

GWSP ENERGY RESOURCES PLAN

September 17, 2015

SECTION 1: Hydroelectric and RPS-Eligible Resource Procurement

Chapter 169 of the Acts of 2008, as amended by chapter 209 of the Acts of 2012, is hereby further amended by inserting after section 83A the following sections:

Section 83B:

a) By no later than 8 months after enactment of this section, all distribution companies in the commonwealth, as defined in section 1 of chapter 164 of the General Laws, shall jointly solicit from developers of clean energy generating sources proposals to deliver an annual amount of electricity from such sources of not more than 10,000,000 MWh, via long-term contracts as detailed in this Section and, provided that reasonable proposals have been received pursuant to subsection (c), may enter into such long-term contracts. In each solicitation, at least thirty percent of the electricity by volume in megawatt-hours in each proposal shall be provided by a Class I RPS-eligible renewable energy generating source. If contracts are not executed up to the annual amount of electricity specified in this subsection, the distribution companies are authorized to conduct solicitations in subsequent years until that amount is procured. Proposals submitted pursuant to this section may include, in addition to the provision of electricity from a clean energy generating source, the provision of transmission facilities necessary for the delivery of such electricity into the ISO New England Control Area.

(b) For the purposes of this act, clean energy generating sources shall mean, individually or collectively, a Class I RPS-eligible renewable energy generating source as defined under section 11F of said chapter 25A, or a non-Class I RPS-eligible hydroelectric generation facility. Said clean energy generating sources shall represent incremental generation delivered into the ISO New England Control Area after June 1, 2016.

(c) The timetable and method for solicitation and execution of the long-term contracts required by this section shall be developed by the distribution companies in consultation with the department of energy resources, and shall be reviewed and approved before issuance by the department of public utilities in accordance with this section. The department of energy resources may require that the solicitation in subsection (a) be staggered and divided into two or more solicitations to occur within such time and of such size as the department determines are in the best interest of ratepayers. If the department of energy resources determines that solely unreasonable proposals were received pursuant to a solicitation, it may terminate that solicitation, with justification for such decision.

(d) For purposes of this act, a long-term contract shall be a contract with a term of 15 to 25 years. A contract authorized by this act may have a term longer than 25 years if the department of public utilities finds that it would be cost-effective for ratepayers when compared to one or more contracts or proposed contracts for electricity with the same physical and technical delivered attributes but that have a term of no more than 25 years. Solicitations for long-term contracts shall allow proposals across a range of contracting methods, including long-term contracts for renewable energy certificates, hereinafter referred to as RECs, for energy only, and for a combination of both RECs and energy only. This long-term contracting option shall be separate and distinct from the distribution companies' obligation to meet applicable annual renewable portfolio standard, hereinafter referred to as RPS, requirements, under section 11F of chapter 25A of the General Laws. The procurement of RECs under this act shall apply only to that portion of contracted electricity attributable to a Class I RPS-eligible renewable energy generating source and shall not apply to electricity from any hydroelectric generation facility larger than 30 MW. Any contracts procured under this section shall contain provisions that require an appropriate unit-specific tracking system to enable an accounting of the delivery of clean energy generation resources.

(e) In accordance with subsection 83B(c), the distribution companies shall jointly select a reasonable method of soliciting proposals from developers of clean energy generating sources using a competitive bidding process only, and any such solicitation may be developed and conducted jointly with utilities and/or procuring entities from other states in New England. A distribution company may decline to consider contract proposals having terms and conditions that it determines would require the contract obligation to place an unreasonable burden on the distribution company's balance sheet, and may structure its contracts, pricing or administration of the products purchased to mitigate impacts on the balance sheet or income statement of the distribution company or its parent company, subject to the approval of the department of public utilities; provided, that such mitigation shall not increase costs to ratepayers. The distribution companies may propose a reasonable form of remuneration for entering into any long-term contract that it files with the department of public utilities for approval and the department of public utilities may approve the proposal at the time of approving the long-term contract, provided however that the department of public utilities shall provide for an annual remuneration for the contracting distribution companies equal to 1.50 per cent of the annual payments under a contract that does not include transmission to compensate the company for accepting the financial obligation of long-term contracts associated with clean energy generating sources. To the extent there are significant transmission costs included in a proposal, the department of public utilities shall authorize the contracting parties to seek recovery of such transmission costs of the project through federal

transmission rates, consistent with policies and tariffs of the federal energy regulatory commission, to the extent the department finds such recovery is in the public interest.

(f) In each solicitation under this section, at least thirty percent of the electricity by volume in megawatt-hours offered in each proposal shall be provided by a Class I RPS-eligible renewable energy generating source.

(g) The department of public utilities and the department of energy resources each shall, within 120 days of enactment, adopt regulations consistent with this section and any applicable rules, orders and regulations established by the Federal Energy Regulatory Commission. The regulations shall: allow the developers of clean energy generating sources to submit proposals for long-term contracts conforming to the contracting methods specified herein; set forth bid review, evaluation, and selection criteria consistent with this act; require that contracts executed by the distribution companies are filed with, and approved by, the department of public utilities before they become effective; encourage proposals from diverse energy sources; authorize the evaluation of combination proposals which allow for resource diversity; and require that the proposals for electricity also meet the following criteria: (1) any Class I RPS-eligible renewable energy generating source must be qualified by the department of energy resources as eligible to participate in the RPS program under section 11F of chapter 25A of the General Laws, and to sell RECs under the program; (2) be determined by the department of public utilities to: (i) provide enhanced electricity reliability within the commonwealth, including, where feasible, the ability to replace energy provided by retiring carbon emitting generation sources in the commonwealth; (ii) contribute to energy source diversity; (iii) guarantee delivery in winter months; (iv) be cost effective to Massachusetts electric ratepayers over the term of the contract; (v) where feasible, create additional employment and economic development in the commonwealth; (vi) contribute to greenhouse gas reductions pursuant to chapter 238 of the acts of 2008; (vii) demonstrate project viability through evidence including: (A) appropriate federal, state and local permits are substantially likely to be obtained (B) land rights have been or are substantially likely to be obtained, (C) corporate approvals for contracts have been obtained, and (D) security payments have been posted; and (vii) demonstrate that electricity from the clean energy generating source will be delivered to the ISO New England Control Area; and (3) meet the requirements of Section 83D for any included transmission facilities.

