



House of Representatives

General Assembly

File No. 567

February Session, 2016

Substitute House Bill No. 5510

House of Representatives, April 11, 2016

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, ZERO EMISSION AND FUEL CELL ELECTRIC VEHICLES.

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

1 Section 1. (NEW) (*Effective July 1, 2016*) As used in this section,
2 sections 14-12 of the general statutes, as amended by this act, 16a-3e of
3 the general statutes, as amended by this act, and 43-3a of the general
4 statutes and sections 5 and 7 of this act:

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

10 (2) "Electric vehicle" means any battery electric vehicle, fuel cell
11 electric vehicle, plug-in hybrid electric vehicle or range-extended
12 battery electric vehicle;

13 (3) "Fuel cell electric vehicle" means any vehicle that operates solely
14 by use of a fuel cell, as defined in subparagraph (B)(i) of subdivision
15 (113) of section 12-412 of the general statutes;

16 (4) "Hybrid electric vehicle" means a motor vehicle that allows
17 power to be delivered to the driver wheels solely by a battery-powered
18 electric motor that also incorporates the use of a combustion engine to
19 provide power to the battery, or any vehicle that allows power to be
20 delivered to the driver wheels by either a combustion engine or by a
21 battery-powered electric motor, or both;

22 (5) "Plug-in hybrid electric vehicle" means a hybrid electric vehicle
23 that has the capability to charge the battery or batteries used for
24 vehicle propulsion from an off-vehicle electric source, such that the off-
25 vehicle source cannot be connected to the vehicle while the vehicle is in
26 motion;

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

32 (7) "Zero-emission vehicle" means any battery electric vehicle, fuel
33 cell electric vehicle, plug-in hybrid electric vehicle or range-extended
34 battery electric vehicle, and any vehicle that meets the requirements
35 pursuant to section 22a-174-36 of the regulations of Connecticut state
36 agencies.

37 Sec. 2. Section 14-12 of the general statutes is amended by adding
38 subsection (l) as follows (*Effective July 1, 2016*):

39 (NEW) (l) Not later than January 1, 2018, the Department of Motor
40 Vehicles shall record the number of electric vehicles, as defined in
41 section 1 of this act, registered in the state. This data shall be publicly
42 available on the department's Internet web site and shall include (1)
43 the number of electric vehicles registered in the state each year, and (2)

44 the total number of electric vehicles registered in the state. The
45 department shall update this information every six months.

46 Sec. 3. Section 16-1 of the 2016 supplement to the general statutes is
47 amended by adding subsection (c) as follows (*Effective July 1, 2016*):

48 (NEW) (c) The terms "utility", "public utility" and "public service
49 company" shall not be deemed to include electric vehicle charging
50 stations, as defined in section 16-19f, as amended by this act.

51 Sec. 4. Section 16-19f of the general statutes is repealed and the
52 following is substituted in lieu thereof (*Effective July 1, 2016*):

53 (a) As used in this section:

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

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

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

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

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

71 (6) "Electric vehicle charging station" means an electric component
72 assembly or cluster of component assemblies designed specifically to

73 charge batteries within electric vehicles by permitting the transfer of
74 electric energy to a battery or other storage device in an electric
75 vehicle;

76 [(6)] (7) "Public electric vehicle charging station" means an electric
77 vehicle charging station [, electric recharging point, charging point or
78 electric vehicle supply equipment, which 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 which allows any electric vehicle
82 owner or operator to access and use the charging station free of charge]
83 located at a publicly available parking space;

84 (8) "Publicly available parking space" means a parking space that
85 has been designated by a property owner or lessee to be available to,
86 and accessible by, the public and may include on-street parking spaces
87 and parking spaces in surface lots or parking garages, but shall not
88 include: (A) A parking space that is part of, or associated with, a
89 private residence; (B) a parking space that is reserved for the exclusive
90 use of an individual driver or vehicle or for a group of drivers or
91 vehicles, such as employees, tenants, visitors, residents of a common
92 interest development, or residents of an adjacent building; or (C) a
93 parking space reserved for persons who are blind and persons with
94 disabilities as described in section 14-253a;

95 [(7)] (9) "Interruptible rate" means an electric utility rate designed to
96 reflect the cost to the utility in providing service to a consumer where
97 such consumer permits his service to be interrupted during periods of
98 peak electrical demand; and

99 [(8)] (10) "Load management techniques" means cost-effective
100 techniques used by an electric utility to reduce the maximum kilowatt
101 demand on the utility.

