Connecticut Chapter
2074 Park St.
Hartford, Connecticut 06105
http://www.sierraclub.org/connecticut
Martin Mador, Legislative Chair

Energy and Technology Committee
March 10, 2016
Testimony in Support, Only if amended, of
HB 5510 AAC Electric, Zero Emission and Fuel Cell Electric Vehicles

I am Martin Mador, 130 Highland Ave., Hamden, CT 06518. I am the volunteer Legislative Chair for the Connecticut Chapter of the Sierra Club. I hold a Masters of Environmental Management degree from the Yale School of Forestry and Environmental Studies.

Promoting EV ownership is certainly an important priority. As transportation is estimated to supply 40% of global warming emissions, addressing greenhouse gas emissions from the transportation sector is an important component of honoring our climate change goals.

There is an important role for the state to play in accelerating EVs. This becomes especially important in these days of cheap fossil fuels. We know that there is no money now from the state budget to extend the CHEAPR rebate program. We will have to look elsewhere. But there are significant changes necessary to the state's EV infrastructure.

The bill which would have done some of this last year, HB 7009, didn't cross the finish line.

So we are back this year with HB 5510. As currently written, however, the bill contains a number of unnecessary, confusing, or harmful provisions. Changes must be made to turn this into a useful vehicle. Members of the CT EV Coalition have invested considerable time composing the changes we advise are needed. They are attached to this testimony.

Sierra and CFE are members of the EV Coalition. We sign on to the testimony submitted on this bill by Shannon Laun from CFE.

Please ensure that HB5510, **amended to incorporate the necessary changes**, passes this year.

HB 5510/LCO 2022 Amendments

An Act Concerning Electric, Zero Emission and Fuel Cell Electric Vehicles

H.B. 5510 must be amended. The bill has many good provisions, including Sections 2, 5, 6, and 12, but it also includes provisions that are confusing, unnecessary, harmful, or conflict with existing laws or regulations.

The following provision is extremely confusing and must be amended:

- **Section 4: Defines EV charging stations and would create time of day rates for EV charging**
  Must be amended. This section misleadingly defines "public" charging stations as free public charging stations, and defines "private" charging stations as those that allow access to anyone. This is confusing and inconsistent with how other states define charging stations. These definitions should be removed, and new definitions should be added for the following terms: EV charging station, public EV charging station, and publicly available parking space. Subsection (b) should be amended to require PURA to establish time of day rates for residential and commercial customers. This would decrease the cost of charging an EV at home or charging a commercial fleet of EVs at night, when electric demand is low. These lower costs would be a good incentive for drivers of EVs and operators of commercial EV fleets.

These provisions have potential but must be strengthened:

- **Section 1: Defines different types of ZEVs**
  The bill wrongly defines "electric vehicle" (subsection 2) and "zero emission vehicle" (subsection 7) as including regular hybrids (like the traditional Prius) rather than plug-in hybrids. This is inconsistent with standard definitions of EVs and ZEVs and would likely lead to confusion. Moreover, there are strong policy reasons to exclude regular hybrids from these definitions in case they are later used as the basis for state incentive programs. Regular hybrids are well established in Connecticut and elsewhere and no longer need financial or other incentives—in contrast to plug-in hybrids and EVs, which are newer technologies.

- **Section 8: Requirements for EV charging stations**
  Subsection (a) concerns payment options, so it should only apply to public EV charging stations that require payment of a fee. Such stations should not be required to offer specific payment options, but should instead offer payment options that allow access by the public. Subsection (b) should be amended to require owners or operators of public EV charging stations to disclose information about the stations to a database. The bill currently requires DMV to do this, but there is no requirement for the information to be reported to DMV. Finally, subsection (e), which prohibits membership-only charging stations, is too broad a prohibition. This language should be changed to allow owners or operators of public EV charging stations to charge separate prices for members and non-members, but require access to be open to all.

These provisions are unnecessary or harmful and should be removed:

- **Section 7: Signage requirements for electricity and hydrogen fuel – conflict with current standards**
  Should be deleted. The requirements in this section conflict with national standards from the National Institute of Standards and Technology Handbook 44, which Connecticut has adopted.

- **Section 9: Would discourage EV charging stations by requiring them to pay high fees starting in 2016**
  Should be deleted. This section would require EV charging stations to pay an annual registration fee of $50. This would discourage installation of charging stations, which would limit options for EV drivers.

- **Sections 10 and 11: Would require adoption of standards that have already been adopted**
  Should be deleted. These sections are unnecessary because they would require adoption of EV charging standards in the National Institute of Standards and Technology Handbook 44 and Handbook 130, which the Department of Consumer Protection has already adopted.

Note: Proposed deletions are bolded and stricken out, ~~**like this**~~. New language is in red.

