



House of Representatives

General Assembly

File No. 596

January Session, 2015

Substitute House Bill No. 7009

House of Representatives, April 13, 2015

The Committee on Energy and Technology reported through REP. REED of the 102nd Dist., Chairperson of the Committee on the part of the House, that the substitute bill ought to pass.

AN ACT CONCERNING ELECTRIC AND ZERO-EMISSION VEHICLES.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

1 Section 1. (NEW) (*Effective October 1, 2015*) As used in this section,
2 sections 14-12, 14-290, 16a-3e and 43-3a of the general statutes, as
3 amended by this act, and sections 6 and 9 of this act:

4 (1) "Battery electric vehicle" means any vehicle that operates solely
5 by use of a battery or battery pack, or that is powered primarily
6 through the use of an electric battery or battery pack but uses a
7 flywheel or capacitor that stores energy produced by the electric motor
8 or through regenerative braking to assist in vehicle operation;

9 (2) "Electric vehicle" means any battery electric vehicle, hybrid
10 electric vehicle or range-extended battery electric vehicle;

11 (3) "Hybrid electric vehicle" means a motor vehicle that allows
12 power to be delivered to the driver wheels solely by a battery-powered
13 electric motor that also incorporates the use of a combustion engine to

14 provide power to the battery, or any vehicle that allows power to be
15 delivered to the driver wheels by either a combustion engine or by a
16 battery-powered electric motor, or both;

17 (4) "Range-extended battery electric vehicle" means a vehicle (A)
18 powered predominantly by a zero-emission energy storage device, (B)
19 with a manufacturer rating of more than seventy-five all-electric miles,
20 and (C) equipped with a backup auxiliary power unit that does not
21 operate until the energy storage device is fully depleted; and

22 (5) "Zero-emission vehicle" means any battery electric vehicle,
23 hybrid electric vehicle, or range extended battery electric vehicle, and
24 any vehicle that meets the requirements pursuant to section 22a-174-36
25 of the regulations of Connecticut state agencies.

26 Sec. 2. Section 14-12 of the general statutes is amended by adding
27 subsection (l) as follows (*Effective October 1, 2015*):

28 (NEW) (l) Not later than October 1, 2015, the Department of Motor
29 Vehicles shall record the number of electric vehicles, as defined in
30 section 1 of this act, registered in the state. This data shall be publicly
31 available on the department's Internet web site and shall include (1)
32 the number of electric vehicles registered in the state each year; and (2)
33 the total number of electric vehicles registered in the state. The
34 department shall update this information every six months.

35 Sec. 3. Section 14-290 of the general statutes is amended by adding
36 subsection (e) as follows (*Effective October 1, 2015*):

37 (NEW) (e) The Department of Motor Vehicles shall establish a
38 program exempting zero-emission vehicles, as defined in section 1 of
39 this act, from the minimum vehicle occupancy requirements for
40 operation of a motor vehicle in the state's high-occupancy vehicle
41 lanes, provided the operator of any such vehicle displays a sticker
42 issued by the department authorizing such use.

43 Sec. 4. Section 16-1 of the general statutes is amended by adding
44 subsection (c) as follows (*Effective October 1, 2015*):

45 (NEW) (c) The terms "utility", "public utility" and "public service
46 company" shall not include public or private electric vehicle charging
47 stations, as defined in section 16-19f, as amended by this act.

48 Sec. 5. Section 16-19f of the general statutes is repealed and the
49 following is substituted in lieu thereof (*Effective October 1, 2015*):

50 (a) As used in this section:

51 (1) "Cost of service" means an electric utility rate for a class of
52 consumer which is designed, to the maximum extent practicable, to
53 reflect the cost to the utility in providing electric service to such class;

54 (2) "Declining block rate" means an electric utility rate for a class of
55 consumer which prices successive blocks of electricity consumed by
56 such consumer at lower per-unit prices;

57 (3) "Time of day rate" means an electric utility rate for a class of
58 consumer which is designed to reflect the cost to the utility of
59 providing electricity to such consumer at different times of the day;

