

**SENATE . . . . . No. 1875**

---

**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 relative to local energy investment and infrastructure modernization.

PETITION OF:

NAME:	DISTRICT/ADDRESS:	
<i>Marc R. Pacheco</i>	<i>First Plymouth and Bristol</i>	
<i>Marjorie C. Decker</i>	<i>25th Middlesex</i>	<i>1/30/2017</i>
<i>Jason M. Lewis</i>	<i>Fifth Middlesex</i>	<i>1/30/2017</i>
<i>Thomas J. Calter</i>	<i>12th Plymouth</i>	<i>1/30/2017</i>
<i>Jack Lewis</i>	<i>7th Middlesex</i>	<i>1/31/2017</i>
<i>Paul R. Heroux</i>	<i>2nd Bristol</i>	<i>2/1/2017</i>
<i>James B. Eldridge</i>	<i>Middlesex and Worcester</i>	<i>2/1/2017</i>
<i>Michael D. Brady</i>	<i>Second Plymouth and Bristol</i>	<i>2/2/2017</i>
<i>Danielle W. Gregoire</i>	<i>4th Middlesex</i>	<i>2/2/2017</i>
<i>Carlos González</i>	<i>10th Hampden</i>	<i>2/2/2017</i>
<i>Mike Connolly</i>	<i>26th Middlesex</i>	<i>2/3/2017</i>
<i>Denise Provost</i>	<i>27th Middlesex</i>	<i>2/3/2017</i>
<i>Elizabeth A. Malia</i>	<i>11th Suffolk</i>	<i>2/3/2017</i>
<i>Jennifer L. Flanagan</i>	<i>Worcester and Middlesex</i>	<i>2/10/2017</i>
<i>Cynthia Stone Creem</i>	<i>First Middlesex and Norfolk</i>	<i>6/16/2017</i>

**SENATE . . . . . No. 1875**

---

By Mr. Pacheco, a petition (accompanied by bill, Senate, No. 1875) of Marc R. Pacheco, Marjorie C. Decker, Jason M. Lewis, Thomas J. Calter and other members of the General Court for legislation relative to local energy investment and infrastructure modernization. Telecommunications, Utilities and Energy.

---

**The Commonwealth of Massachusetts**

\_\_\_\_\_  
**In the One Hundred and Ninetieth General Court  
(2017-2018)**  
\_\_\_\_\_

An Act relative to local energy investment and infrastructure modernization.

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

1           SECTION 1: Chapter 164 of the General Laws is hereby amended by inserting after  
2 section 145, as appearing in the 2016 Official Edition, the following section:

3           Section 146:

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

6           (1) "Local energy resources," distributed renewable generation facilities, energy  
7 efficiency, energy storage, electric vehicles, and demand response and load management  
8 technologies.

9           (2) "Distributed renewable generation facility," a facility producing electrical energy  
10 from any source that qualifies as a renewable energy generating source under section 11F of  
11 chapter 25A and is interconnected to a distribution company.

12 (3) “Board,” the Grid Modernization Consumer Board.

13 (b) The Department shall issue an order concluding the current Grid Modernization  
14 Proceedings (D.P.U. 15-120, 15-121 and 15-122) by December 31, 2017.

15 (c) The Department shall commence a proceeding by no later than January 31, 2018 that  
16 establishes procedures for each distribution company of the commonwealth to create and file  
17 with the Department by October 31, 2019 its subsequent Grid Modernization Plan, as described  
18 in further detail in subsection (d).

19 (1) This proceeding shall also establish specific metrics and related performance  
20 incentives to evaluate the progress of the distribution companies toward establishing a grid  
21 planning system to utilize and integrate local energy resources to meet customers’ energy needs.  
22 Said metrics may include, but are not limited to: reducing the impact of outages, optimizing  
23 demand, integrating local energy resources, improving workforce and asset management, and  
24 electrification that results in lower greenhouse gas emissions and energy costs savings, after  
25 accounting for fuel switching;

26 (2) This proceeding shall also create protections for low-income consumers including, but  
27 not limited to, remote shutoff protection and exemption from special cost recovery mechanisms.

