



March 31, 2016

VIA ELECTRONIC MAIL

Governor's Council on Climate Change
Analysis, Data & Metrics (ADM) Working Group
Email: deep.climatechange@ct.gov

RE: Comments of the Sierra Club to the ADM Working Group

Dear Members of the ADM Working Group:

On behalf of the Sierra Club and its more than 8,000 members in Connecticut, thank you for the opportunity to provide comments regarding the Analysis Data & Metrics Working Group's most recent meeting. We appreciate Governor Malloy's continuing climate leadership through the Governor's Council on Climate Change ("GC3"), and look forward to continuing to work with the Council to establish aggressive but achievable near-term climate goals for Connecticut that will put the State on track to meet its 2050 climate commitments.

I. Summary of Comments

The most recent modeling conducted by the GC3 succinctly demonstrates that more ambitious programs than those considered in the process to date are necessary to reach the state's goals. Connecticut's long term climate target was not reached even under a scenario with 80% of electricity consumption from zero carbon resources, 70% of all vehicles powered by that increasingly clean electricity, and 60-80% penetration of renewable energy and clean electricity for heating needs.¹ These results reinforce that rapidly transitioning to nearly 100% carbon free electricity, powering virtually all vehicles with those sources, and switching to electricity and renewables for thermal requirements are necessary steps to achieving Connecticut's climate goals. The Sierra Club supports the GC3's plan for NESCAUM to model shorter term goals including a 55% reduction in climate-disrupting pollution within Connecticut by 2030.² Per our previous comments in the process, we encourage the GC3 to include the following policies in their recommendations, especially noting that some actions, such as determining the future of the Regional Greenhouse Gas Initiative ("RGGI"), will require engagement prior to the finalization of the GC3 report:

1. With the current RGGI program review ongoing, we urge Connecticut to advocate that the RGGI states model a robust set of 2030 cap levels, including a cap that declines by 5% each year from 2020 to 2030. Once these policy case model results are available, we urge Connecticut to advocate for the selection of a cap level that is consistent with the State's 2030 climate goals.

¹ http://www.ct.gov/deep/lib/deep/climatechange/gc3_adm_group/adm_meeting_3_10_2016.pdf (page 16)

² http://www.ct.gov/deep/lib/deep/climatechange/gc3/gc3_exploratory_report_2016.pdf (page 37)

2. As we stated in our December GC3 comments, the GC3 should work with the Department of Energy and Environmental Protection (“DEEP”), the Public Utilities Regulatory Authority (“PURA”), and Connecticut’s utilities to expand and make long-term rebates that reduce the higher up-front cost of purchasing EVs, as well as rapidly expand Connecticut’s charging infrastructure, especially in underserved areas and areas where the market falling far short, such as in multi-unit dwellings (“MUDs”) and workplaces.

II. Comments

A. Modeling Scenarios

The Sierra Club supports modeling of a robust range of intermediate-term climate goals that meet or exceed Connecticut’s commitment under the New England Governors and Eastern Canadian Premiers recent Resolution Concerning Climate Change³ that are in line with meeting Connecticut’s longer-term 2050 climate outcomes.

Building on their prior commitments, the New England Governors and Eastern Canadian Premiers last August agreed to a 2030 reduction marker range of “at least 35% to 45% percent” below 1990 levels. This goal is broadly consistent with the goals of other states in the region, and we support plans for NESCAUM to model both 35% and 45% reductions by 2030.⁴

At the same time, as other groups have noted, it is worth exploring a range of more aggressive carbon reduction scenarios. To that end, the Sierra Club supports plans for NESCAUM to model a third scenario in which economy-wide greenhouse gas emissions drop by 55% by 2030. Such a trajectory is arguably more equitable because it requires uniform percentage declines throughout the entire 2016 to 2050 time frame.

B. Achievement of 2030 Reductions

While the establishment of aggressive but achievable intermediate-term climate goals consistent with Connecticut’s longer-term 2050 commitments is a process that deserves thoughtful consideration, it should not impede near-term opportunities to lock in significant progress.

1. Electric Sector

The RGGI program is tailor-made for locking in the necessary electric sector reductions to ensure attainment of Connecticut and other states’ 2030 climate goals. The RGGI program establishes a region-wide cap on carbon dioxide emissions from electric generators. Establishing

³ Resolution 39-1 – Resolution Concerning Climate Change (Aug. 31, 2015).

