and consumable fuels; (ii) integrated oil and gas; or (iii) oil and gas exploration and production.

"Indirect holdings", all securities of a company held in an account or fund, including a mutual fund, managed by at least 1 person not employed by the public fund and in which the public fund owns shares or interests together with other investors not subject to this section.

"Public fund", the Pension Reserves Investment Trust Fund established in subdivision (8) of section 22 of chapter 32 of the General Laws or the pension reserves investment management board charged with managing the pooled investment fund consisting of the assets of the State Employees' and Teachers' Retirement Systems and the assets of local retirement systems under the control of the board.

"Thermal coal", coal used to generate electricity, including coal which is burned to create steam to run turbines; provided, however, “thermal coal” shall not include metallurgical coal or coking coal used to produce steel.

"Thermal coal company", a publicly-traded company that generates at least 50 per cent of its revenue from the mining of thermal coal as determined by the board.

(b) Notwithstanding any general or special law to the contrary, within 30 days after the effective date of this act, the public fund shall facilitate the identification of all thermal coal and fossil fuel companies in which the fund owns direct or indirect holdings.

(c) Notwithstanding any general or special law to the contrary, the public fund shall take the following actions in relation to thermal coal companies in which the fund owns direct or indirect holdings:

(i) sell, redeem, divest or withdraw all publicly-traded securities of each thermal coal company identified pursuant to subsection (b) before December 31, 2020;

(ii) if recommended by the commission established in subsection (d), sell, redeem, divest or withdraw all publicly-traded securities of each fossil fuel company identified pursuant to subsection (b) according to the following schedule: (i) at least 33 per cent of such assets shall be removed from the public fund’s assets under management before December 31, 2022; (ii) 67 per cent of such assets shall be removed from the public fund’s assets under management before December 31, 2024; and (iii) 100 per cent of such assets shall be removed from the public fund’s assets under management before December 31, 2025.

The public fund shall not acquire new assets or securities of thermal coal companies or, if so recommended by the commission established in subsection (d), fossil fuel companies.

(d) There shall be a special commission to investigate and study divestment of the public fund from fossil fuel companies, but not including thermal coal companies, as proposed by the schedule in subsection (c). The commission shall evaluate the benefits of divestment from fossil fuels, not including thermal coal, compared to any potential increased risk that divestment may pose to the commonwealth's pension funds and retirees.

The commission shall consist of: the state treasurer or a designee who shall serve as chair; the executive director of the public employee retirement administration commission or a designee; a member of the Retired State, County and Municipal Employees Association of Massachusetts; an active member of the Service Employees International Union who shall be designated by the state council; and 3 private citizens to be appointed by the governor who shall have expertise and current employment in environment, social and governance-related finance, institutional divestment or climate science.

The commission shall consult with experts in the relevant fields of economics, wealth management, fiduciary law and environmental sciences. The report shall include, but not be limited to: (i) recommendations on defining fossil fuel companies; (ii) a sensitivity analysis of the potential impact of divestment on the fund's return on investment, including an analysis of the potential impact that divestment from fossil fuel companies may have on the amortization schedules for the commonwealth's pension funds; (iii) an analysis and recommendations as to how to best incorporate assessment of carbon risk into the investment policy statement; (iv) an analysis of the potential environmental and policy benefits derived from divestment from fossil

fuel companies; (v) recommendations on divestment of indirect holdings, particularly regarding potential exceptions for mutual funds and index funds that may invest in fossil fuel companies; (vi) analysis of the potential impact that divestment may pose to companies and employees based in the commonwealth; and (vii) recommendations on effective administration and oversight of fossil fuel divestment.

The commission shall file its report and its recommendations, together with an actuarial analysis, if any, with the clerks of the senate and house of representatives, the chairs of the senate and house committees on ways and means and the chairs of the joint committee on public service not later than April 1, 2020.