102 (b) The Public Utilities Regulatory Authority, with respect to each
103 electric public service company and each municipal electric company,
104 shall (1) within two years, consider and determine whether it is

105 appropriate to implement any of the following rate design standards:
106 (A) Cost of service; (B) prohibition of declining block rates; (C) time of
107 day rates; (D) seasonal rates; (E) interruptible rates; and (F) load
108 management techniques, and (2) [within one year, consider and
109 determine whether it is appropriate to] not later than June 1, 2017,
110 implement electric vehicle time of day rates for residential and
111 commercial customers. The consideration of said standards by the
112 authority and each municipal electric company shall be made after
113 public notice and hearing. Such hearing may be held concurrently with
114 a hearing required pursuant to subsection (b) of section 16-19e. The
115 authority and each municipal company shall make a determination on
116 whether it is appropriate to implement any of said standards. Said
117 determination shall be in writing, shall take into consideration the
118 evidence presented at the hearing and shall be available to the public.
119 A standard shall be deemed to be appropriate for implementation if
120 such implementation would encourage energy conservation, optimal
121 and efficient use of facilities and resources by an electric public service
122 company or municipal electric company and equitable rates for electric
123 consumers.

124 (c) The Public Utilities Regulatory Authority, with respect to each
125 electric public service company, and each municipal electric company
126 may implement any standard determined under subsection (b) of this
127 section to be appropriate or decline to implement any such standard. If
128 the authority or a municipal electric company declines to implement
129 any standard determined to be appropriate, it shall state in writing its
130 reasons for doing so and make such statement available to the public.

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

135 Sec. 5. (NEW) (*Effective July 1, 2016*) (a) The Public Utilities
136 Regulatory Authority shall require each electric distribution company,
137 as defined in section 16-1 of the general statutes, as amended by this

138 act, to integrate electric vehicle charging load projections into such
139 company's distribution planning. Such projections shall be based on
140 the number of electric vehicles, as defined in section 1 of this act,
141 registered in the state and projected increases or decreases in sales of
142 such vehicles.

143 (b) Not later than January 1, 2017, and annually thereafter, each
144 electric distribution company shall publish on such company's Internet
145 web site a report explaining the incorporation of such company's
146 electric vehicle charging load projections for the company's
147 distribution planning.

148 Sec. 6. Section 16a-3e of the general statutes is repealed and the
149 following is substituted in lieu thereof (*Effective July 1, 2016*):

150 The Integrated Resources Plan to be adopted in 2012 and biennially
151 thereafter, shall (1) indicate specific options to reduce electric rates and
152 costs. Such options may include the procurement of new sources of
153 generation. In the review of new sources of generation, the Integrated
154 Resources Plan shall indicate whether the private wholesale market
155 can supply such additional sources or whether state financial
156 assistance, long-term purchasing of electricity contracts or other
157 interventions are needed to achieve the goal; (2) analyze in-state
158 renewable sources of electricity in comparison to transmission line
159 upgrades or new projects and out-of-state renewable energy sources,
160 provided such analysis also considers the benefits of additional jobs
161 and other economic impacts and how they are created and subsidized;
162 (3) include an examination of average consumption and other states'
163 best practices to determine why electricity rates are lower elsewhere in
164 the region; (4) assess and compare the cost of transmission line
165 projects, new power sources, renewable sources of electricity,
166 conservation and distributed generation projects to ensure the state
167 pursues only the least-cost alternative projects; (5) analyze the
168 potential for electric vehicles, as defined in section 1 of this act, to
169 provide energy storage and other services to the electric grid and
170 identify strategies to ensure that the grid is prepared to support

171 increased electric vehicle charging, based on projections of sales of
172 electric vehicles; (6) continually monitor supply and distribution
173 systems to identify potential need for transmission line projects early
174 enough to identify alternatives; and [(6)] (7) assess the least-cost
175 alternative to address reliability concerns, including, but not limited to,
176 lowering electricity demand through conservation and distributed
177 generation projects before an electric distribution company submits a
178 proposal for transmission lines or transmission line upgrades to the
179 independent system operator or the Federal Energy Regulatory
180 Commission, provided no provision of such plan shall be deemed to
181 prohibit an electric distribution company from making any filing
182 required by law or regulation.