60 (4) "Seasonal rate" means an electric utility rate for a class of
61 consumer designed to reflect the cost to the utility in providing
62 electricity to such consumer during different seasons of the year;

63 (5) "Electric vehicle time of day rate" means an electric utility rate
64 for a class of consumer designed to reflect the cost to the utility of
65 providing electricity to such consumer charging an electric vehicle at a
66 public or private electric vehicle charging station at different times of
67 the day, but shall not include demand charges;

68 (6) "Public electric vehicle charging station" means an electric
69 vehicle charging station, electric recharging point, charging point or
70 electric vehicle supply equipment [, which] (A) that is an element in an
71 infrastructure that supplies electricity for the recharging of plug-in
72 electric vehicles, including all-electric cars, neighborhood electric
73 vehicles and plug-in hybrids, and [which] (B) that allows any electric
74 vehicle owner or operator to access and use the charging station free of

75 charge;

76 (7) "Private electric vehicle charging station" means an electric
77 vehicle charging station, electric recharging point, charging point or
78 electric vehicle supply equipment (A) that is an element in an
79 infrastructure that supplies electricity for the recharging of plug-in
80 electric vehicles, including all-electric cars, neighborhood electric
81 vehicles and plug-in hybrids, and (B) that may allow any electric
82 vehicle owner or operator to access and use the charging station;

83 ~~[(7)]~~ (8) "Interruptible rate" means an electric utility rate designed to
84 reflect the cost to the utility in providing service to a consumer where
85 such consumer permits his service to be interrupted during periods of
86 peak electrical demand; and

87 ~~[(8)]~~ (9) "Load management techniques" means cost-effective
88 techniques used by an electric utility to reduce the maximum kilowatt
89 demand on the utility.

90 (b) The Public Utilities Regulatory Authority, with respect to each
91 electric public service company and each municipal electric company,
92 shall (1) within two years, consider and determine whether it is
93 appropriate to implement any of the following rate design standards:
94 (A) Cost of service; (B) prohibition of declining block rates; (C) time of
95 day rates; (D) seasonal rates; (E) interruptible rates; and (F) load
96 management techniques, and (2) [within one year, consider and
97 determine whether it is appropriate to] not later than June 1, 2016,
98 implement electric vehicle time of day rates for (A) public electric
99 vehicle charging stations, and (B) private electric vehicle charging
100 stations. The consideration of said standards by the authority and each
101 municipal electric company shall be made after public notice and
102 hearing. Such hearing may be held concurrently with a hearing
103 required pursuant to subsection (b) of section 16-19e. The authority
104 and each municipal company shall make a determination on whether
105 it is appropriate to implement any of said standards. Said
106 determination shall be in writing, shall take into consideration the
107 evidence presented at the hearing and shall be available to the public.

108 A standard shall be deemed to be appropriate for implementation if
109 such implementation would encourage energy conservation, optimal
110 and efficient use of facilities and resources by an electric public service
111 company or municipal electric company and equitable rates for electric
112 consumers.

113 (c) The Public Utilities Regulatory Authority, with respect to each
114 electric public service company, and each municipal electric company
115 may implement any standard determined under subsection (b) of this
116 section to be appropriate or decline to implement any such standard. If
117 the authority or a municipal electric company declines to implement
118 any standard determined to be appropriate, it shall state in writing its
119 reasons for doing so and make such statement available to the public.

120 (d) The provisions of this section shall not apply to any municipal
121 electric company which has total annual sales of electricity for
122 purposes other than resale of five hundred million kilowatt-hours or
123 less.

124 Sec. 6. (NEW) (*Effective October 1, 2015*) (a) The Public Utilities
125 Regulatory Authority shall require each electric distribution company,
126 as defined in section 16-1 of the general statutes, as amended by this
127 act, to integrate electric vehicle charging load projections into such
128 company's distribution planning. Such projections shall be based on
129 the number of electric vehicles, as defined in section 1 of this act,
130 registered in the state and projected increases or decreases in sales of
131 such vehicles.

132 (b) Not later than January 1, 2016, and annually thereafter, each
133 electric distribution company shall publish on such company's Internet
134 web site a report explaining the incorporation of such company's
135 electric vehicle charging load projections for the company's
136 distribution planning.