⁴ New York in its 2015 State Energy Plan established a goal of 40% below 1990 levels by 2030 energy-sector wide; Delaware in its 2014 Climate Framework set a goal of 30% below 2008 levels by 2030 economy-wide, *see* Climate Framework for Delaware (Dec. 31, 2014), available at <http://www.dnrec.delaware.gov/energy/Documents/The%20Climate%20Framework%20for%20Delaware.pdf>, and Maryland in its recent legislation renewing its Greenhouse Gas Emission Reduction Act set a goal of 40% below 2006 levels by 2030 economy-wide.

a RGGI cap consistent with Connecticut and the other RGGI states' 2030 climate goals is the best way to ensure Connecticut is on the necessary trajectory for decarbonization of the electric sector. Moreover, modeling analyses suggest that Connecticut can achieve a region-wide reduction in greenhouse gas emissions of 40% below 1990 levels in 2030 by decreasing electric sector carbon dioxide emissions to half of RGGI 2020 levels by 2030, and in doing so accrue significant economic and public health benefits.

In October 2015, the RGGI states kicked off their 2016 program review, with a primary objective to establish the electric sector carbon cap trajectory for the region out to 2030 (consistent with the planning horizon of EPA's Clean Power Plan). Although this program review is occurring in parallel with the GC3's 2030 goal development, the concurrent timing should not constrain Connecticut's ability to ensure RGGI locks in needed electric sector emission reductions.

Under any 2030 climate goal that meets or exceeds Connecticut's commitment under the Northeast Governors and Eastern Canadian Premiers Resolution, the electric sector is going to need to experience a significant decreasing emission trajectory through 2030. As analysts have observed, "electricity is the least-challenging sector to decarbonize directly so it takes on the largest initial emission reductions."⁵ For example, Clarke *et al.* (2014) summarized the results of nine top energy-environment-economy models looking at reducing economy-wide domestic greenhouse gas emissions by 50% and 80% by 2050.⁶ The authors observed that these models call for reductions in the electric sector in excess of 75% to achieve a 50% reduction in economy-wide greenhouse gas emissions.⁷

As we noted in our previous comments, the Sierra Club, in collaboration with Pace Energy and Climate Center and Chesapeake Climate Action Network, retained Synapse Energy Economics to develop a vision of what a least-cost build-out to RGGI states' 2030 climate goals would entail. Specifically, our organizations tasked Synapse with building out a reference case business-as-usual scenario and then identifying the lowest cost shifts from that reference case that were both achievable within the relevant time frame and needed to meet a 40% economy-wide reduction in greenhouse gas emissions from 1990 levels by 2030, and to model the resultant economic and climate impacts.

Since our last comments Synapse has developed an updated report, *The RGGI Opportunity 2.0*, which further confirms the results of the broader environmental-economic studies in the context of the RGGI region. Synapse, analyzing a least-cost buildout to a region-wide 40% reduction in greenhouse gas emissions by 2030, concluded that the electric sector will be responsible for nearly half of the incremental emission reductions between now and 2030.⁸ Specifically, even with electrification of 10 million vehicles in the RGGI states, acceleration of energy efficiency in all states to levels achieved by the highest performing states in the region,

⁵ Leon E. Clarke et al., *Technology and U.S. Emissions Reductions Goals: Results of the EMF 24 Modeling*, *The Energy Journal*, Vol. 1 (Special Issue 1: The EMF24 Study on U.S. Technology and Climate Policy Strategies) (2014), at 21.

⁶ *Id.* at 9.

⁷ *Id.* at 21.

⁸ Synapse Energy Economics, *The RGGI Opportunity 2.0: RGGI as the Electric Sector Compliance Tool to Achieve 2030 State Climate Targets* (updated Mar. 4, 2016), attached as an exhibit to these comments.

and large improvements in building efficiency and heating, emissions from the electric sector must continue to decline at a rate of 5% each year between 2020 and 2030 to keep Connecticut and the other RGGI states on track to meet a 40% by 2030 climate goals. This conclusion is fully consonant with the analyses provided in the March 10th GC3 materials. Electric vehicles are already 50-70% lower in greenhouse gas emissions than conventional vehicles in the northeast region based on today's electricity sources. As Slide 14 of the March 10th presentation illustrates, electrification of vehicles is increasingly more effective as we shift the electric sector to be increasingly carbon-free. In order for Connecticut to put itself on a trajectory to meet a 40% by 2030 goal, even with a major transition to electric vehicles, significant further decarbonization of the electric sector is also required.