(e) Notwithstanding this section, any requirement to divest the public fund from thermal coal or other fossil fuel companies shall not apply to indirect holdings in actively-managed investment funds; provided, however, that the public fund shall submit letters to the managers of the investment funds containing thermal coal or other fossil fuel companies requesting that they consider removing remove such companies from the investment fund or create a similar actively-managed fund with indirect holdings devoid of such companies. If the manager creates a similar fund, the public fund shall replace all applicable investments with investments in the similar fund in an expedited timeframe consistent with prudent investing standards. For the purposes of this section, private equity funds shall be deemed to be actively-managed investment funds.

(f) Notwithstanding any general or special law to the contrary, the public fund may cease divesting from companies under subsection (c), reinvest in companies from which it divested under said subsection (c) or continue to invest in companies from which it has not yet divested upon clear and convincing evidence showing that the total and aggregate value of all assets under

management by or on behalf of the public fund becomes: (i) equal to or less than 99.5 per cent; or (ii) 100 per cent less 50 basis points of the net value of all assets under management by or on behalf of the public fund in the previous year as a direct result of divestment. Cessation of divestment, reinvestment or any subsequent ongoing investment authorized by this section shall be strictly limited to the minimum steps necessary to avoid the contingency set forth in the preceding sentence. For any cessation of divestment and in advance of any cessation authorized by this subsection, the public fund shall provide a written report to the attorney general, the senate and house committees on ways and means and the joint committee on public service, updated semi-annually thereafter as applicable, setting forth the reasons and justification, supported by clear and convincing evidence, for its decisions to cease divestment, to reinvest or to remain invested in thermal coal.

This subsection shall also apply to any divestment of the public fund from fossil fuel companies.

(g) Present, future and former board members of the public fund, jointly and individually, state officers and employees and investment managers under contract with the public fund shall be indemnified from the General Fund and held harmless by the commonwealth from all claims, demands, suits, actions, damages, judgments, costs, charges and expenses, including court costs and attorneys' fees, and against all liability, losses and damages of any nature whatsoever that such present, future or former board members, state officers and employees and investment managers shall or may at any time sustain by reason of any decision to restrict, reduce or eliminate investments in fossil fuel companies.

(h) The public fund shall file a copy of the lists of thermal coal in which the fund owns direct or indirect interests with the clerks of the senate and the house of representatives and the attorney general within 30 days after of the effective date of this act. Annually thereafter, the public fund shall file a report with the clerks of the senate and the house of representatives and the attorney general which shall includes: (i) all investments sold, redeemed, divested or withdrawn in compliance with subsection (c); and (ii) all prohibited investments from which the public fund has not yet divested under said subsection (c). This subsection shall also apply to any divestment of the public fund from fossil fuel companies.

SECTION 54. Notwithstanding any general or special law to the contrary, any Independent Retirement Board may, in accordance with the procurement process described in M.G.L. c. 32, § 23B, divest in whole or in part from any investment in fossil fuel companies. In accordance with this provision, an independent retirement board may, after following the process described in M.G.L. c. 32, § 23B, invest in index funds or other investment vehicles that may not include fossil fuel companies. For the purposes of this section, fossil fuel companies shall be defined as follows: “Fossil fuel company”, a company identified by a Global Industry Classification System code in one of the following sectors: (1) coal and consumable fuels; (2) integrated oil and gas; (3) oil and gas exploration and production.

SECTION 55. The secretary of transportation and the Massachusetts Bay Transportation Authority control board established in section 200 of chapter 46 of the acts of 2015, in consultation with the executive office of energy and environmental affairs, shall develop and complete a detailed plan for the full electrification of all of the authority’s passenger vehicles, including buses, ferries and commuter rail lines. The plan for electrification of the commuter rail shall include the procurement by purchase, lease or other method of electric locomotives, electric

multiple unit equipment or a combination of both. The plan shall include the design and construction of high level platforms at all stations on each line. The overall plan shall include a detailed project schedule including all necessary procurement activities, leading to all of the authority's passenger vehicles being electric by December 31, 2030. The plan shall be filed with the clerks of the senate and house of representatives and the chairs of the joint committee on transportation and shall be made publicly available on the Massachusetts Department of Transportation's website not later than December 31, 2020.