137 Sec. 7. Section 16a-3e of the general statutes is repealed and the
138 following is substituted in lieu thereof (*Effective October 1, 2015*):

139 The Integrated Resources Plan to be adopted in 2012 and biennially
140 thereafter, shall (1) indicate specific options to reduce electric rates and
141 costs. Such options may include the procurement of new sources of
142 generation. In the review of new sources of generation, the Integrated
143 Resources Plan shall indicate whether the private wholesale market
144 can supply such additional sources or whether state financial
145 assistance, long-term purchasing of electricity contracts or other
146 interventions are needed to achieve the goal; (2) analyze in-state
147 renewable sources of electricity in comparison to transmission line
148 upgrades or new projects and out-of-state renewable energy sources,
149 provided such analysis also considers the benefits of additional jobs
150 and other economic impacts and how they are created and subsidized;
151 (3) include an examination of average consumption and other states'
152 best practices to determine why electricity rates are lower elsewhere in
153 the region; (4) assess and compare the cost of transmission line
154 projects, new power sources, renewable sources of electricity,
155 conservation and distributed generation projects to ensure the state
156 pursues only the least-cost alternative projects; (5) analyze the
157 potential for electric vehicles, as defined in section 1 of this act, to
158 provide energy storage and other services to the electric grid and
159 ensure that the grid is prepared to support increased electric vehicle
160 charging, based on projections of sales of electric vehicles; (6)
161 continually monitor supply and distribution systems to identify
162 potential need for transmission line projects early enough to identify
163 alternatives; and [(6)] (7) assess the least-cost alternative to address
164 reliability concerns, including, but not limited to, lowering electricity
165 demand through conservation and distributed generation projects
166 before an electric distribution company submits a proposal for
167 transmission lines or transmission line upgrades to the independent
168 system operator or the Federal Energy Regulatory Commission,
169 provided no provision of such plan shall be deemed to prohibit an
170 electric distribution company from making any filing required by law
171 or regulation.

172 Sec. 8. Subsection (a) of section 16a-15 of the general statutes is
173 repealed and the following is substituted in lieu thereof (*Effective*

174 October 1, 2015):

175 (a) Each person shall publicly display and maintain on each pump
176 or other dispensing device from which any gasoline or other product
177 intended as a fuel for aircraft, motor boats or motor vehicles, including
178 electricity dispensed from electric vehicle charging equipment, is sold
179 by such person, such signs as the Commissioner of Consumer
180 Protection, by regulation adopted pursuant to chapter 54, may require
181 to inform the public of the octane rating and price of such gasoline,
182 and the price of such electricity, hydrogen fuel or other product. Each
183 person selling such gasoline, electricity, hydrogen fuel or other
184 product on both a full-serve and self-serve basis and displaying the
185 price of such [gasoline or other] product at a location on the premises
186 other than at a pump or other dispensing device shall include in such
187 display both the full-serve and self-serve prices of such gasoline or
188 other product, in such manner as the commissioner, by regulation,
189 may require. [All] For gasoline or any other product intended as a fuel,
190 all signs as to price shall be the per-gallon price and shall not be the
191 price of less or more than one gallon. For electricity dispensed from
192 electric vehicle charging equipment, all signs as to price shall be the
193 per-kilowatt hour price.

194 Sec. 9. (NEW) (*Effective October 1, 2015*) (a) The owner or operator of
195 a private electric vehicle charging station, as defined in section 16-19f
196 of the general statutes, as amended by this act, that is available for
197 public use shall provide multiple payment options, including, but not
198 limited to, cash or electronic payment by means of a credit card or
199 debit card.

200 (b) The Commissioner of Motor Vehicles shall disclose the location
201 and characteristics of each private electric vehicle charging station,
202 including, but not limited to, the address, voltage and timing
203 restrictions, to the federal database operated by the United States
204 Department of Energy Alternative Fuels Data Center.