Of note, *The RGGI Opportunity 2.0* also shows that complying with RGGI states' collective 2030 climate goals in a least-cost manner and decreasing electric sector carbon intensity by a further 50% between 2020 and 2030 is a win-win for the region. Not only do the reduced climate pollution and reduced air and water pollution mitigate risks to human health, a least-cost buildout to a 40% reduction in economy-wide carbon emissions will promote economic growth and jobs. According to Synapse's analysis, to comply with a 40% by 2030 target, over the next fourteen years the RGGI states would put 10 million electric vehicles⁹ on the road, increase energy efficiency to levels of the top-achieving states in the region, replace inefficient heating oil in buildings with highly efficient heat pumps and ramp up renewable generation in the region. As a result of these investments, the RGGI states would achieve \$25.7 billion in total savings while adding an average of 58,400 job-years per year. Connecticut would see carbon emissions from natural gas, buildings, and transportation decline, while adding thousands of jobs in the renewable and electric and gas energy efficiency sectors.

With the current RGGI program review ongoing, we urge Connecticut to advocate that the RGGI states model a robust set of 2030 cap levels, including a cap that declines by 5% each year from 2020 to 2030, consistent with the result of Synapse's analysis. Once these policy case model results are available, we urge Connecticut to advocate for the selection of a cap level that is consistent with the State's 2030 climate goals.

2. Transportation Sector

As we highlighted previously in our December GC3 comments, in order for Connecticut to achieve 2030 economy-wide climate goals that meet or exceed its commitment under the New England Governors and Eastern Canadian Premiers' resolution, and an 80% emissions reduction by 2050, it will be necessary for the State to make significant reductions in GHG emissions from its transportation sector as well. As shown in the GC3 November meeting presentation, the transportation sector is a major contributor of air pollutants,¹⁰ and it represents 40% of Connecticut's current GHG emissions.

⁹ For purposes of the analysis, electric vehicles were assumed to be full battery electric vehicles, not plug-in hybrid electric vehicles.

¹⁰ GC3 Meeting Slides (November 13, 2015).

In recognition of the need to address transportation sector GHG emissions, in 2013 Connecticut joined with seven other states in a Zero Emission Vehicle (“ZEV”)¹¹ Memorandum of Understanding (“MOU”) and corresponding Multi-State Action Plan to commit to a goal of 3.3 million ZEVs on the road by 2025 across the eight states.¹² This translates into 155,505 ZEVs on the road in Connecticut by 2025.¹³ Most recently, as part of the Transportation & Climate Initiative (“TCI”), Connecticut announced its plan to work with other regional states to pursue clean transportation investments to reduce GHG emissions from the transportation sector 31-39% by 2030 from 2011 levels.¹⁴ Connecticut also joined the International ZEV Alliance in pursuit of making all new passenger vehicles in their jurisdictions ZEVs by no later than 2050.

While these goals are commendable, Connecticut is not currently on track to meet its ZEV goals under the ZEV MOU, nor is it on track to achieve the reduction in GHG emissions from its transportation section needed to achieve its 2030 and 2050 GHG reduction goals. The GC3’s March presentation specifically highlights that even with 70% EV market share and 80% zero carbon electricity, Connecticut will still fall short of meeting its 2050 GHG reduction goals. In order to achieve those goals, we reiterate a number of our December recommendations to the GC3 for ramping up EVs and associated charging infrastructure. As the GC3 stated in its November meeting, it is essential that the EV sales share increase to 100% by 2050 while also transitioning out of Connecticut’s existing fossil-fuel fleet. In order to maximize GHG emissions reductions, Connecticut should also seek to achieve 100% renewable electricity generation by 2050. The GC3 has a critical role to play in this regard.

- a. To Reach the State’s GHG Reduction and ZEV MOU Goals, the GC3 Should Encourage Connecticut To Expand Its EV Rebate Programs and Make Funding Consistent and Reliable

There are more than a dozen mass market EVs at various price points available in Connecticut today. However, to date there are only 3,000-5,000 EVs on Connecticut roads. At present, there are three primary obstacles to EV adoption: higher up-front costs of the EVs themselves, the lack of an adequate charging infrastructure to support them, and lack of sufficient public education. To meet its goals, Connecticut needs to address all of these obstacles. As we stated in our December GC3 comments, the GC3 should work with DEEP, PURA, and Connecticut’s utilities to expand and secure long-term funding for rebates that reduce the higher up-front cost of purchasing EVs, as well as educating the public about the rebate and the benefits of EVs and rapidly expanding Connecticut’s charging infrastructure, especially in underserved areas and areas where the market falling far short, such as in multi-unit dwellings (“MUDs”) and workplaces.