Raised Bill No. 5510

LCO No. **2022**

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:

Section 1. (NEW) (*Effective July 1, 2016*) As used in this section, sections 14-12, 16a-3e and 43-3a of the general statutes, as amended by this act, and sections 5 and ~~**8**~~ 7 of this act:

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

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

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

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

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

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

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

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

(NEW) (l) Not later than October 1, 2016, the Department of Motor Vehicles shall record the number of electric vehicles, as defined in section 1 of this act, registered in the state. This data shall be publicly available on the department's Internet web site and shall include (1) the number of electric vehicles registered in the state each year; and (2) the total number of electric vehicles registered in the state. The department shall update this information every six months.

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

(NEW) (c) The terms "utility", "public utility", "electric distribution company", "electric supplier", and "public service company" shall not be deemed to include ~~**public or private**~~ owners or operators of electric vehicle charging stations, as defined in section 16-19f, as amended by this act, solely on the basis of such ownership or operation.

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

(a) As used in this section:

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

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

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

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

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

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

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

(6) "Electric vehicle charging station" means 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;

(7) "Publicly available parking space" means a parking space that has been designated by a property owner or lessee to be available to, and accessible by, the public and may include on-street parking spaces and parking spaces in surface lots or parking garages but shall not include a parking space that is part of, or associated with, a private residence, or a parking space that is reserved for the exclusive use of an individual driver or vehicle or for a group of drivers or vehicles, such as employees, tenants, visitors, residents of a common interest development, or residents of an adjacent building.

(8) "Public electric vehicle charging station" means an electric vehicle charging station located at a publicly available parking space;

~~[(7)] (8)~~ (9) "Interruptible rate" means an electric utility rate designed to reflect the cost to the utility in providing service to a consumer where such consumer permits his service to be interrupted during periods of peak electrical demand; and

~~[(8)] (9)~~ (10) "Load management techniques" means cost-effective techniques used by an electric utility to reduce the maximum kilowatt demand on the utility.

(b) The Public Utilities Regulatory Authority, with respect to each electric public service company and each municipal electric company, shall (1) within two years, consider and determine whether it is appropriate to implement any of the following rate design standards: (A) Cost of service; (B) prohibition of declining block rates; (C) time of day rates; (D) seasonal rates; (E) interruptible rates; and (F) load management techniques, and (2) **[**within one year, consider and determine whether it is appropriate to**]** not later than June 1, 2017, implement electric vehicle time of day rates for (i) residential customers; and (ii) commercial customers~~**(A) public electric vehicle charging stations; and (B) private electric vehicle charging stations**~~. The consideration of said standards by the authority and each municipal electric company shall be made after public notice and hearing. Such hearing may be held concurrently with a hearing required pursuant to subsection (b) of section 16-19e. The authority and each municipal company shall make a determination on whether it is appropriate to implement any of said standards. Said determination shall be in writing, shall take into consideration the evidence presented at the hearing and shall be available to the public. A standard shall be deemed to be appropriate for implementation if such implementation would encourage energy conservation, optimal and efficient use of facilities and resources by an electric public service company or municipal electric company and equitable rates for electric consumers.

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

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

Sec. 5. (NEW) (*Effective July 1, 2016*) (a) The Public Utilities Regulatory Authority shall require each electric distribution company, as defined in section 16-1 of the general statutes, as amended by this act, to integrate electric vehicle charging load projections into such company's distribution planning. Such projections shall be based on the number of electric vehicles, as defined in section 1 of this act, registered in the state and projected increases or decreases in sales of such vehicles.

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

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

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

~~Sec. 7. Subsection (a) of section 16a-15 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective July 1, 2016*):~~

~~(a) Each person shall publicly display and maintain on each pump or other dispensing device from which any gasoline or other product intended as a fuel for aircraft, motor boats or motor vehicles, including electricity dispensed from electric vehicle charging equipment and hydrogen fuel, is sold by such person, such signs as the Commissioner of Consumer Protection, by regulation adopted pursuant to chapter 54, may require to inform the public of the octane rating and price of such gasoline, and the price of such electricity, hydrogen fuel or other product. Each person selling such gasoline, electricity, hydrogen fuel or other product on both a full-serve and self-serve basis and displaying the price of such gasoline, electricity, hydrogen fuel or other product at a location on the premises other than at a pump or other dispensing device shall include in such display both the full-serve and self-~~

~~**serve prices of such gasoline, electricity, hydrogen fuel or other product, in such manner as the commissioner, by regulation, may require. [All] For gasoline or any other product intended as a fuel, including hydrogen fuel, all signs as to price shall be the per-gallon price and shall not be the price of less or more than one gallon. For electricity dispensed from electric vehicle charging equipment, all signs as to price shall be the per-kilowatt hour price.**~~

Sec. ~~**8**~~7. (NEW) (*Effective July 1, 2016*) (a) The owner or operator of a ~~private~~ public electric vehicle charging station, as defined in section 16-19f of the general statutes, as amended by this act, ~~that is available for public use~~ that requires payment of a fee, shall provide ~~multiple~~ payment options that allow access by the general public~~**including, but not limited to, cash or electronic payment by means of a credit card or debit card**~~.