205 (c) No person shall park in a space equipped with a private electric
206 vehicle charging station, unless such person is operating a plug-in

207 hybrid electric vehicle or battery electric vehicle, as defined in section 1
208 of this act.

209 (d) The owner or operator of a private electric vehicle charging
210 station that is available for public use may impose time restrictions on
211 the amount of time that an electric vehicle is charged at the charging
212 station.

213 (e) Membership-only electric vehicle charging stations are
214 prohibited.

215 Sec. 10. Subsection (b) of section 43-3 of the general statutes is
216 repealed and the following is substituted in lieu thereof (*Effective*
217 *October 1, 2015*):

218 (b) Notwithstanding any regulations to the contrary, the following
219 weighing and measuring devices shall be registered annually with the
220 commissioner and the commissioner shall charge the following annual
221 registration fees: (1) Each motor fuel dispenser and private electric
222 vehicle charging station, as defined in section 16-19f, as amended by
223 this act, fifty dollars; (2) each large weighing or measuring device, two
224 hundred fifty dollars; (3) each medium weighing or measuring device,
225 one hundred dollars; and (4) each small weighing or measuring device,
226 thirty dollars.

227 Sec. 11. Section 43-42 of the general statutes is repealed and the
228 following is substituted in lieu thereof (*Effective October 1, 2015*):

229 The Commissioner of Weights and Measures is authorized after a
230 public hearing held to establish and promulgate such rules,
231 regulations, specifications and tolerances to supplement and give full
232 effect to the provisions of sections 43-36 to 43-44, inclusive, as he
233 deems necessary. The commissioner [may] shall issue as regulations
234 those specifications, tolerances and regulations for commercial
235 weighing and measuring devices adopted by the National Conference
236 on Weights and Measures set forth in the National Institute of
237 Standards and Technology Handbook 44, as amended, of the United

238 States Department of Commerce and incorporate them by reference.
 239 Such rules, regulations, specifications and tolerances shall have the
 240 force and effect of law. In addition to any provisions adopted by the
 241 National Conference on Weights and Measures, the commissioner
 242 shall not require any person to acquire a weighing or measuring device
 243 or instrument that exceeds the weighing or measuring needs of the
 244 business in which such device or instrument is employed.

245 Sec. 12. Section 43-3a of the general statutes is repealed and the
 246 following is substituted in lieu thereof (*Effective October 1, 2015*):

247 (a) The Commissioner of Weights and Measures [may] shall issue as
 248 regulations those specifications, tolerances and regulations for the
 249 method of sale of commodities adopted by the National Conference on
 250 Weights and Measures set forth in the National Institute of Standards
 251 and Technology Handbook 130, as amended, of the United States
 252 Department of Commerce, and incorporate them by reference. Such
 253 rules, regulations, specifications and tolerances shall have the force
 254 and effect of law.

255 (b) Not later than June 1, 2016, the Commissioner of Weights and
 256 Measures shall adopt standards from the National Institute of
 257 Standards and Technology concerning commercial electricity
 258 measuring devices, including those used to measure and sell electricity
 259 dispensed as a fuel for electric vehicles, as defined in section 1 of this
 260 act.

This act shall take effect as follows and shall amend the following sections:		
Section 1	October 1, 2015	New section
Sec. 2	October 1, 2015	14-12
Sec. 3	October 1, 2015	14-290
Sec. 4	October 1, 2015	16-1
Sec. 5	October 1, 2015	16-19f
Sec. 6	October 1, 2015	New section
Sec. 7	October 1, 2015	16a-3e
Sec. 8	October 1, 2015	16a-15(a)

Sec. 9	<i>October 1, 2015</i>	New section
Sec. 10	<i>October 1, 2015</i>	43-3(b)
Sec. 11	<i>October 1, 2015</i>	43-42
Sec. 12	<i>October 1, 2015</i>	43-3a

ET *Joint Favorable Subst.*

The following Fiscal Impact Statement and Bill Analysis are prepared for the benefit of the members of the General Assembly, solely for purposes of information, summarization and explanation and do not represent the intent of the General Assembly or either chamber thereof for any purpose. In general, fiscal impacts are based upon a variety of informational sources, including the analyst's professional knowledge. Whenever applicable, agency data is consulted as part of the analysis, however final products do not necessarily reflect an assessment from any specific department.