(h) The department of energy resources shall, using an independent energy expert hired and selected in consultation with the Attorney General, review and evaluate the proposals submitted pursuant to this act and provide to the distribution companies and the department of public utilities by no later than 90 days after the proposals are submitted, a ranked list of

selected qualifying proposals. In addition to the criteria and requirements in subsection 83B(c), the evaluation shall assess and score each proposal's environmental attributes. For proposals that include electricity from hydroelectric generating facilities greater than 30MW, preference shall be given to proposals that meet the requirements in section 11F(c)(6)(i) of chapter 25A of the General Laws and do not involve pumped storage of water or construction of a new dam or water diversion after January 1, 1998. The distribution companies may, but are not required to, enter into contracts with bidders selected through this process. Each distribution utility shall be entitled to recover all costs related to their apportioned share of the market products being purchased through any long-term contract. The costs shall be calculated and based upon the total energy demand from all distribution customers in each service territory of the distribution companies.

(i) As part of its contract review process, the department of public utilities shall consider the Attorney General's recommendations, which shall be submitted to the department of public utilities within 45 days following the filing of such contracts with the department of public utilities. The attorney general shall consider such factors as protection against self-dealing by electric distribution companies' direct financial interests in developing or owning in eligible energy and transmission resources. The department of public utilities shall consider both the potential costs and benefits of such contracts and shall approve a contract only upon a finding that it is a cost effective mechanism for procuring electricity from a clean energy generating source on a long-term basis taking into account the factors outlined in this act.

(j) Notwithstanding the provisions of this section, any portion of electricity procured pursuant to this act that is attributable to a hydroelectric generation facility larger than 30 MW shall not be eligible to participate in the Commonwealth's RPS program under section 11F of chapter 25A of the General Laws

(k) A distribution company may elect to use any energy purchased under such contracts for resale to its customers, and for that portion of the electricity attributable to Class I RPS-eligible renewable energy generating source may elect to retain RECs to meet the applicable annual RPS requirements under section 11F of chapter 25A of the General Laws. If the electricity and/or RECs are not so used, such companies shall sell such purchased electricity into the ISO-New England wholesale energy market and/or shall sell such purchased RECs through a competitive bid process. If a distribution company makes such a sale, it shall net the cost of payments made under the related long-term contract(s) against the proceeds obtained from all sales of procured electricity and/or RECs, and the difference shall be credited or charged to the distribution company's rate-payers in a manner reviewed and approved by the department of public utilities.

(l) Notwithstanding subsection 83B(k), the department of energy resources shall conduct periodic reviews to determine the impact on the electricity and REC markets of the disposition of electricity and RECs under this act and may issue reports recommending legislative changes if it determines that actions are being taken that will adversely affect the electricity and REC markets.

SECTION 2: Offshore Wind Procurement

Chapter 169 of the Acts of 2008, as amended by chapter 209 of the Acts of 2012, is hereby further amended by inserting after section 83B the following section:

Section 83C:

(a) By no later than 8 months after enactment of this section, all distribution companies in the commonwealth, as defined in section 1 of chapter 164 of the General Laws, shall be required to conduct periodic joint solicitations for proposals from offshore wind energy developers to deliver to the ISO-NE grid an annual amount of electricity and, provided reasonable proposals have been received, enter into commercially reasonable long-term contracts to facilitate the financing of offshore wind energy generation.

(b) The first solicitation shall be for no less than 1,500,000 MWh of electricity per year. Any subsequent solicitations must occur within 24 months of the previous solicitation and each subsequent solicitation shall be for no less than 1,000,000 MWh of electricity per year. Under this section, all distribution companies must collectively enter into long-term contracts that in the aggregate will ensure the delivery of no less than 8,500,000 MWh of electricity per year by 2025.

(c) For purposes of this section, the term "commercially reasonable" shall mean terms and pricing that are reasonably consistent with what an experienced electric power market analyst would expect to see in transactions involving newly developed offshore wind energy resources. Commercially reasonable shall include having a credible project operation date, as determined by the department of public utilities, but a project need not have completed the requisite permitting process to be considered commercially reasonable. If there is a dispute about whether any terms or pricing are commercially reasonable, the department of public utilities shall make the final determination after evidentiary hearings.

(d) This long-term contracting obligation for offshore wind shall be separate and distinct from the electric distribution companies' obligation to meet applicable annual renewable portfolio standard, hereinafter referred to as RPS, requirements, under section 11F of chapter 25A of the

General Laws. A distribution company may fulfill its responsibilities under this section through individual competitive solicitations that are independent from the periodic joint solicitations for proposals from offshore wind energy developers and, provided reasonable proposals have been received, enter into commercially reasonable long-term contracts to facilitate the financing of offshore wind energy generation under this section if, upon petition to the department of public utilities prior to, or concurrently with, its initial review of the first proposed joint solicitation, the department rules that a solicitation by an individual distribution company would be more commercially reasonable than said distribution company engaging in a joint solicitation.

(e) For purposes of this section, a long-term contract shall be a contract with a term of 15 to 20 years. A contract may have a longer term, up to 25 years if the department of public utilities finds that it would be cost-effective for ratepayers when compared to one or more existing or proposed contracts for electricity, with the same delivered attributes, or for RECs. In developing proposed long-term contracts, the distribution companies shall consider multiple contracting methods, including long-term contracts for renewable energy certificates, hereinafter referred to as RECs, for energy, and for a combination of both RECs and energy.

(f) By no later than 8 months after enactment of this section, the electric companies, in consultation with the department of energy resources, shall jointly propose to the department of public utilities for its approval, a reasonable method for soliciting proposals, using a competitive bidding process only, for long-term contracts from offshore wind energy developers using a competitive bidding process only.—A distribution company may structure its contracts, pricing or administration of the products purchased to mitigate impacts on the balance sheet or income statement of the distribution company or its parent company, subject to the approval of the department of public utilities. All proposed contracts shall be subject to the review and approval of the department of public utilities.

