



December 20, 2018

Commissioner Rob Klee
Deputy Commissioner Mary Sotos
CT Department of Energy and Environmental Protection
79 Elm St.
Hartford, CT 0610

Dear Commissioner Klee and Deputy Commissioner Sotos:

The Connecticut Electric Vehicle Coalition (“the EV Coalition” or “EVC”) is a diverse group of clean energy advocates and businesses, organized labor, and environmental justice groups that support policies that will put more electric vehicles (“EVs”) on the road in Connecticut to achieve significant economic, public health, and climate benefits for our state. The Connecticut Electric Vehicle Coalition appreciates the efforts of the Department of Energy and Environmental Protection (DEEP) to “identify Connecticut-specific policies, programs, and strategies that the State of Connecticut should pursue to optimize deployment of EVs and associated infrastructure” through the development of an EV Roadmap. The Connecticut EV coalition strongly supports the state creating a more strategic and ambitious strategy on zero emission vehicle (“ZEV”) deployment, one of several key strategies that will help the state tackle climate change,¹ improve the public health and air quality,² as well as create economic development opportunities for the state.³

The EV Coalition recommends that DEEP approach the EV Roadmap by first identifying targets for vehicle electrification based on the State’s climate goals, focusing on the State’s 2030 goal of reducing GHG emissions economy-wide 45 percent below 2001 levels.⁴ The Governor’s Council on Climate Change’s recently released draft report identifies the need to electrify 20 percent of the passenger vehicle fleet (500,000 vehicles), 30 percent of buses, light commercial trucks and refuse trucks, and 35 percent of single use short haul trucks by 2030 consistent with the State’s legislated climate goal,⁵ which should guide the targets in the Roadmap. Once the vehicle goals are identified,

¹ EVs have zero tailpipe emissions, and even with New England’s electricity mix today, these vehicles cut GHG emissions as much as 75% compared to conventional vehicles. These emissions savings will only increase as the region continues to clean and modernize the electric system, and move toward a 100% renewable future. See Acadia Center, *EnergyVision 2030*, available here: <http://2030.acadiacenter.org/>

² American Lung Association, *Clean Air Future: Health and Climate Benefits of Zero Emission Vehicles* (Oct. 2016), available at <http://www.lung.org/local-content/california/documents/2016zeroemissions.pdf>. See also <http://www.lung.org/local-content/california/documents/national-clean-air-future-report.pdf>.

³A study of economic impacts of EV deployment in California, for example, showed that ZEVs are a catalyst for growth. In California alone, the ZEV market will create 100,000 additional jobs across all economic sectors by 2030. See David Roland-Holst, University of California Berkeley, *Plug-in Electric Vehicle Deployment in California, An Economic Assessment* (Sept. 2012), available at https://are.berkeley.edu/~dwrh/CERES_Web/Docs/ETC_PEV_RH_Final120920.pdf. Similar modeling should be done in Connecticut.

⁴ Public Act 18-82.

⁵ Governor’s Council on Climate Change, *Building a Low Carbon Future for Connecticut: Achieving a 45% GHG Reduction by 2030* (released Dec. 18, 2018), at 28, available at

the EV Coalition urges DEEP to model the associated charging needs (both public and private, Level 1, 2 and DC fast charging) for a realistic range of assumptions regarding future vehicle capabilities (e.g., ratios of plug-in hybrid electric vehicles to battery electric vehicles, distributions of battery ranges across the vehicle fleet, and availability of home charging). This analysis can be readily undertaken using the National Renewable Energy Laboratory's (NREL's) publicly available EVI-Pro Lite tool,⁶ which can produce a sensitivity analysis around the results by varying the input assumptions.

Finally, the EV Coalition urges DEEP to identify policies and strategies that can put Connecticut on the trajectory required to meet its 2030 vehicle electrification and charging infrastructure goals, while minimizing adverse impacts to the grid and maximizing the benefits of the new electric load. This strategy identification should include clarifying roles and responsibilities for the full range of stakeholders, including actions that need to be taken legislatively, those that can be taken administratively at the state level, actions that should be undertaken by the State's utilities, and those that should be pursued at the local level.

While the Draft Scope EV Roadmap identifies a number of key strategic areas and important considerations for accelerating deployment of ZEVs in Connecticut, which are discussed in greater detail below, for the Roadmap to truly be able to guide decision-making around EVs in the coming years, we urge DEEP to embed it in the type of analysis regarding 2030 vehicle and charging infrastructure needs identified above. In developing the Roadmap, we also urge DEEP to be cognizant of equity impacts of its recommendations and focus on expanding not just opportunities for EV ownership but also access to the benefits of electrified transportation (e.g., through electrified shared-ride or ride-hailing services, through electrified transit bus options etc.).