28 (d) Every 5 years, on or before April 1, each electric distribution company shall prepare a  
29 Grid Modernization Plan. Each plan shall comply with the requirements set forth by the  
30 Department in the proceeding described in subsection (c), or as modified by the Department, and  
31 shall be prepared in coordination with the Grid Modernization Consumer Board established by  
32 subsection (g). Each plan shall:

33 (1) Evaluate locational benefits and costs of local energy resources currently located on  
34 the system, and identify optimal locations for local energy resources over the next 10 years. This  
35 evaluation shall be based on reductions or increases in local generation capacity and demand,  
36 avoided or increased investments in transmission and distribution infrastructure, safety benefits,  
37 reliability benefits, and any other savings the local energy resources provide to the electric grid  
38 or avoided costs to ratepayers;

39 (2) Provide information about the interconnection of distributed renewable generation  
40 facilities in publicly accessible hosting capacity maps that are updated on a continual basis;

41 (3) Propose or identify locational based incentives and other mechanisms for the  
42 deployment of cost-effective local energy resources that satisfy planning objectives;

43 (4) Propose cost-effective methods of effectively coordinating existing programs,  
44 incentives, and tariffs to maximize the locational benefits and minimize the incremental costs of  
45 local energy resources;

46 (5) Identify any additional spending by the distribution company necessary to integrate  
47 cost-effective local energy resources into distribution planning consistent with the goal of  
48 yielding net benefits to ratepayers;

49 (6) Identify any additional barriers to the deployment of local energy resources;

50 (e) Any distribution infrastructure necessary to accomplish the Grid Modernization Plan  
51 is eligible for pre-authorization by the Department, through a review of the company's proposed  
52 investments and cost estimates, as supported by the business case.

53 (f) Each Grid Modernization Plan prepared under subsection (d) shall be submitted for  
54 approval and comment by the Grid Modernization Consumer Board every 5 years, on or before  
55 April 1.

56 (1) The electric distribution companies shall provide any additional information requested  
57 by the Board that is relevant to the consideration of the Plan. The Board shall review the plan  
58 and any additional information and submit its approval or comments to the electric distribution  
59 companies not later than 3 months after the submission of the plan. The electric distribution  
60 companies may make any changes or revisions to reflect the input of the Board.

61 (2) The electric distribution companies shall submit their plans, together with the Board's  
62 approval or comments and a statement of any unresolved issues, to the Department every 5  
63 years, on or before October 31. The Department shall consider the plans and shall provide an  
64 opportunity for interested parties to be heard in a public hearing.

65 (3) Not later than 180 days after submission of a plan, the Department shall issue a  
66 decision on the plan which ensures that the electric distribution companies have satisfied the  
67 criteria set forth by the Department and shall approve, modify and approve, or reject and require  
68 the resubmission of the plan accordingly.

69 (4) Each Grid Modernization Plan shall be in effect for 5 years.

70 (g) There shall be a Grid Modernization Consumer Board to consist of the commissioner  
71 of the department of energy resources, who shall serve as chair, and 7 members including the  
72 attorney general, or his designee, the commissioner of the department of environmental  
73 protection, or his designee, and additional members appointed by the Department: 1 shall be a  
74 representative of residential consumers, 1 shall be a representative of low-income consumers, 1

75 shall be a representative of the environmental community, 1 shall be a representative of the clean  
76 energy technology industry, and 1 shall be a representative of businesses, including large C& I  
77 end users. Interested parties shall apply to the Department for designation. Members shall serve  
78 for terms of 6 years and may be reappointed. There shall be 1 non-voting ex-officio member  
79 from each of the electric distribution companies.