¹¹ ZEVs are vehicles with no tailpipe emissions. They therefore include both battery electric vehicles as well as fuel cell vehicles.

¹² ZEV Multi-State Task Force, Multi-State ZEV Action Plan 2 (May 2014).

¹³ Sierra Club, Acadia Center, Conservation Law Foundation, *Charging Up*, available at: https://www.sierraclub.org/sites/www.sierraclub.org/files/uploads-wysiwig/ChargingUp_DIGITAL_ElectricVehicleReport_Oct2015_0.pdf

While recognizing that not all ZEVs are EVs, we anticipate that the bulk of ZEVs in the coming years will be EVs.

¹⁴ <http://www.transportationandclimate.org/five-northeast-states-and-dc-announce-they-will-work-together-develop-potential-market-based>

i. EV Purchases

In response to Connecticut's participation in the ZEV MOU, the State created EVConnecticut in 2013, a partnership between DEEP and the Connecticut Department of Transportation. EVConnecticut offers the Connecticut Hydrogen and Electric Automobile Purchase Rebate ("CHEAPR"), a "cash on the hood" rebate of up to \$3,000 to Connecticut residents off the purchase or lease price of a new eligible EV. CHEAPR is the only EV rebate in the country that is available immediately at the point of sale at the dealership.

While the CHEAPR program is laudable, the current funding source is limited, and the lack of long-term program funding creates uncertainty for automakers, auto-dealers, and potential EV buyers. In order to provide this funding certainty, the GC3 should work with its TCI regional partners as well as with DEEP at the state level to establish a guaranteed and long-term funding source for CHEAPR and Connecticut's other EV rebate programs.

ii. EV Charging Stations

EVConnecticut also offers rebates for charging infrastructure, providing up to \$10,000 per installation of publicly available EV charging stations.¹⁵ In 2013, EVConnecticut awarded grants for 56 publicly-available EV charging stations,¹⁶ and in May 2015 and December 2015, DEEP released additional financing from the fund to provide for more stations.¹⁷

Despite the success of these programs, Connecticut only has approximately 200 publicly available charging stations.¹⁸ In order to reach its ZEV MOU and GWSA GHG reduction goals, Connecticut must rapidly expand its EV charging infrastructure. Essential to this expansion is targeting "long dwell time" locations, such as MUDs and workplaces, where vehicles are most frequently at rest for periods long enough for a battery to recharge.¹⁹ A report by the National Academy of Sciences characterizes home charging as a "virtual necessity" for all EV drivers. The same report finds that workplace charging vastly improves the EV value proposition by reducing "range anxiety," increasing electric miles driven, and facilitating the integration of renewables.²⁰ Similarly, research by the U.S. Department of Energy indicates that individuals with access to workplace charging are 20 times more likely to be an EV owner.²¹ And yet EVs

¹⁵ Multi-State ZEV Task Force, *State Initiatives* (Aug. 11, 6:30pm), available at: <http://www.zevstates.us/state-initiatives/>; see also Dep't of Energy and Environmental Protection, *EVConnecticut* (Aug. 10, 2015), available at: http://www.ct.gov/deep/cwp/view.asp?a=2684&q=525224&deepNav_GID=1619.

¹⁶ Dep't of Energy and Environmental Protection, *Governor Malloy Announces Funding for Electric Vehicle Charging Stations Across Connecticut* (Nov. 4, 2013), available at: <http://www.ct.gov/deep/cwp/view.asp?Q=534564&A=4380>.

¹⁷ CT Dep't of Energy and Environmental Protection, *New Round of Funding: Incentive Program for Electric Vehicle (EV) Charging Stations* (May 20, 2015), available at: http://www.ct.gov/deep/lib/deep/air/electric_vehicle/commissioner_letter_private_ev_incentives.pdf.

¹⁸ U.S. Department of Energy, Alternative Fuels Data Center.

¹⁹ National Research Council of the National Academies of Sciences, *Overcoming Barriers to the Deployment of Plug-in Electric Vehicles*, the National Academies Press at 6-9 (2015).