Accelerating ZEV Adoption

There are a range of barriers to EV adoption including vehicle purchase price, lack of consumer education and information, and range anxiety due to inadequate publicly-accessible charging infrastructure. The EV Coalition urges DEEP to address each of these barriers to EV adoption in the EV Roadmap and identify levers that the State can pull that will help to overcome them.⁷

The EV Coalition supports specific recommendations and strategies around ZEV adoption, including addressing all the topics proposed by DEEP, and briefly comments on the following included in DEEP's list:

- *Education, outreach, and marketing.* The EVC agrees that DEEP should propose improved and coordinated education campaigns in the Roadmap.
- *Public and private fleet strategies.* The EVC supports public and private fleet strategies, and the establishment of state fleet EV deployment targets. Bulk purchases will help reduce purchase price. As noted in the GC3 draft report, the State must lead by example by quickly shifting all fleet vehicle purchases to electric. This will help bring down vehicle costs. The state can

https://www.ct.gov/deep/lib/deep/climatechange/publications/building_a_low_carbon_future_for_ct_gc3_recommendations.pdf

⁶ EVI-Pro Lite is available through the Alternative Fuels Data Center at <https://afdc.energy.gov/evi-pro-lite>.

⁷ See CT EV Coalition Comments on Draft CES dated September 19, 2017.

further increase the efficacy of this strategy by coordinating with other like-minded states and municipalities to engage in bulk purchasing. Both California and Massachusetts have recognized the importance of aggressive state fleet EV mandates, and Connecticut should explore savings that could accrue from multi-state bulk purchasing programs.⁸

- *Sustainable funding in the form of incentives, financing, manufacturer partnerships, or other.* The EVC supports the policy objective of ensuring a stable source of funding for CHEAPR at least through 2025 to ensure that all interested purchasers can take advantage of EVs. Incentives should be designed to equitably increase access to EVs by offering an income eligible program that offers bigger rebates and used-car rebates for customers in lower income brackets. The EVC also recommends that a board is established to oversee the rebate program, and to establish a process for setting and altering rebate levels, including low income rebates and eligibility, and program evaluation. This Board should set up structures for monitoring and evaluation of EV access to make sure all residents, especially those most impacted by air pollution, have access to both clean public transit and vehicles, as well as needed EVSE.
- *Partnering with dealerships.* EVC supports better partnerships with dealerships to increase their engagement of consumers interested in buying electric, for instance workshops and ride-and-drives sponsored by the State, dealership groups, and EV stakeholders, as well as trainings for dealerships that enhance electric car expertise and sales capabilities.⁹
- *Bringing clean transportation options to low- to moderate-income communities.* In addition to income eligible rebates, the roadmap should focus on electrifying our public transit system, and could explore how the state can incentivize ride share services to utilize ZEVS.
- *Streamlining building codes and permitting.* EV-ready building codes are critical to reducing the cost of equipping buildings with the charging equipment needed to support accelerated adoption of electric vehicles.
- *Interoperability:* The EVC believes that it should be easy for any charging station to be used by any driver accessed through any system. For any state-facilitated or ratepayer-supported programs, the EVC urges DEEP to consider strategies to maximize interoperability and consumer access.
- *Data collection (EV registrations, charging station data, etc.)* The EVC supports improving the state's data collection and monitoring regarding both EV registrations and charging stations, while maintaining consumer privacy.

In addition to the above topics, the EV Roadmap should address increasing Connecticut consumers' access to EVs. The EVC supports allowing direct EV sales to consumers or other alternative business models. Allowing direct sales would increase the availability of additional EV models, grow public awareness of EVs generally, and encourage build-out of public and private charging infrastructure.

⁸ See Commission on Future of Transportation in Massachusetts, *Choices for Stewardship: Recommendations to Meet the Transportation Future*, available at https://www.mass.gov/files/documents/2018/12/14/FOTCVolume1_1.pdf. See also Hiroko Tabuchi, The New York Times, *California Requires New City Buses to Be Electric by 2020*, Dec. 12, 2018, available at <https://www.nytimes.com/2018/12/14/climate/california-electric-buses.html>.

⁹ See e.g., PlugInAmerica, *PlugStar Dealer Program*, <https://pluginamerica.org/plugstar/dealership/>.

Creating a Robust Fueling Infrastructure

There are also important barriers to deployment of EV charging infrastructure that will be necessary for EV adoption, such as the challenge that demand charges pose to the business case for direct current fast chargers at low levels of EV penetration. The EV Coalition supports the EV Roadmap's inclusion of strategic charging infrastructure planning, including how the state should approach the EVSE Infrastructure Proposals under VW NOx Mitigation Grant and more broadly looking at public-private partnerships for public, residential and workplace charging. We have previously urged the state to move forward as quickly as possible to take advantage of and begin benefiting from settlement funds available to expand Connecticut's EV charging infrastructure and make other critical advancements toward electrifying our transportation sector.¹⁰

The Roadmap could address utility's role in building out Connecticut's charging infrastructure, but only to the extent that incorporating this topic would not slow down recommendations and progress made through PURA's grid modernization docket. Utility investment in make-ready infrastructure, for example, can complement the competitive market, address coordination problems, and help to overcome barriers to entry in important market segments, including low-income communities and multi-family housing.