80 (1) The Board shall, as part of the approval process by the Department outlined in  
81 subsection (f), seek to maximize net economic benefits through use of distributed energy  
82 resources and achieve transmission, reliability, climate and environmental goals. The Board  
83 shall review and approve Grid Modernization Plans and budgets, and work with electric  
84 distribution companies in preparing resource assessments. Approval of Grid Modernization  
85 Plans and budgets shall require a two-thirds majority vote.

86 (2) The Board may retain expert consultants, provided, however that such consultants  
87 shall not have any contractual relationship with an electric distribution company doing business  
88 in the commonwealth or any affiliate of such company. The Board shall annually submit to the  
89 Department a proposal regarding the level of funding required for the retention of expert  
90 consultants and reasonable administrative costs. The proposal shall be approved by the  
91 Department either as submitted or as modified by the Department. The Department shall  
92 allocate funds sufficient for these purposes from the Grid Modernization Plan budgets.

93 (3) The electric distribution companies shall provide quarterly reports to the Board on the  
94 implementation of their respective plans. The reports shall include a description of progress in  
95 implementing the plan, an evaluation of the metrics identified by the Department in the  
96 proceeding described in subsection (c), and such other information or data as the Board shall

97 determine. The Board shall provide an annual report to the department and the joint committee  
98 on telecommunications, utilities and energy on the implementation of the plan which includes  
99 descriptions of the programs, investments, cost-effectiveness, and savings and benefits during the  
100 previous year.

101 SECTION 2: Section 69G of chapter 164, as appearing in the 2016 Official Edition, is  
102 hereby amended by inserting the following definition after “department”:

103 “Distributed Renewable Generation Facility”, a facility producing electrical energy from  
104 any source that qualifies as a renewable energy generating source under section 11F of chapter  
105 25A and is interconnected to a distribution company.

106 Also amended by adding the following definition after “generating facility”:

107 “Infrastructure Resource Facility”, an electric transmission line, an electric distribution  
108 line, or an ancillary structure which is an integral part of the operation of a transmission or  
109 distribution line, that meets the following criteria: a) is estimated to cost more than \$1 million; b)  
110 is needed due to asset condition or load-growth; c) has a date of need at least 36 months in the  
111 future; d) has a need that can be addressed by load reductions of less than 20 percent of the  
112 relevant peak load in the area of the defined need; and e) such other criteria as the Board may  
113 determine. A line that is constructed, owned, and operated by a generator of electricity solely for  
114 the purpose of electrically and physically interconnecting the generator to the transmission  
115 system of a transmission and distribution utility shall not be considered an Infrastructure  
116 Resource Facility.

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

118 “Local Energy Resource Alternative”, the following methods used either individually or  
119 combined to meet or defer in whole or in severable part the need for a proposed Infrastructure  
120 Resource Facility: energy efficiency and conservation, energy storage system, electric vehicles,  
121 load management technologies, demand response, distributed renewable generation facilities,  
122 and other relevant technologies determined by the Board.

123 SECTION 3: Chapter 164 of the General Laws is hereby amended by inserting after  
124 section 69J, as appearing in the 2016 Official Edition, the following section:

125 Section 69J 1/6:

126 (a) No applicant shall commence construction of an Infrastructure Resource Facility at a  
127 site unless a Determination of Wires has been approved by the board. In addition, no state  
128 agency shall issue a construction permit for any Infrastructure Resource Facility unless the  
129 Determination of Wires has been approved by the board and the facility conforms with such  
130 determination. Applications for Determination of Wires must be filed with the board no later  
131 than four years prior to date of in-service need.

132 (b) A petition for a Determination of Wires shall include, in such form and detail as the  
133 board shall from time to time prescribe, the following information: (1) a description of the  
134 Infrastructure Resource Facility, site and surrounding areas; (2) an analysis of the need for the  
135 facility over its planned service life, both within and outside the commonwealth, including date  
136 of need for the facility; (3) a description of the alternatives to the facility, such as other methods  
137 of transmitting or storing energy, other site locations, other sources of electrical power or gas, a  
138 reduction of requirements through load management, or local energy resource alternatives; and  
139 (4) the results of an investigation by an independent 3rd party, which may be the Board or a



140 contractor selected by the Board, of local energy resource alternatives that may, alone or  
141 collectively, address or defer part or all of the need identified in the application for the  
142 Infrastructure Resource Facility. The investigation must set forth the total projected costs and  
143 economic benefits to ratepayers of the Infrastructure Resource Facility, as well as of the local  
144 energy resource alternative(s), over the effective life of the proposed Infrastructure Resource  
145 Facility.