(b) ~~**The Commissioner of Motor Vehicles shall disclose the location and characteristics of each private electric vehicle charging such station, including, but not limited to, the address, voltage and timing restrictions,**~~ The owner or operator of a public electric vehicle charging station, as defined in section 16-19f of the general statutes, or their designee, shall disclose on an ongoing basis the station's geographic location, a schedule of fees, accepted methods of payment, and the amount of network roaming charges for nonmembers, if any, to the federal database operated by the United States Department of Energy Alternative Fuels Data Center.

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

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

~~(e) **No person may own or operate a membership-only electric vehicle charging station.**~~ (c) Persons desiring to use a public electric vehicle charging station that requires payment of a fee shall not be required to pay a subscription fee in order to use the station, and shall not be required to obtain membership in any club, association, or organization as a condition of using the station. Owners or operators of public electric vehicle charging stations that require payment of a fee may have separate price schedules conditional on a subscription or membership.

(d) Nothing in this section limits the ability of an owner or lessee of a publicly available parking space whose primary business is other than electric vehicle charging from restricting use of the parking space, such as limiting use to customers and visitors of the business.

~~**Sec. 9. Subsection (b) of section 43-3 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective July 1, 2016*):**~~

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

~~**Sec. 10. Section 43-42 of the general statutes is repealed and the following is substituted in lieu thereof (*Effective July 1, 2016*):**~~

~~**The Commissioner of Weights and Measures is authorized after a public hearing held to establish and promulgate such rules, regulations, specifications and tolerances to supplement and give full effect to the provisions of sections 43-36 to 43-44, inclusive, as he deems necessary. The commissioner [may] shall issue as regulations those specifications, tolerances and regulations for commercial weighing and measuring devices adopted by the National Conference on Weights and Measures set forth in the National Institute of Standards and Technology Handbook 44, as amended, of the United States Department of Commerce and incorporate them by reference. Such rules, regulations, specifications and tolerances shall have the force and effect of law. In addition to any provisions adopted by the National Conference on Weights and Measures, the commissioner shall not require any person to acquire a weighing or measuring device or instrument that exceeds the weighing or measuring needs of the business in which such device or instrument is employed.**~~

~~**Sec. 11. Section 43-3a of the general statutes is repealed and the following is substituted in lieu thereof (*Effective July 1, 2016*):**~~

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

~~**(b) Not later than June 1, 2017, the Commissioner of Weights and Measures shall adopt regulations, in accordance with chapter 54, to establish standards from the National Institute of Standards and Technology concerning commercial electricity measuring devices, including those used to measure and sell electricity dispensed as a fuel for electric vehicles, as defined in section 1 of this act.**~~

Sec. ~~12~~8. Subsection (a) of section 14-103d of the general statutes is repealed and the following is substituted in lieu thereof (*Effective July 1, 2016*):

(a) No motor vehicle which uses any pressurized gas except natural gas or hydrogen as a fuel for its engine may enter or be parked in any area that is under grade level. Any vehicle within the state which carries any pressurized gas as its fuel in a tank attached to the vehicle in any concealed area, including, but not limited to, trunks, compartments or under such vehicle, except a vehicle that is in compliance with all applicable federal codes and standards for light duty passenger use, shall have displayed on its exterior the words "Pressurized Flammable Gas" or a standard abbreviation or symbol as determined by the Office of the State Fire Marshal, in block letters at least two inches high, which letters shall be of contrasting colors and shall be placed as near as possible to the area where the tank is located. No person may dispense any pressurized gas used as a vehicle fuel into any tank in a concealed area of a vehicle unless the vehicle is in compliance with the requirements of this subsection. The Commissioner of Motor Vehicles shall adopt regulations in accordance with the provisions of chapter 54 to carry out the provisions of this 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***~~	~~**16a-15(a)**~~
Sec. ~~8~~7	*July 1, 2016*	New section
~~**Sec. 9**~~	~~***July 1, 2016***~~	~~**43-3(b)**~~
~~**Sec. 10**~~	~~***July 1, 2016***~~	~~**43-42**~~
~~**Sec. 11**~~	~~***July 1, 2016***~~	~~**43-3a**~~
Sec. ~~12~~8	*July 1, 2016*	14-103d(a)