183 Sec. 7. (NEW) (*Effective July 1, 2016*) (a) The owner or operator of a
184 public electric vehicle charging station, as defined in section 16-19f of
185 the general statutes, as amended by this act, that requires payment of a
186 fee shall provide multiple payment options that allow access by the
187 public.

188 (b) The owner or operator of a public electric vehicle charging
189 station shall disclose the location and characteristics of each such
190 public electric vehicle charging station, including, but not limited to,
191 the address, voltage and timing restrictions, to the federal database
192 operated by the United States Department of Energy Alternative Fuels
193 Data Center.

194 (c) No person shall park in a space equipped with a public electric
195 vehicle charging station, unless such person is operating a plug-in
196 hybrid electric vehicle or battery electric vehicle, as defined in section 1
197 of this act.

198 (d) The owner or operator of a public electric vehicle charging
199 station may impose restrictions on the amount of time that an electric
200 vehicle may be charged at the charging station.

201 (e) (1) Owners or operators of public electric vehicle charging
202 stations that require payment of a fee shall not require persons

203 desiring to use such public electric vehicle charging station to pay a
204 subscription fee or otherwise obtain a membership in any club,
205 association or organization as a condition of using such public electric
206 vehicle charging station.

207 (2) Notwithstanding subdivision (1) of this subsection, owners or
208 operators of public electric vehicle charging stations that require
209 payment of a fee may have different price schedules that are
210 conditioned on a subscription or membership in a club, association or
211 organization.

212 Sec. 8. Subsection (b) of section 43-3 of the general statutes is
213 repealed and the following is substituted in lieu thereof (*Effective July*
214 *1, 2016*):

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

224 Sec. 9. Subsection (a) of section 14-103d of the general statutes is
225 repealed and the following is substituted in lieu thereof (*Effective July*
226 *1, 2016*):

227 (a) No motor vehicle which uses any pressurized gas except natural
228 gas or hydrogen as a fuel for its engine may enter or be parked in any
229 area that is under grade level. Any vehicle within the state which
230 carries any pressurized gas as its fuel in a tank attached to the vehicle
231 in any concealed area, including, but not limited to, trunks,
232 compartments or under such vehicle, except a vehicle that is in
233 compliance with all applicable federal codes and standards for light
234 duty passenger use, shall have displayed on its exterior the words

235 "Pressurized Flammable Gas" or a standard abbreviation or symbol as
 236 determined by the Office of the State Fire Marshal, in block letters at
 237 least two inches high, which letters shall be of contrasting colors and
 238 shall be placed as near as possible to the area where the tank is located.
 239 No person may dispense any pressurized gas used as a vehicle fuel
 240 into any tank in a concealed area of a vehicle unless the vehicle is in
 241 compliance with the requirements of this subsection. The
 242 Commissioner of Motor Vehicles shall adopt regulations in accordance
 243 with the provisions of chapter 54 to carry out the provisions of this
 244 section.

This act shall take effect as follows and shall amend the following sections:		
Section 1	July 1, 2016	New section
Sec. 2	July 1, 2016	14-12
Sec. 3	July 1, 2016	16-1
Sec. 4	July 1, 2016	16-19f
Sec. 5	July 1, 2016	New section
Sec. 6	July 1, 2016	16a-3e
Sec. 7	July 1, 2016	New section
Sec. 8	July 1, 2016	43-3(b)
Sec. 9	July 1, 2016	14-103d(a)

Statement of Legislative Commissioners:

In the introductory language of Section 1, "as amended by this act" was added after the first two occurrences of "of the general statutes" and was removed after the third occurrence of "of the general statutes" for clarity and consistency and "8" was changed to "7" for accuracy.

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 17 \$	FY 18 \$
Various State Agencies	All Funds - Potential Cost	Potential Minimal	Potential Minimal

Note: All Funds=All Funds

Municipal Impact:

Municipalities	Effect	FY 17 \$	FY 18 \$
Various Municipalities	Potential Cost	Potential Minimal	Potential Minimal

Explanation

The bill requires the Public Utilities Regulatory Authority (PURA) to implement electric vehicle charging time of day rates for residential and commercial customers of electric utilities and certain municipal electric companies which may result in a potential cost to the state and 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.