146 (c) Prior to issuing a Determination of Wires, the Board must consider whether it is  
147 possible for any Local Energy Resource Alternative(s), alone or in combination, to meet or defer  
148 some or all of the identified need. In its consideration, the Board shall compare the Infrastructure  
149 Resource Facility to Local Energy Resource Alternatives based on uniform, standard criteria,  
150 including benefit-cost analysis. In its Determination, the Board must make specific findings  
151 regarding: i) the portions of the identified need, if any, that cannot be addressed or deferred by  
152 Local Energy Resource Alternative(s), due to engineering or public safety reasons; ii) the  
153 portions of the identified need, if any, for which the Board determines Local Energy Resource  
154 Alternative(s), alone or in combination, may meet or defer the need more cost-effectively, as  
155 defined in subsection f, than the Infrastructure Resource Facility, and the duration of such  
156 deferral; and iii) additional portions of identified need, if any. Notice of issuance of a  
157 Determination of Wires must be provided to the town or city administrator of each municipality  
158 in which the related Infrastructure Resource Facility or Local Energy Resource Alternative(s) is  
159 located.

160 (d) Upon issuance of a Determination of Wires that contains a finding that one or more  
161 Local Energy Resource Alternative(s) may satisfy or defer a portion of the identified need more  
162 cost-effectively, as defined in subsection f, than the Infrastructure Resource Facility, the

163 applicant must engage in a transparent, open solicitation for resources that can meet or defer that  
164 portion of the need, as well as any additional portions of identified need. Any requests for  
165 proposals shall be reviewed by the Department in consultation with DOER, the Energy  
166 Efficiency Advisory Council, and the Grid Modernization Consumer Board. The applicant's  
167 selection of resources for contracting shall be carried out in consultation with DOER, and any  
168 contracts shall be reviewed and approved by the Department.

169 (e) If during the review of contracts by the Department, it is determined that an  
170 Infrastructure Resource Facility will meet the identified need more cost-effectively, as defined in  
171 subsection f, than the Local Energy Resource Alternative(s), such finding shall serve as prima  
172 facie evidence of the Infrastructure Resource Facility being the "lowest possible cost" for the  
173 Board's determination under Section 69J.

174 (f) Within three months of enactment of this section, the Department of Energy  
175 Resources shall develop, in consultation with the Energy Efficiency Advisory Council, a  
176 framework for benefit-cost analysis to be applied to evaluations of Infrastructure Resource  
177 Facilities and Local Energy Resource Alternatives, as a determinant of cost-effectiveness. The  
178 Total Resource Cost test utilized in the Energy Efficiency programs shall be appropriately  
179 modified to account for the value of reliability and other site-specific costs, benefits and risks  
180 appropriate to consideration of Local Energy Resource Alternatives. Categories of costs and  
181 benefits may include: ratepayer benefits; reasonably foreseeable environmental and public health  
182 compliance costs; line losses; local reliability; market price suppression effects for energy and  
183 capacity; fuel price risks; avoided transmission and distribution investments; electric generation  
184 supply costs and reductions; capacity market costs and reductions; ancillary services costs and  
185 reductions; transmission costs and reductions; distribution system costs and reductions; outage

186 costs and reductions for electric customers; renewable energy certificate costs; fuel costs;  
187 demand-reduction induced price effects; and other costs and benefits of switching to electricity-  
188 based end uses. No later than six months after enactment of this section, such framework shall  
189 be considered by the Board in creating regulations regarding the Board's process and criteria for  
190 determining cost-effectiveness and issuing a Determination of Wires.