OFA Fiscal Note

State Impact:

Agency Affected	Fund-Effect	FY 16 \$	FY 17 \$
Transportation, Dept.	FF - Potential Revenue Loss	See Below	See Below
Motor Vehicle Dept.	TF - Cost	up to 50,000	up to 50,000

Note: FF=Federal Funds; TF=Transportation Fund

Municipal Impact: None

Explanation

The bill requires the Public Utilities Regulatory Authority (PURA) to implement time of day rates for public and private electric vehicle charging stations and to require electric companies to integrate electric vehicle charging load projections into their distribution planning. This is not expected to affect the state or municipalities as ratepayers. Also, it is estimated PURA has the staff and expertise to implement rates for charging stations and would not incur a fiscal impact.

Sections 1-3 require the Department of Motor Vehicles (DMV) to: (1) create a program allowing single occupant zero-emission vehicles to use the state's high occupancy vehicle (HOV) lanes and (2) authorize and distribute a sticker that would allow these vehicles to drive in the HOV lane.

The bill does not specify how DMV would authorize and distribute these stickers; however it is anticipated that DMV would need up to \$50,000 for reprogramming and administrative costs associated with creating the program under the provisions of the bill.

To the extent that the provisions of the bill would make Connecticut not compliant with Federal regulation, there may be a potential

reduction in eligibility for Federal highway safety grant programs or a reduction in Federal funding.

The Out Years

The annualized ongoing fiscal impact identified above would continue into the future subject to inflation.

OLR Bill Analysis**sHB 7009****AN ACT CONCERNING ELECTRIC AND ZERO-EMISSION VEHICLES.****SUMMARY:**

This bill makes a number of changes related to electric and zero emission vehicles, including planning for electricity demand for these vehicles, making high occupancy vehicle (HOV) lanes available to zero-emission vehicles with one occupant, and imposing various requirements on charging stations.

Regarding electric utilities and planning for electricity demand, the bill requires:

1. the Public Utilities Regulatory Authority (PURA) to implement, by June 1, 2016, time of day rates for public electric vehicle charging stations (which any vehicle can use free of charge) and private charging stations (§ 5);
2. (a) PURA to require electric companies to integrate electric vehicle charging load projections into their distribution planning, based on the number of registered and projected sales of electric vehicles and (b) the electric companies to annually, beginning by January 1, 2016, post a report on their websites about their projections and plans (§ 6);
3. the state's integrated resource plan to analyze the potential for electric vehicles to provide energy storage and other services to the electric grid and ensure the grid is prepared to support increased electric vehicle charging based on projected vehicle sales (§ 7).

The bill makes a number of changes regarding charging stations.

Among other things, it:

1. excludes public or private electric vehicle charging stations from the requirements governing public utilities, which are subject to PURA rate regulation and must comply with PURA's orders (§ 4);
2. requires posting prices (the bill also imposes this requirement on hydrogen fuel pumps) and offering multiple payment options to customers, imposes parking restrictions, authorizes charging time limits, and prohibits members-only charging stations;
3. requires DMV to provide the U.S. Department of Energy's Alternative Fuels Data Center with each private vehicle charging station's location and characteristics including their addresses, voltage, and timing restrictions (§ 9);
4. requires annual registration of private electric vehicle charging stations with the Department of Consumer Protection (DCP) and imposes a \$50 annual fee (§ 10); and
5. requires DCP to adopt certain standards for commercial electricity measuring devices including those for selling electricity for electric vehicles.

The bill also requires the Department of Motor Vehicles (DMV), by October 1, 2015, to record the number of electric vehicles registered in Connecticut and post on its website, and update every six months, the total number registered and the number registered each year (§ 2).