The bill also requires the Department of Motor Vehicles (DMV) to record the number of electric vehicles registered in the state and publish the information on the department's website which is not anticipated to result in a fiscal impact as DMV has the resources to collect this information.

Lastly, the bill makes two exceptions to the law concerning vehicles that use pressurized gas as a fuel which do not have a fiscal impact.

The Out Years

The annualized ongoing fiscal impact identified above would continue into the future subject to electric vehicle charging time of day rates.

OLR Bill Analysis**sHB 5510*****AN ACT CONCERNING ELECTRIC, ZERO EMISSION AND FUEL CELL ELECTRIC VEHICLES.*****SUMMARY:**

This bill requires the Public Utilities Regulatory Authority (PURA) to require electric distribution companies (EDC, i.e., Eversource and United Illuminating) to integrate electric vehicle charging load projections into their distribution planning, based on data the bill requires the Department of Motor Vehicles (DMV) to collect. It also adds an analysis of electric vehicles to the required contents of the state's integrated resource plan.

Under the bill, PURA must implement electric vehicle time of day rates for residential and commercial customers of electric utilities and certain municipal electric companies by June 1, 2017. (PURA does not regulate municipal electric companies, thus it is unclear to what extent PURA can require them to implement electric vehicle time of day rates.)

The bill also establishes requirements for public electric vehicle charging stations, including restrictions on what types of vehicles may park in such stations, disclosure requirements for stations' location and characteristics, subscription and payment requirements, and annual registration requirements. Under the bill, public electric vehicle charging stations are not utilities, public utilities, or public service companies, and therefore are not subject to regulations covering those entities.

The bill makes two exceptions to the law concerning vehicles that use pressurized gas as a fuel. Current law requires vehicles in the state that carry pressurized gas for fuel in a tank attached to the vehicle in

any concealed area to display "Pressurized Flammable Gas," or another standard abbreviation determined by the Office of the State Fire Marshal, on the vehicle's exterior. The bill exempts vehicles that comply with applicable federal codes and standards for light duty passenger use from the labelling requirement. Current law prohibits motor vehicles that use pressurized gas for fuel to enter or park in any area under grade level, but exempts natural gas-fueled vehicles from this prohibition. The bill also exempts hydrogen-fueled vehicles.

EFFECTIVE DATE: July 1, 2016

§§ 1, 2 — DMV DATA COLLECTION

Required Data and Frequency

Under the bill, by January 1, 2018, the DMV must record the number of electric vehicles registered in the state. The DMV must make the information public on its website and include the (1) number of electric vehicles registered in the state each year and (2) total number of electric vehicles registered in the state. The bill requires the DMV to update this information every six months.

Electric Vehicles

Under the bill, electric vehicles include:

1. battery electric vehicles, which are vehicles (a) operated solely or powered primarily by a battery or battery pack and (b) that use a flywheel or capacitor that stores energy produced by an electric motor or through regenerative braking to assist in vehicle operation;
2. fuel cell electric vehicles, which are vehicles that operate solely by use of a fuel cell (i.e., a device that directly or indirectly produces electricity directly from hydrogen or hydrocarbon fuel through a noncombustive electro-chemical process);
3. range-extended battery electric vehicles, which are vehicles (a) powered mainly by a zero-emission energy storage device, (b) with a manufacturer rating of more than 75 all-electric miles,

and (c) equipped with a backup auxiliary power unit that does not operate until the energy storage device is fully depleted; and

4. plug-in hybrid electric vehicles, which the bill defines as hybrid electric vehicles (see below) with the capacity to charge the battery or batteries used for vehicle propulsion from an off-vehicle electric source that cannot be connected to the vehicle while the vehicle is in motion.

Under the bill, hybrid electric vehicles are motor vehicles that allow power to be delivered to the driver wheels solely by a battery-powered electric motor that also uses a combustion engine to provide power to the battery, or any vehicle allowing a combustion engine or battery-powered motor to deliver power to the driver wheels, or both. Only plug-in hybrid electric vehicles are subject to the bill's provisions concerning electric vehicles.