(g) The department of public utilities and the department of energy resources each shall adopt regulations consistent with this section. The regulations shall: (1) allow offshore wind energy developers to submit proposals for long-term contracts conforming to the contracting methods specified in this Section 83C; (2) require that contracts executed by the distribution companies under such proposals are filed with, and approved by, the department of public utilities before they become effective; (3) provide for an annual remuneration for the contracting distribution company equal to 1.50 per cent of the annual payments under the contract to compensate the company for accepting the financial obligation of the long-term contract, such provision to be acted upon by the department of public utilities at the time of contract approval; and (4) require that the proposed offshore wind energy project meet the following criteria: (a) have a

commercial operation date, as verified by the department of energy resources, on or after October 1, 2018; (b) be qualified by the department of energy resources as eligible to participate in the RPS program, under said section 11F of said chapter 25A, and to sell RECs under the program; (c) have control or a right to acquire control over a suitable site; (d) be developed by a team with a sufficient amount of relevant experience to successfully develop, finance, construct and operate its proposed project; and (e) be determined by the department of public utilities to: (i) provide enhanced electricity reliability within the commonwealth; (ii) contribute to moderating system peak load requirements in the commonwealth; (iii) demonstrate that the offshore wind energy will be delivered to the ISO New England Control Area including, where feasible, at or near the location of retiring carbon emitting generation sources; (iv) be commercially reasonable; (v) where feasible, create additional employment and economic development in the commonwealth; and (iv) where feasible, utilize publically owned facilities.

(h) As part of its approval process, the department of public utilities shall consider the attorney general's recommendations, which shall be submitted to the department of public utilities within 45 days following the filing of such contracts with the department of public utilities. The department of public utilities shall consider both the potential costs and benefits of such contracts and shall approve a contract only upon a finding that it is a commercially reasonable mechanism for procuring offshore wind energy on a long-term basis, taking into account the factors outlined in this section.

(i) The solicitations required under this section shall be coordinated among the electric distribution companies by the department of energy resources. The electric distribution companies shall each enter into a contract with the winning bidders for their apportioned share of the market products being purchased from the project. The apportioned share shall be calculated and based upon the total energy demand from all distribution customers in each service territory of the distribution companies.

(j) As long as an electric distribution company has entered into long-term contracts as part of joint solicitations in compliance with this Section 83C, it shall not be required by regulation or order or by other agreement to enter into additional long-term contracts for offshore wind pursuant to this Section 83C; provided, however, that an electric distribution company may execute such contracts voluntarily, subject to the approval of the department of public utilities.

(k) An electric distribution company may elect to use any energy purchased under such contracts for resale to its customers, and may elect to retain RECs to meet the applicable annual RPS requirements under said section 11F of said chapter 25A. If the energy and RECs are not so used, such companies shall sell such purchased energy into the wholesale spot market

and shall sell such purchased RECs through a competitive bid process. Notwithstanding the previous sentence, the department of energy resources shall conduct periodic reviews to determine the impact on the energy and REC markets of the disposition of energy and RECs under this section and may issue reports recommending legislative changes if it determines that actions are being taken that will adversely affect the energy and REC markets. If a distribution company sells the purchased energy into the wholesale spot market and auctions the RECs as described in the above paragraph, the distribution company shall net the cost of payments made to projects under the long-term contracts against the proceeds obtained from all sales of procured energy and RECs, and the difference shall be credited or charged to all distribution customers through a uniform fully reconciling annual factor in distribution rates, subject to review and approval of the department of public utilities. The reconciliation process shall be designed so that a distribution company recovers all costs incurred under such contracts. If the RPS requirements of said section 11F of said chapter 25A terminate, the contracts already executed and approved by the department of public utilities shall remain in full force and effect. This section shall not limit consideration of other contracts for RECs or power submitted by a distribution company for review and approval by the department of public utilities.

SECTION 3: Environmental Best Practices for Transmission Procurement

Chapter 169 of the Acts of 2008, as amended by chapter 209 of the Acts of 2012, is hereby further amended by inserting after section 83C the following section:

Section 83D:

(a) Notwithstanding any general or special law to the contrary relating to the procurement of electricity or energy facilities, to the extent that proposals for electricity from clean energy generating sources received pursuant to Section 83B include proposals for associated electric transmission facilities necessary to deliver such energy into the ISO New England Control Area, such transmission facilities, whether located within or outside of Massachusetts, may only be procured if the authorizing agency, in consultation with the Massachusetts Department of Environmental Protection, the Massachusetts Department of Fish and Game, and the Massachusetts Department of Conservation and Recreation determine that the proposals meet the best management practices described in this Section.

(b) Consistent with section 61 of chapter 30 of the General Laws, transmission facilities shall be sited to avoid or minimize significant impact to: federal and state significant scenic or recreational areas; historic, archeological and cultural resources; the habitat for plants or animals that are endangered, threatened, or of special concern; existing ecological buffers necessary to support watersheds and wildlife habitats; large unfragmented blocks of plants or

animal habitat; wetlands; or other ecologically sensitive areas identified by state and federal resource agencies or subject to protection under federal or state law.

(c) To the maximum extent practicable, transmission facilities shall also be sited: on or within an existing electric transmission, pipeline, road, railroad, water or other corridor or route where burial is most practical; or, if such a corridor or route is unavailable, on or within an existing electric transmission right of way and with transmission towers and other facilities of heights less than those of the predominate surrounding trees and other major vegetation; and in any case, so as to minimize the need for active vegetation control over the planned service life of the facility.

(d) All transmission facilities must implement a vegetation management plan consistent with the U.S. Environmental Protection Agency's Integrated Vegetation Management principles and practices for utility rights-of-way to include, but not necessarily be limited to: the conduct of regular surveys, plans for control of invasive species, use of native plant species, reduction of disturbances to wildlife, and avoidance of excessive soil disturbance.

(e) In making the assessments required by this Section regarding impacts to plant and animal habitats, impacts and alternatives must be considered for their effect on not only the parcel or parcels occupied by the transmission facility, but also for their effect on the broader relevant habitat or ecosystem of which such a parcel is or may be a part.