191 (g) Within ten months of enactment of this section, the Department shall issue criteria  
192 outlining acceptable methods for securing contracts for Local Energy Resource Alternatives.  
193 The Department may consider whether utility performance incentives are appropriate. Any such  
194 incentives must be included in the cost effectiveness analysis set forth in subsection f.

195 (h) If the Board determines that one or more local energy resources alternative(s) can  
196 sufficiently address or defer the identified need at greater overall economic benefit to ratepayers  
197 across the region than the Infrastructure Resource Facility, but at a higher cost to ratepayers in  
198 the Commonwealth, the Board shall make reasonable efforts to achieve within 180 days an  
199 agreement among the states within the ISO-NE region to allocate the cost of the local energy  
200 resource alternative(s) among the ratepayers of the region using the allocation method used for  
201 regional transmission lines or a different allocation method that results in lower costs than the  
202 proposed Infrastructure Resource Facility to the ratepayers of the Commonwealth.

203 SECTION 4: Section 69J of chapter 164 of the General Laws, as appearing in the 2016  
204 Official Edition, is hereby amended by striking the third paragraph and inserting in its place  
205 thereof the following paragraph:

206 A petition to construct a facility shall include, in such form and detail as the board shall  
207 from time to time prescribe, the following information: (1) a description of the facility, site and

208 surrounding areas; (2) an analysis of the need for the facility, either within or outside, or both  
209 within and outside the commonwealth; (3) a description of the alternatives to the facility, such as  
210 other methods of transmitting or storing energy, other site locations, other sources of electrical  
211 power or gas, or a reduction of requirements through load management; (4) any applicable  
212 Determination of Wires; and (5) a description of the environmental impacts of the facility,  
213 including impacts on greenhouse gas emissions. The board shall be empowered to issue and  
214 revise filing guidelines after public notice and a period for comment. A minimum of data shall be  
215 required by these guidelines from the applicant for review concerning land use impact, water  
216 resource impact, air quality impact, solid waste impact, radiation impact and noise impact.

217 SECTION 5: Chapter 164 of the General Laws is hereby amended by inserting after  
218 section 94I, as appearing in the 2016 Official Edition, the following section:

219 Section 94J:

220 (a) In this section, unless the context clearly requires otherwise, “residential fixed charge”  
221 shall mean any recurring fixed fee charged to residential electric customers distinct from charges  
222 based on meter readings for each billing period, including, but not limited to, a fixed charge for  
223 distribution service, a distribution customer service charge, or a customer charge.

224 (b) In a proceeding pursuant to section 94 with respect to an investigation of the rates,  
225 prices, and charges of a distribution company, the Department may not approve a residential  
226 fixed charge higher than the investment costs and operation and maintenance expenses directly  
227 related to the sum of 1) cost of connection, not including the cost of advanced metering used to  
228 provide energy services; 2) billing; and 3) the provision of customer service.

229 SECTION 6: Section 1B of Chapter 164 of the General Laws is amended by inserting  
230 after subsection (f), as appearing in the 2016 Official Edition, the following section:

231 (g) Beginning on January 1, 2018, each distribution company shall offer to default  
232 service customers an option to choose a time of use rate designed to reflect the cost of providing  
233 electricity at different times of the day. Each distribution company shall provide each default  
234 service customer, not less than once per year, a summary of available rate options with a  
235 calculation of expected bill impacts under each. Should a customer opt into a time of use rate, the  
236 distribution company shall install all necessary equipment within 60 days of request. Any  
237 residential customer choosing for the first time a time of use rate shall be provided with no less  
238 than one year of bill protection, during which the total amount paid by the customer for electric  
239 service shall not exceed the amount that would have been payable by the customer under that  
240 customer's previous rate schedule. A customer may choose a different rate schedule after one  
241 year. If the Department approves default service rates that include time-varying pricing on a  
242 mandatory or opt-out basis, this offering structure may be discontinued, but each distribution  
243 company must offer a time-varying default service rate at all times.