The bill defines zero-emission vehicles as any of the above electric vehicles and any vehicles that meet requirements in the Department of Energy and Environmental Protection's (DEEP) regulations (currently, any vehicle certified by the California Air Resources Board to produce zero emissions of any criteria pollutants under any and all possible operational modes and conditions). This definition is limited to the term's use in certain statutes and provisions of the bill, but the term is not used in those statutes or provisions.

§§ 1, 4 — ELECTRIC VEHICLE TIME OF DAY RATES

Current law requires PURA to determine, for each (1) electric utility and (2) municipal electric utility that has sales of over 500 million kilowatt-hours annually, whether it is appropriate to implement electric vehicle time of day rates. The bill instead requires PURA to implement such rates by June 1, 2017 and expands the rates to include consideration of non-public charging stations. (PURA does not regulate municipal electric companies, thus it is unclear to what extent PURA can require them to implement electric vehicle time of day

rates.) Under the bill, electric vehicle time of day rates are electric utility rates for a consumer class designed to reflect the utility's cost to provide electricity to a consumer charging an electric vehicle at an electric vehicle charging station at different times of day, not including demand charges. An electric vehicle charging station, under the bill, is an electric component assembly or cluster of component assemblies designed specifically to charge batteries within electric vehicles by permitting the transfer of electric energy to a battery or other storage device in an electric vehicle.

§§ 1, 5 & 6 — PLANNING FOR ELECTRIC VEHICLES

EDC Distribution Planning

Under the bill, PURA must require each EDC to integrate electric vehicle charging load projections into its distribution planning. The bill requires the companies to base projections on data collected by the DMV and projected increases or decreases in electric vehicle sales.

The bill requires the EDCs to annually publish on their websites starting January 1, 2017 a report explaining the incorporation of electric vehicle charging load projections in the company's distribution planning.

Integrated Resource Plan

The law requires DEEP, in consultation with the electric companies, to review the state's energy and capacity resources and develop an integrated resource plan for procuring energy resources. By law, the plan must, among other things, indicate specific options to reduce electric rates and costs and analyze in-state renewable sources of electricity in comparison to other options. Under the bill, the integrated resource plan must also (1) analyze the potential for electric vehicles to provide energy storage and other services to the electric grid and (2) identify strategies to ensure that the grid is prepared to support increased electric vehicle charging, based on projections of electric vehicle sales.

§§ 4, 7 & 8 — PUBLIC ELECTRIC VEHICLE CHARGING STATIONS

The bill establishes new requirements for public electric vehicle charging stations, which, under the bill, are electric vehicle charging stations located at a publicly available parking space (i.e., a parking space designated by a property owner or lessee as available to and accessible by the public). Under the bill, a publicly available parking space may include on-street parking spaces and parking spaces in surface lots or parking garages, but does not include parking spaces that are:

1. part of, or associated with, a private residence;
2. reserved for the exclusive use of an individual driver, vehicle, or a group of drivers or vehicles, such as employees, tenants, visitors, common interest development residents, or residents of an adjacent building; or
3. reserved for people who are blind or living with a disability that limits or impairs their ability to walk.

New Requirements

The bill requires owners or operators of public electric vehicle charging stations to disclose the locations and characteristics of each station, including the address, voltage, and timing restrictions, to the federal database operated by the United States Department of Energy Alternative Fuels Data Center.

Under the bill, station owners or operators who require station users to pay a fee must provide multiple payment options that allow public access. The bill prohibits station owners and operators who require a fee from requiring subscription fees or membership in any club, association, or organization as a condition of using the station. However, the bill allows owners and operators who require fees to have different price schedules based on subscription or membership in a club, association, or organization.

The bill prohibits anyone from parking in a space equipped with a public electric vehicle charging station, except for those operating

plug-in hybrid vehicles or battery electric vehicles. The bill allows station owners and operators to impose restrictions on the amount of time that an electric vehicle may be charged at the charging station.

By law, various weight and measurement devices must be registered annually with the Department of Consumer Protection (DCP) commissioner, who must charge registration fees. Under the bill, public electric vehicle charging stations must be registered annually with the DCP commissioner, who must collect a \$50 registration fee.

COMMITTEE ACTION

Energy and Technology Committee

Joint Favorable Substitute

Yea 21 Nay 1 (03/22/2016)