(f) If significant impacts cannot be avoided in accordance with subsection (b), having considered all commercially available technology, available science, costs relative to ecological benefits, and the likelihood of success of available mitigation or offset actions, any such impact must be mitigated or offset. Any mitigation or offset action shall have a direct physical nexus with the impact to be mitigated or offset, and may not be the payment of funds alone. Minimization and offset actions must meet state or federally approved ecological performance standards and must include adaptive management, monitoring, and enforcement measures designed to ensure long-term and sustainable conservation outcomes. Mitigation may include, but is not limited to: the preservation, enhancement, restoration or establishment of resources of greater or equal value to those to be impacted, as compensation for unavoidable impacts.

(g) All efforts to avoid, minimize, or mitigate the impacts caused by a transmission facility shall be at least as protective as existing relevant state and federal environmental statutes and regulations. The requirements of this section shall not supersede or impair the authority of any regional or state resource agency with respect to these or other facilities.

SECTION 4: Including Municipal Lighting Plants in Efficiency Programs

Section 19 of Chapter 25 of the general laws is hereby amended by striking subsection (a) and inserting in its place:

(a) The department shall require a mandatory charge of 2.5 mills per kilowatt-hour for all consumers 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. Municipal lighting plants shall be full participants in the energy efficiency programs within two years of enactment of this section. 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 NOx 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.

SECTION 5: Including Municipal Lighting Plants in Renewable Energy Programs

Section 20 of Chapter 25 of the general laws is hereby amended by striking subsection (a) and inserting in its place:

(a) The department shall require a mandatory charge of 0.5 mill per kilowatt-hour for all electricity consumers to support the development and promotion of renewable energy projects. All revenues generated by the mandatory charge shall be deposited into the Massachusetts Renewable Energy Trust Fund, established under section 9 of chapter 23J.
(b) Notwithstanding any general or special law to the contrary, in administering the Massachusetts Renewable Energy Trust Fund, the Massachusetts clean energy technology

center shall not make any grant or loan or provide any subsidy from the trust fund to any municipal lighting plant or consumer residing in the distribution service territory of such municipal lighting plant unless: (A) a mandatory charge per kilowatt-hour is assessed against all consumers residing in the distribution service territory and remitted to the collaborative under the first sentence of subsection (a) or clause (1); or (B) the board of directors of the Massachusetts clean energy technology center, as a condition precedent to any such grant, loan or subsidy, shall have determined and incorporated into the minutes of its proceedings findings that: (i) any such grant, loan or subsidy is intended for the principal purpose of generating public benefits for those consumers who reside in distribution service territories in which the mandatory charge is so imposed and remitted and will generate only incidental private benefits to the recipient or others residing in a distribution service territory in which the mandatory charge is not so imposed and remitted; and (ii) the facts and circumstances associated with the recipient or the residence of the recipient provide unique or extraordinary opportunities to advance the public purposes of the trust fund over those opportunities available through grants or subsidies made to recipients residing in distribution service territories in which such a mandatory charge is assessed and remitted.

SECTION 6: Energy Efficiency Potential Study

Chapter 25 of the General Laws is hereby amended by adding the following after section 21 subsection (b)(3): --

(4) Each Three Year Plan shall be informed by a study identifying all potential efficiency and demand reduction resources that are cost effective or less expensive than supply. The study informing the plan may not be older than 5 years, but the first study shall be completed within 6 months of passage of this bill. The study shall be performed by a consultant procured by the Energy Efficiency Advisory Council (EEAC). The findings of the study shall be presented to the EEAC and the Department of Public Utilities.

5) Each Three Year Plan shall project and describe the impact of the Plan on the statutory emissions reduction requirements of the Global Warming Solutions Act for 2020, 2050, and interim periods, once such standards are established.

SECTION 7: Use of Energy Efficiency Potential Study

Chapter 25 of the General Laws, section 21 subsection (d)(2) is amended by adding the following after the last sentence: --

To the extent that the Department approves a plan that contains a figure for all efficiency and demand reduction resources that are cost effective or less expensive than supply that is shown to be less than what is identified in the findings of the study called for in section 21(b)(4), the Department shall issue a finding explaining this difference. If a plan is adopted that contains lower savings in one or more years than those shown in the study, the burden of proof shall be on those intervenors advocating for lower savings, and on the Department, to show why the savings levels shown in the study are not feasible.

SECTION 8: Compliance with Three Year Plan

Chapter 25 of the General Laws, section 21 subsection (e) is hereby amended by striking out, in line 111, the word "may" and inserting in place thereof the following word: "shall".

SECTION 9: Providing information to EEAC

Section 22 of Chapter 25 of the General Laws is amended by adding the following after the last sentence of subsection 22(D):

The electric and natural gas distribution companies and municipal aggregators shall provide the council with all information it deems necessary to assess, monitor and evaluate the performance of programs and make necessary recommendations for improvements.

SECTION 10: Doubling RPS Standard

Section 11F of chapter 25A, as appearing in the 2014 Official Edition, is hereby amended by striking out the first paragraph and inserting in place thereof the following:-

(a) The department shall establish a renewable energy portfolio standard for all retail electricity suppliers selling electricity to end-use customers in the commonwealth. By December 31, 1999, the department shall determine the actual percentage of kilowatt-hours sales to end-use customers in the commonwealth which is derived from existing renewable energy generating sources. Every retail supplier shall provide a minimum percentage of kilowatt-hours sales to end-use customers in the commonwealth from new renewable energy generating sources, according to the following schedule: (1) an additional 1 per cent of sales by December 31, 2003, or 1 calendar year from the final day of the first month in which the average cost of any renewable technology is found to be within 10 per cent of the overall average spot-market price per kilowatt-hour for electricity in the commonwealth, whichever is sooner; (2) an additional one-half of 1 per cent of sales each year thereafter until December 31, 2009; (3) an additional 1 per cent of sales every year until December 31, 2015; and (4) an additional 2 per

cent of sales every year thereafter. For the purpose of this subsection, a new renewable energy generating source is one that begins commercial operation after December 31, 1997, or that represents an increase in generating capacity after December 31, 1997, at an existing facility. Commencing on January 1, 2009, such minimum percentage requirement shall be known as the “Class I” renewable energy generating source requirement.

SECTION 11: Including Municipal Lighting Plants in Renewable Portfolio Standard
Section 11F of Chapter 25A is hereby amended by striking subsection 11F(i) and inserting in its place:

(i) A municipal lighting plant shall comply with the obligations under this section within five years of enactment of this section.