EFFECTIVE DATE: October 1, 2015

§ 1 — ELECTRIC VEHICLES DEFINED

For purposes of the bill's provisions, an electric vehicle is a:

1. battery electric vehicle, which is one that (a) operates solely on a battery or battery pack or (b) is powered primarily through an

electric battery or battery pack but uses a flywheel or capacitor that stores energy from the electric motor or regenerative braking to assist in vehicle operation;

2. hybrid electric vehicle, which is one that (a) delivers power to the driver wheels solely by a battery-powered electric motor that incorporates a combustion engine to provide power to the battery or (b) allows delivery of power to the driver wheels by a combustion engine, battery-powered electric motor, or both; or
3. range-extended battery electric vehicle, which is one powered predominantly by a zero-emission energy storage device that has a manufacturer rating of more than 75 all-electric miles and is equipped with a backup auxiliary power unit that operates only when the energy storage device is fully depleted.

§§ 1 & 3 — HOV LANES

The bill requires DMV to create a program allowing single occupant zero-emission vehicles to use the state's HOV lanes if the vehicle displays a DMV sticker authorizing it.

The bill defines a zero-emission vehicle as an electric vehicle, as defined by the bill, or a vehicle that meets state regulatory requirements for zero-emission vehicles.

Federal law places conditions on use of vehicles in HOV lanes (see BACKGROUND).

§§ 8 & 9 — PRICE DISPLAYS AND PAYMENT OPTIONS

As currently required for gasoline pumps, the bill requires posting any DCP-required signs about prices on charging stations and hydrogen fuel pumps. Owners must display any differences in price for full- or self-service. For charging stations, the price must be in kilowatt/hours. Violations are punishable by a fine of \$50 to \$250.

The bill also requires operators to provide customers of private electric vehicle charging stations open to the public with multiple

payment options, including cash and credit or debit cards.

§§ 9-10 — CHARGING STATION PARKING

The bill (1) prohibits parking at a private electric vehicle charging station except when operating a plug-in hybrid or battery electric vehicle and (2) allows owners or operators of private electric vehicle charging stations open to the public to restrict how long an electric vehicle may charge at the station.

§§ 11-12 — MEASURING STANDARDS

By June 1, 2016, the bill requires the DCP commissioner to adopt standards from the National Institute of Standards and Technology (NIST) concerning commercial electricity measuring devices, including those used to measure and sell electricity for fuel in electric vehicles. A NIST working group recently completed recommended standards on this topic. They will be considered for final approval by the National Conference on Weights and Measures in July.

The bill requires, rather than allows, the DCP commissioner to adopt as regulations certain standards from NIST related to commercial weighing and measuring devices and the method of sale of commodities. The commissioner has already adopted these standards by reference in regulations.

BACKGROUND

Integrated Resource Plan (IRP)

The law requires the Department of Energy and Environmental Protection (DEEP), in consultation with the electric companies, to review the state's energy and capacity resources and develop an IRP for procuring energy resources. The IRP assesses future electric needs and plans to meet those needs. It looks at both demand side resources (conservation, energy efficiency, etc.) and supply side resources (generation/power plants, transmission lines, etc.). The most recent IRP was issued in June 2012. DEEP recently released a draft 2014 IRP which should be finalized during the first half of 2015.

Related Federal Law — HOV Lanes

With some exceptions, federal law only allows vehicles with at least two occupants to use HOV lanes. Until September 30, 2017, a state may allow HOV lane use by a single person driving (1) an inherently low emission vehicle certified and labeled according to federal regulations or (2) a low emission and energy-efficient vehicle certified and labeled according to federal law, if the operator pays a toll.

To allow use by these vehicles, federal law requires the responsible state agency (for Connecticut, the Department of Transportation (DOT)) to establish procedures (1) to enforce the restrictions on use of the lanes and (2) for low emission and energy-efficient vehicles, determine how to select qualifying vehicles. DOT must report to the federal DOT that (1) the lanes are not degraded, (2) these vehicles will not degrade the lanes, and (3) DOT will establish necessary programs to monitor the vehicles' impact. DOT must report on these programs to the federal DOT annually, establish enforcement programs, and limit or prohibit use by these vehicles if the lanes are degraded (23 USC § 166).

COMMITTEE ACTION

Energy and Technology Committee

Joint Favorable Substitute

Yea 22 Nay 1 (03/24/2015)