SECTION 56. Notwithstanding any general or special law to the contrary, the state board of building regulations and standards established in section 93 of chapter 143 of the General Laws shall form a working group that may include representatives of the following trades: planning; real estate sales and brokerage; homebuilding; and solar installation to study the feasibility of requiring the installation of solar powered systems in newly-constructed housing as amendments to the state building and electric codes, and the feasibility of regulatory methods to promote housing that consumes a total amount of annual energy that is substantially equivalent to the amount of renewable energy generated on site, also known as net-zero housing. The working group shall report to the general court the result of its study and its recommendations, if any, together with drafts of legislation or regulations necessary to carry its recommendations into effect, by filing the same with the clerks of the senate and house of representatives not later than July 1, 2019.

SECTION 57. The Massachusetts Bay Transportation Authority shall issue a report on the development of a power management system to capture and reuse energy produced from regenerative braking with authority trains. The report shall be filed with the clerks of the senate and the house of representatives not later than December 31, 2020.

SECTION 58. The 2030 statewide greenhouse gas emissions limit required by subsection (a) of section 4 of chapter 21N of the General Laws shall be adopted not later than January 1, 2021.

SECTION 59. The 2040 statewide greenhouse gas emissions limit required pursuant to subsection (a) of section 3 of chapter 21N of the General Laws shall be adopted not later than January 1, 2021.

SECTION 60. The department of energy resources shall establish not later than December 31, 2020 annual statewide deployment targets to be achieved in each distribution company's and municipal lighting plant's service territory in order to reach the 2,000 megawatt energy storage system target pursuant to subsection (a) of section 17 of chapter 25A of the General Laws.

SECTION 61. Anaerobic digestion facilities that are both operational and qualified as Class I renewable energy generating sources under section 11F of chapter 25A of the General Laws prior to the effective date of section 17 of said chapter 25A shall be eligible to participate in the incentive program via a one-time procurement for the class I renewable generation attributes created by existing anaerobic digestion facilities. The department shall determine eligibility criteria for existing anaerobic digestion facilities to participate in the one-time procurement, with the total megawatts being procured equal to the combined capacity of all eligible facilities. The 1-time procurement shall include a ceiling price equal to or greater than the alternative compliance payment rate, not to exceed double the alternative compliance payment rate established by the department under said section 11F of said chapter 25A.

SECTION 62. The department of energy resources shall establish a pilot program for anaerobic digestion technology that utilizes solid waste or organic materials otherwise eligible under section 138 of chapter 164 of the General Laws up to 6 megawatts.

SECTION 63. The department of energy resources shall establish the subsequent statewide energy storage deployment target required pursuant to subsection (a) of section 17 of chapter 25A of the General Laws not later than December 31, 2022.

SECTION 64. The regulations required pursuant to clause (i) of the first paragraph of section 7A of chapter 21N of the General Laws shall be promulgated and in effect not later than December 31, 2020.

SECTION 65. The regulations required pursuant to clause (ii) of the first paragraph of section 7A of chapter 21N of the General Laws shall be promulgated and in effect not later than December 31, 2021.

SECTION 66. The regulations required pursuant to clause (iii) of the first paragraph of section 7A of chapter 21N of the General Laws shall be promulgated and in effect not later than December 31, 2022.

SECTION 67. The regulations required by section 48 shall be promulgated within 180 days after the effective date of this act and shall take effect within 180 days after promulgation.

SECTION 68. Subsection (g) of section 1B of chapter 164 of the General Laws shall take effect on July 2, 2020.

SECTION 69. The regulations, guidelines or orders required by paragraphs (6) and (7) of subsection (c) of section 134 of chapter 164 of the General Laws shall be promulgated not more than 6 months after the effective date of this act.

SECTION 70. Section 1L of chapter 164 of the General Laws shall take effect on January 1, 2019; provided, however, that the department shall promulgate regulations to implement said section 1L of said chapter 164 not later than January 1, 2020.

SECTION 71. The 2050 emissions reduction plan required pursuant to subsection (h) of section 4 of chapter 21N of the General Laws shall be completed not later than December 31, 2021.

SECTION 72. Section 52 shall take effect upon a determination by the attorney general that the section is constitutional.