SECTION 12: Including Municipal Lighting Plants in Alternate Portfolio Standard
Section 11F1/2 of Chapter 25A is hereby amended by striking subsection (d) and inserting in its place.

(d) A municipal lighting plant shall comply with the obligations of this section within five years of enactment.

SECTION 13: Commonwealth Solar Program

Chapter 25A of the General Laws is hereby amended by inserting after section 11I the following sections:

Section 11J

The department shall establish a Commonwealth Solar Program for all retail electricity suppliers selling electricity to end-use customers in the commonwealth to encourage the development of solar photovoltaic technology by residential, commercial, governmental and industrial electric customers throughout the Commonwealth. The program shall be structured to achieve 20 per cent solar electricity, measured by the sale of retail electricity to end-use customers in the commonwealth, by December 31, 2025 which shall be met via the requirements of subsection (g) of section 11F and section 11K.

Section 11K. Adjustable Block Program for Solar Renewable Energy Certificate Long-Term Contracting.

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

“Long-term contracts”, contracts for a period of 15 to 25 years.

“Solar renewable energy certificate”, a non-price characteristic of the electrical energy output from a facility for the production of electrical energy that uses sunlight to generate electricity as created by a solar carve-out program under subsection (g) of section 11F.

“Community shared solar facility”, a solar net metering facility with three or more eligible recipients of credits, provided that (1) no more than 50% of the net metering credits produced by the facility are allocated to any one recipient, (2) no more than three recipients may receive net metering credits in excess of those produced annually by 25 kW of nameplate AC capacity, and (3) the recipients have an interest in the production of the facility or the entity that owns the facility, in the form of formal ownership, a lease agreement, or a net metering contract.

“Low income residential solar facility”, a solar net metering facility that allocates all of its net metering credits to the providers or residents of publicly-assisted housing or low income households, as defined under section 1 of chapter 40T.

(b) The Department of Energy Resources is hereby authorized to create a long-term contracting program for solar renewable energy certificates. This program shall have an adjustable block structure that offers a set price for a targeted amount of solar capacity, with subsequent blocks opening automatically after the targeted amount of capacity has qualified or a finite period of time has expired. Once a project has qualified at a certain value, that value shall be for the length of the contract. The program may include a mechanism to change adjustable block values, based on a formula, if enrollment is faster or slower than targeted.

(c) Values within each block shall be differentiated by category, including, but not limited to: (i) community shared solar facilities, (ii) low income residential solar facilities, (iii) solar net metering facilities of a municipality or other governmental entity, and (iv) residential solar net metering facilities under 25 kW.

(d) Adjustable block values shall represent (i) the external social benefits of solar generation based on the most recent report issued under section 16 of Chapter 25A, and (ii) any additional support necessary to ensure the economic viability of solar generation facilities by the categories determined under subsection (c), with the ultimate goal of reducing the additional support for economic viability to zero.

(e) The Department of Energy Resources shall submit the program to the Department of Public Utilities once the program has been finalized. The Department of Public Utilities shall approve a mechanism for assigning long-term contracting requirements to the distribution companies. Each distribution company may elect to retain the purchased solar renewable energy certificates to meet the applicable annual requirements under subsection (g) of section 11F. If not so used, the distribution companies shall sell such purchased solar renewable energy certificates through a competitive bid process. If a distribution company auctions the solar renewable energy certificates, the distribution company shall net the cost of payments made to projects under the long-term contracts against the proceeds obtained from the sale, and the difference shall be credited or charged to all customers through the fully reconciling funding mechanism approved under Section 139B(d)(iii) of Chapter 164.

SECTION 14: Value of Solar

Chapter 25A of the General Laws is hereby amended by inserting after section 15 the following:—

Section 16.

(a) The Department of Energy Resources shall determine the long-run value of distributed solar energy generation in the Commonwealth and the method for determining that value. The method developed by the Department must, at a minimum, account for the value of the energy; the value of its generation capacity, avoided transmission and distribution investments, avoided transmission and distribution line losses, improved local reliability, reduced vulnerability to power failures or disruption, improved power quality, and avoided natural gas pipeline capacity costs; market price suppression effects for energy and capacity; avoided fuel price risks; reasonably foreseeable environmental and public health compliance costs, including the avoided cost of compliance with greenhouse gas limitations under Chapter 21N; the cost of integrating distributed solar energy generation into the distribution system; and the societal value of (i) the reduced environmental and public health impacts of the energy and (ii) economic benefits. The Department may, based on known and measurable evidence of the cost or benefit of solar operation to ratepayers and society, incorporate other values into the method, including credit for systems installed at high-value locations on the electric grid, or other factors. These values shall be calculated separately for different panel orientations, as well as two-way tracking systems. These values should not be impacted by whether the solar system is attached to a meter or located on a site associated with a load. The report required by subsection (c) must clearly identify the value of each of the individual components described in

this subsection that comprise the value of solar energy generation, calculated as a levelized 25-year net present value per kilowatt-hour using an appropriate societal discount rate.

(b) Distribution companies shall publicly provide any data necessary to determine the values in subsection (a) upon request of the Department of Energy Resources.

(c) The Department shall issue a report with the method and the value of distributed solar energy generation by December 31, 2015. This report shall be updated every four years thereafter. The initial report and subsequent updates shall follow the procedures specified by subsection (d). When developing the report, the department shall utilize consultants with experience in conducting similar studies in other jurisdictions and with expertise in power systems, solar energy, and electric utility ratemaking regarding the proposed methodology, underlying assumptions, and preliminary data.

(d) In developing a method for valuing distributed solar energy generation pursuant to this section, the Department shall ensure the method is consistent with published guidance from the Interstate Renewable Energy Council. The Department shall make public its proposed methodology and rationale and provide for an opportunity for public comment. Subsequent to finalizing the method, the Department shall make public underlying assumptions used for calculating the values under that method and the rationale for proposing them and provide for an opportunity for public comment on them. In each stage of the study, the Department shall consider the attorney general's recommendations. In issuing or updating this report, the Department is not required to conduct an adjudicatory proceeding or a regulatory proceeding under Chapter 30A.