In addition, the EV Roadmap can help direct a discussion about how to overcome the barrier that demand charges pose to build-out of DC fast charging infrastructure. Many approaches are being tested around the country including demand charge holidays, off-bill rebates, and rate structures that shift some portion of the demand charge into the volumetric charge. In Connecticut, Eversource has been testing this latter option through the EV Rate Ride pilot, which has saved publicly available charging station owners thousands of dollars annually.¹¹ Another example is Pacific Gas & Electric's recent proposal to replace demand charges with a lower rate based on the installed capacity to which a charging customer is willing to subscribe, subject to a significant overage charge, as well as a time of use component.¹² Any EV rate design reforms should be structured to be consistent with the state's goals of grid modernization and improved integration of distributed energy resources (DER), including solutions that retain compatible price signals for multiple and different types of DER like storage.

Smart, Standards-Based EV Integration & Consumer Market Signals

The EVC supports DEEP's plans to identify strategies that will minimize adverse impacts and maximize benefits of new electric load, including encouraging off-peak charging and utilizing ZEVs as a demand response resource. Smart integration of EVs into the grid can help maximize GHG

¹⁰ See EVC Letter to Governor Malloy dated November 1, 2017.

¹¹ CT's own EV Rate Rider is a good example of how rate design can support EV deployment. PURA Docket No. 13-12-11, [http://www.dpuc.state.ct.us/dockhistpost2000.nsf/8e6fc37a54110e3e852576190052b64d/46cfb43aff01dbd28525829c00736078/\\$FILE/Att%201-3%20Electric%20Vehicle%20Pilot%20Filing.pdf](http://www.dpuc.state.ct.us/dockhistpost2000.nsf/8e6fc37a54110e3e852576190052b64d/46cfb43aff01dbd28525829c00736078/$FILE/Att%201-3%20Electric%20Vehicle%20Pilot%20Filing.pdf).

¹² PG&E Proposes to Establish New Commercial Electric Vehicle Rate Class, Nov. 5, 2018, https://www.pge.com/en/about/newsroom/newsdetails/index.page?title=20181105_pge_proposes_to_establish_new_commercial_electric_vehicle_rate_class. See also Robert Walton, Utility Dive, *PG&E Mimics Smart Phone Data Plans with EV Charging Rate Proposal*, Nov. 9, 2018, <https://www.utilitydive.com/news/pge-proposes-new-rate-class-for-commercial-ev-charging/541799/>.

emissions reductions by optimizing grid utilization. Through appropriate customer signals (e.g. time-of-use rates or off-peak charging incentives), the flexible load of EVs can better integrate renewable resources or shift load by charging at periods of low demand. These changes improve the efficiency of the grid and reduce costs for all ratepayers, while at the same time improving the economics of operating an EV. In seeking to manage EV load, there must be careful consideration of customer experience and choice to assure that the steps taken to shape the load curve from EV charging do not inadvertently deter EV adoption or disincentivize the deployment of EVSE at a wide range of appropriate locations. Because these issues are being explored in the current grid modernization before PURA,¹³ the EV Roadmap should only address them if timing aligns.

ZEV's Beyond Light-Duty Vehicles

The EVC supports the EV Roadmap including the evaluation of deployment opportunities for medium and heavy-duty vehicle and non-road electrification. It is especially important for the state to address zero emission buses and electrified public transit options to promote equitable access to clean transportation. The roadmap should therefore focus on addressing additional policy levers needed to electrify our transit buses as quickly as possible. Specifically, DEEP should look at how the state can better leverage VW settlement funds to accelerate the deployment of electric transit buses and electric school buses. The first round of funding resulted in a disappointing number of proposals around electrification. DEEP should look at how other states have used the diesel mitigation funds to support electrification, and potentially revise the mitigation plan and future project solicitation guidelines to better support and encourage electric vehicle investments, including for public and private buses.

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We look forward to engaging with DEEP on these important topics.

Respectfully submitted,

The Connecticut Electric Vehicle Coalition

- Acadia Center*†
- Connecticut Fund for the Environment*†
- Connecticut Nurses Association
- Connecticut Roundtable on Climate & Jobs*
- Connecticut Citizen Action Group
- ConnPIRG
- Conservation Law Foundation

¹³ See PURA Docket No. 17-12-03: PURA Investigation into Distribution System Planning of the Electric Distribution Companies, Connecticut Electric Vehicle Coalition Joint Principles on Grid Modernization and Electric Vehicles, Sept. 26, 2018.

- ChargePoint*
- Chispa-CT*
- Clean Water Action*
- CT League of Conservation Voters
- CT 350
- Drive Electric Cars New England
- Eastern CT Green Action
- Electric Vehicle Club of Connecticut*
- Energy Solutions, LLC
- Environment Connecticut*
- Greater New Haven Clean Cities Coalition, Inc.
- Hamden Land Conservation Trust
- Hartford Climate Stewardship Council
- International Brotherhood of Electrical Workers*
- Interreligious Eco-Justice Network
- New Haven Climate Movement
- Northeast Clean Energy Council
- People's Action for Clean Energy
- Proton OnSite
- Plug In America*
- RENEW Northeast
- Sierra Club*†
- Solar Connecticut, Inc.
- Tesla, Inc.
- Union of Concerned Scientists

* Connecticut EV Coalition Steering Committee Membership

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