SECTION 15: Local Energy Resource Alternative Definitions

Section 69G of chapter 164, as appearing in the 2014 Official Edition, is hereby amended by inserting the following definition after "electric company":

"Electric transmission Facility: (1) a new electric transmission line having a design rating of 69 kilovolts or more and which is one mile or more in length on a new or existing transmission corridor; (2) a new electric transmission line having a design rating of 115 kilovolts or more which is 10 miles or more in length on an existing transmission corridor except reconductoring or rebuilding of transmission lines at the same voltage; or (3) an ancillary structure which is an integral part of the operation of any transmission line which is a facility.

Also amended by striking the definition for "facility" and inserting in its place:

“Facility”, (1) a generating facility; (2) an electric transmission facility; (3) a unit, including associated buildings and structures, designed for or capable of the manufacture or storage of gas, except such units below a minimum threshold size as established by regulation; and (4) a new pipeline for the transmission of gas having a normal operating pressure in excess of 100 pounds per square inch gauge which is greater than one mile in length except restructuring, rebuilding, or relaying of existing transmission lines of the same capacity.

Also amended by adding the following definition after “liquefied natural gas”:

“Local Energy Resource Alternative:” all of the following methods used either individually or combined to meet in whole or in severable part the need for a proposed electric transmission facility: energy efficiency and conservation, energy storage, load management, demand response or distributed generation.

SECTION 16: Local Energy Resource Alternatives in Petition to Construct

Section 69J of Chapter 164, as appearing in the 2014 Official Edition, is hereby amended by striking the third paragraph and inserting the following in its place:

A petition to construct a facility shall include, in such form and detail as the board shall from time to time prescribe, the following information: (1) a description of the facility, site and surrounding areas; (2) an analysis of the need for the facility over its planned service life, either within or outside, or both within and outside the commonwealth. including date of need for the facility; (3) a description of the alternatives to the facility, such as other methods of transmitting or storing energy, other site locations, other sources of electrical power or gas, a reduction of requirements through load management, or local energy resource alternatives; and (4) a description of the environmental impacts of the facility. The board shall be empowered to issue and revise filing guidelines after public notice and a period for comment. A minimum of data shall be required by these guidelines from the applicant for review concerning land use impact, water resource impact, air quality impact, solid waste impact, radiation impact and noise impact.

Within 6 months of enactment of this section, the Department, in consultation with the EFSB, shall promulgate criteria and guidelines regarding: a) which electric transmission facilities shall additionally require consideration of local energy resource alternatives by the Board; b) how electric transmission facilities will be compared with local energy resource alternatives; and c) options for securing contracts for selected local energy resource alternatives, if any.

These criteria are to be reviewed and revised every 3 years. Criteria shall include, but are not limited to: asset condition or load growth-related need; cost threshold; load reduction necessary as a proportion of relevant peak load in the area to be served by the proposed electric transmission facility; and a date of need more than 36 months out. A transmission project that is constructed, owned and operated by a generator of electricity solely for the purpose of electrically and physically interconnecting the generator to the transmission system of a transmission and distribution utility shall not be subject to this section.

A petition to construct an electric transmission facility that meets the criteria promulgated by the Department under this section must also include the results of an investigation by an independent 3rd party, which may be the Board or a contractor selected by the Board, of local energy resource alternatives that may, alone or collectively, address part or all of the need identified in the petition for the proposed electric transmission facility. The investigation must set forth the total projected costs and economic benefits to ratepayers of the electric transmission facility, as well as of the local energy resource alternative(s), over the effective life of the proposed electric transmission facility.

SECTION 17: Local Energy Resource Alternatives Evaluated by EFSB

Section 69J of Chapter 164, as appearing in the 2014 Official Edition, is hereby amended by inserting below the fourth paragraph:

Additionally, prior to approving an electric transmission facility, the Board must consider whether some or all of the identified need of the proposed electric transmission facility can be reliably and safely met using one or more local energy resource alternative(s). During its review, the Board shall give preference to local energy resource alternatives that are identified as able to address the identified need for the proposed electric transmission facility more cost-effectively than the proposed facility.

The Board shall give preference to the local energy resource alternative(s) that individually or in combination address in whole or in part the identified need for the proposed electric transmission facility at greatest economic benefit to ratepayers. When the costs and benefits to ratepayers of the identified local energy resource alternative(s) are reasonably equal, the board shall give preference to the alternative(s) that advance the Commonwealth's climate goals.

In its Order, the Board must make specific findings with regard to the likelihood that its preferred local energy resource alternative(s) can address some or all of the identified need at greater benefits or lower costs than the proposed electric transmission facility. Local energy resource alternative(s) that can address the need at a reasonably similar lifetime cost shall be preferred to the proposed electric transmission facility. If the Board determines that some or all of the identified need still exists, after incorporation of local energy resources, it shall approve the petition to construct the facility or portions thereof needed to address the remaining need.

If the Board determines that one or more local energy resources alternative(s) can sufficiently address the need identified by the petition to construct an electric transmission facility at overall greater economic benefit to ratepayers across the region than the facility, but at a higher cost to ratepayers in this State, the Board shall make reasonable efforts to achieve within 180 days an agreement among the states within the ISO-NE region to allocate the cost of the local energy resource alternative(s) among the ratepayers of the region using the allocation method used for transmission lines or a different allocation method that results in lower costs than the proposed electric transmission facility to the ratepayers of this State. Such reasonable efforts may include, if the Department approves, a mechanism that allows the transmission owners to retain a portion of the savings achieved on behalf of Massachusetts ratepayers through use of the local energy resource alternatives.

SECTION 18: No Electric Companies Contracting For Natural Gas Capacity

Section 94A of chapter 164 of the General Laws is hereby amended by striking out, in lines 1 and 2, the words "No gas or electric company shall hereafter enter into a contract for the purchase of gas or electricity" and inserting in place thereof, the following words: "No gas company shall hereafter enter into a contract for the purchase of gas, and no electric company shall hereafter enter into a contract for the purchase of electricity,".

Said section 94A of said chapter 164 is further amended by inserting, in line 15, after the sentence ending "null and void." the following sentence: "No gas company may contract for electricity pursuant to this section; and no electric company may contract for gas pursuant to this section."

SECTION 19: Next Generation Solar Facilities Definitions

Section 138 of chapter 164 of the General Laws is hereby amended by striking the first paragraph and inserting in place thereof the following paragraph:—

As used in this section, sections 139, 139A, 139B, 140 and Section 11K of Chapter 25A, the following words shall, unless the context otherwise requires, have the following meanings:—

Section 138 of chapter 164 is hereby further amended by adding the following definitions after the definition for “Net metering facility of a municipality or other governmental entity”:

“Next generation solar net metering facility”, a facility for the production of electrical energy that (1) uses sunlight to generate electricity; (2) is interconnected to a distribution company; (3) will enter service after 1600 megawatts AC of distributed solar generation capacity has been installed in the Commonwealth; and (4) has a generating capacity of more than (i) 10 kilowatts on a single phase circuit or (ii) 25 kilowatts on a 3-phase circuit, but less than or equal to 2 megawatts.

“Next generation solar net metering credit”, a credit equal to the excess kilowatt-hours by time of use billing period, if applicable, multiplied by the sum of the distribution company’s: (i) default service kilowatt-hour charge in the ISO-NE load zone where the customer is located; (ii) the next generation solar distribution system benefit credit for the applicable category; (iii) the greater of the transmission kilowatt-hour charge or next generation solar transmission credit; (iv) next generation solar energy system benefit credit; (v) transition kilowatt-hour charge; and, if applicable, (vi) next generation solar west-facing credit; or (vii) next generation solar distribution locational credit; provided, however, that this shall not include the demand side management and renewable energy kilowatt-hour charges set forth in sections 19 and 20 of chapter 25.

“Next generation solar distribution system benefit credit”, a credit equal to the average long-run net per-kilowatt-hour value provided to the distribution system by the applicable category of next generation solar net metering facilities, as determined under section 139B.

“Next generation solar distribution locational credit”, a credit equal to the incremental long-run distribution system value provided by next generation solar net metering facilities located in constrained areas of the distribution grid, as determined under section 139B.

“Next generation solar transmission credit”, a credit equal to the equivalent per-kWh value of demand charges for transmission for the relevant rate class, as determined under section 139B.

“Next generation solar energy system benefit credit”, a credit equal to the long-run ratepayer energy- and capacity-related benefits incremental to the default service charge, as determined under section 139B.

“Next generation solar west-facing credit”, a credit equal to the long-run incremental value from solar panels oriented to the west, as determined under section 139B.

SECTION 20: Net Metering

Section 139 of chapter 164 is hereby amended by striking out paragraph (f), appearing in the 2014 Official Edition, and inserting in place thereof the following paragraph:-

(f) The aggregate net metering capacity for solar net metering facilities shall be 1600 megawatts AC of solar photovoltaic facilities interconnected to the distribution system of a distribution company, as defined in section 1 of chapter 164. The aggregate net metering capacity of facilities that are a non-solar Class I facility, a non-solar agricultural net metering facility, a wind net metering facility, or an anaerobic digestion net metering facility shall not exceed 3 per cent of the distribution company’s peak load, which includes all such facilities that are interconnected or have been approved as eligible for net metering as of the effective date of this section. The maximum amount of nameplate capacity eligible for net metering by a municipality or other governmental entity under this section shall be 10 megawatts AC. For the purpose of calculating the aggregate capacity, the capacity of a non-solar Class I facility, a non-solar agricultural net metering facility, a wind net metering facility or an anaerobic digestion net metering facility shall be its nameplate rating.

SECTION 21: Next Generation Solar Net Metering

Chapter 164 of the General Laws is hereby amended by inserting after section 139 the following 2 sections:—

Section 139A. Next Generation Solar Net Metering Facilities.

(a) A distribution company customer that uses electricity generated by a next generation solar net metering facility may elect net metering as follows:

(1) If the electricity generated by the next generation solar net metering facility during a billing period exceeds the customer’s kilowatt-hour usage during the billing period, the customer shall be billed for 0 kilowatt-hour usage and the excess next generation solar net metering credits shall be credited to the customer’s account. Credits may be carried forward from month to month. A next generation solar net metering facility may designate customers of the same distribution company to which the next generation solar net metering facility is interconnected and that are located in the same ISO-NE load zone to receive such credits in amounts attributed by the next generation solar net metering facility. Written notice of the identities of the

customers so designated and the amounts of the credits to be attributed to such customers shall be in a form as the distribution company shall reasonably require.

(2) If the customer's kilowatt-hour usage exceeds the electricity generated by the next generation solar net metering facility during the billing period, the customer shall be responsible for the balance at the distribution company's applicable rate.

(b) In no case shall a solar net metering facility previously qualified as a solar net metering facility under sections 138 and 139 of chapter 164 of the General Laws or as a renewable generating resource for a program under subsection (g) of section 11F of chapter 25A lose those qualifications provided such solar facility continues to meet the requirements of said sections and applicable regulations; provided, however, a Class I solar net metering facility, that is not otherwise defined as a next generation solar net metering facility, may elect treatment as a next generation solar net metering facility upon written notice to the distribution company.

(c) The distribution company shall impose tariffs, as may be approved from time to time by the department, regarding necessary interconnection studies and the type, costs and timeframe for installing metering and distribution system upgrades to accommodate these installations. Such tariffs shall require that all facilities maintain adequate insurance. Distribution companies shall be prohibited from imposing special fees on next generation solar net metering facilities, such as backup charges and demand charges, or additional controls or liability insurance, as long as the facility meets the other requirements of the interconnection tariff and all relevant safety and power quality standards.

Before providing net metering service under this section, a next generation solar net metering facility shall provide all necessary information to, and cooperate with, the distribution utility to which it is interconnected to enable the distribution utility to obtain the appropriate asset identification for reporting generation to ISO-NE.

(d) A next generation solar net metering facility or net metering customer shall not be: an electric company, generation company, aggregator, supplier, energy marketer or energy broker, within the meaning of those terms as defined in sections 1 and 1F of Chapter 164.

(e) Next generation solar net metering facilities shall be exempt from the limitations on aggregate net metering capacity under subsection (f) of section 139.

(f) The department shall adopt rules and regulations as necessary to carry out this section, including adoption or continuation of a system that provides proposed next generation solar net metering facilities an assurance of net metering eligibility.

Section 139B. Determination of values for next generation solar net metering credits.

(a) On or after January 1, 2016, the Department of Public Utilities shall open a proceeding to determine applicable credits for next generation solar net metering facilities. This proceeding shall conclude by September 30, 2016. These credit values shall be based upon the long-run levelized values determined by the value of solar study conducted under Chapter 25A, Section 16, as follows:

(i) The next generation solar distribution system benefit credit shall be equal to the long-run net per-kilowatt-hour value of all distribution-system-related benefits and costs, including avoided distribution infrastructure investments, improved local reliability, reduced vulnerability to failures or disruption, improved power quality, and any solar integration costs including necessary project-specific upgrades, by the following categories (A) next generation solar net metering facilities with a capacity less than or equal to 1 megawatt AC, (B) next generation solar net metering facilities with a capacity greater than 1 megawatt AC, and (C) any Class I solar net metering facilities that have elected treatment as a next generation solar net metering facility under subsection (b) of Section 139A;

(ii) The next generation solar distribution locational credit shall be equal to the long-run incremental value to the distribution system of next generation solar net metering facilities located in constrained areas of the distribution grid.

(iii) The next generation solar transmission credit shall be determined for each rate class that includes demand charges for transmission. Such credit shall be equal to the sum of (A) the transmission kilowatt-hour charge and (B) an equivalent per-kWh value calculated by converting the relevant demand charge assuming the average capacity factor for that rate class.

(iv) The next generation solar energy system benefit credit shall be equal to the long-run ratepayer energy- and capacity-related benefits incremental to the default service charge, including avoided natural gas pipeline capacity investments; market price suppression effects for energy and capacity; avoided fuel price risks; and reasonably foreseeable environmental and public health compliance costs, such as the avoided cost of compliance with greenhouse gas limitations under Chapter 21N.

(v) The next generation solar west-facing credit shall be equal to the long-run incremental value of next generation solar net metering facilities that are oriented to the west, and, for ratemaking and cost recovery purposes, may be divided into portions (A) related to the energy system for energy- and capacity-related benefits and (B) related to the distribution system for distribution-related benefits.

(b) After the initial determination of credits under subsection (a), credit values related to distribution may be updated in subsequent distribution rate cases under Section 94, based upon the most recent value of solar study conducted under Chapter 25A, Section 16.

(c) After the initial determination of credits under subsection (a), the next generation solar transmission credit shall be updated each time a distribution company updates the relevant transmission retail rates.

(d) (i) After the initial determination of credits under subsection (a), the next generation solar energy system benefit credit and the energy- and capacity-related portion of the west-facing credit shall be updated every four years after each update of the value of solar study conducted under Chapter 25A, Section 16.

(ii) A qualified next generation solar net metering facility shall continue to receive the value of the next generation solar energy system benefit credit in effect at the time of qualification for the operational lifetime of the system.

(iii) The department shall approve a fully reconciling and state-wide non-bypassable funding mechanism for any net impacts from the next generation solar energy system benefit credit and the energy- and capacity-related portion of the next generation solar west-facing credit.

(e) By September 30, 2016, the Department shall develop rules and regulations to determine eligibility for and application of the next generation solar distribution locational credit and the next generation solar west-facing credit.

SECTION 22: Community Shared Solar Energy System

Chapter 164 of the General Laws is hereby amended by inserting at the end of section 140 the following:—

(c) Notwithstanding any general or special law to the contrary, any community shared solar energy system, shall be exempt from taxes pursuant to chapter 59, section 5, clause Forty-Fifth of the General Laws, for a period of 20 years from the date of interconnection. For the purposes of this section, "community shared solar energy system" shall mean a solar powered system or device or a combination of solar powered systems or devices collectively owned by residents or non utility businesses that are placed on property owned by a cooperating local property owner, nonprofit organization or non utility business for the purpose of heating or otherwise supplying not more than 125 per cent of the annual energy needs of each of the owners of the system or device; provided, however, that (i) the ownership units shall be less than or equal to 25 kilowatts each and (ii) the owner of a community solar energy system unit shall receive an

exemption in proportion to the owner's share of the system, as determined by the proportion of energy generated for use by the owner. This section shall take effect on January 1, 2016.

SECTION 23: Energy Storage

Chapter 164 of the General Laws, as appearing in the 2014 Official Edition, is hereby amended by adding the following 3 sections:-

Section 146. (a) For purposes of the following two sections, “energy storage system” shall mean commercially available technology that is capable of absorbing energy, storing it for a period of time, and thereafter dispatching the energy. An energy storage system shall be cost effective and either reduce emissions of greenhouse gases, reduce demand for peak electrical generation, defer or substitute for an investment in generation, transmission, or distribution assets, or improve the reliable operation of the electrical transmission or distribution grid.

(b) An energy storage system shall do one or more of the following: (1) use mechanical, chemical, or thermal processes to store energy that was generated at one time for use at a later time; (2) store thermal energy for direct use for heating or cooling at a later time in a manner that avoids the need to use electricity at that later time; (3) use mechanical, chemical, or thermal processes to store energy generated from renewable resources for use at a later time; or (4) use mechanical, chemical, or thermal processes to store energy generated from mechanical processes that would otherwise be wasted for delivery at a later time.

Section 147. (a) On or before December 31, 2015, the department of energy resources shall open a proceeding to determine appropriate targets, if any, for electric companies to procure viable and cost-effective energy storage systems to be achieved by January 1, 2020. As part of this proceeding, the department may consider a variety of possible policies to encourage the cost-effective deployment of energy storage systems, including refinement of existing procurement methods to properly value energy storage systems and using alternative compliance payments to develop pilot programs.

(b) The department shall adopt the procurement targets, if determined to be appropriate pursuant to paragraph (a), by July 1, 2016. The department shall reevaluate the procurement targets not less than once every three years.

Section 148. (a) By January 1, 2020, each electric company entity shall submit a report to the department demonstrating that it has complied with the energy storage system procurement targets and policies adopted by the department pursuant to section 147.

(b) Each electric company shall prudently plan for and procure resources that are adequate to meet its planning reserve margin and peak demand and operating reserves, sufficient to provide reliable electric service to its customers.