²⁰ *Id.*

²¹ U.S. Department of Energy, Workplace Charging Challenge Progress Update 2014: Employers Take Charge, 5 (2014), available at: http://www.energy.gov/sites/prod/files/2015/11/f27/WPCC_2014progressupdate_1114.pdf

owners often lack the ability to install chargers at these locations, and employers and owners of MUDs often lack an incentive to spend the money to install them.

Because of these obstacles, a growing number of states are exploring ways for utilities to engage the EV charging market to expand access and lower the costs for EV chargers. Other states and their respective utilities have already begun pilot programs to expand EV charging infrastructure.

In January 2016, the California PUC approved San Diego Gas & Electric's ("SDG&E") innovative "Vehicle-Grid Integration" program. SDG&E will deploy 3,500 charging stations at workplaces and multi-unit dwellings within its service territory, including in disadvantaged communities, and, using dynamic day-ahead electricity pricing, encourage charging during off-peak hours and when renewable energy is abundant. SDG&E will own and operate the charging infrastructure while charging station hosts will choose amongst competing providers of equipment and services. The \$45 million program cost, which will be recovered through rates, is expected to have a customer bill impact of just 0.2 percent before accounting for the downward pressure on electricity prices that will result from increasingly widespread transportation electrification.²²

The favorable decision for SDG&E's program came just two weeks after the California PUC approved the pilot phase of Southern California Edison's "Charge Ready" program – a plan to deploy 1,500 charging stations within its service territory. As with SDG&E's program, the "Charge Ready" program targets multi-unit dwellings and workplaces, including a minimum deployment in disadvantaged communities. Under the program, SCE will recover for utility-side infrastructure costs and for rebates to be used by site hosts for the purchase of charging stations from third party providers. "Charge Ready" will use a time-of-day electricity rate to incentivize off-peak charging, and includes a commitment for SCE to create a dedicated demand-response program for the added EV load. In the second phase, SCE aims to deploy another 28,500 stations.

Most recently, the Oregon State legislature passed a bill to wean the state off coal, to increase renewables, and to use that renewable energy to power the state's transportation fleet. The bill instructs the Oregon Public Utilities Commission to order each electric company to file applications "for programs to accelerate transportation electrification" by the end of this year.²³ The proposals "may include prudent investments in or customer rebates for electric vehicle charging and related infrastructure."²⁴ The Oregon legislation echoes California's landmark climate bill passed in September 2015, which similarly directs the California PUC to order electric utilities to file applications "to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards ... and to reduce emissions of

²² Analysis conducted by the Pacific Northwest National Laboratory suggests that a mass market for EVs could lower electric rates by about 20 percent. *See* Michael Kintner-Meyer, Kevin Schneider, & Robert Pratt, *Impacts Assessment of Plug-in Hybrid Vehicles on Electric Utilities and Regional U.S. Power Grids* (November 2007).

²³ Oregon Clean Energy and Coal Transition Plan, 13.

²⁴ *Id.*

greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.”²⁵

Like the California and Oregon PUCs, the GC3 should work proactively with PURA, Connecticut’s utilities, the EV charging industry, and other stakeholders to develop a regulatory framework for soliciting and evaluating proposals for accelerating the deployment of EV charging stations in public and semi-public locations to increase EV ownership and maximize the associated economic and environmental benefits. Despite the expenditure of funds to build out the charging infrastructure, EV expansion can drive rates down for all utility customers by leading to the increased utilization of renewable sources and otherwise idle generation assets while also minimizing strain on the grid and the need for new generating capacity. These benefits of EV deployment are provided to all utility customers by providing lower rates, customer savings, a more stable utility industry, and cleaner air.

- b. To Ensure a Rapid Expansion of EVs and Charging Infrastructure, the GC3 Should Work with PURA and DEEP to Establish a Specific Electric Vehicle Proceeding to Further EV Deployment in Connecticut

To ensure that these other states do not leave Connecticut behind, we urge the GC3 to work with PURA and DEEP to establish a proceeding to entertain proposals from utilities and comments from other stakeholders on how best to facilitate and structure EV expansion and charging infrastructure. This proceeding should also preserve third-party market competition for the EV charging industry, ensuring the maximum build-out of charging infrastructure at the lowest cost. Establishing this proceeding will be necessary to ensure both that Connecticut’s ZEV MOU goals are met and that Connecticut’s EV expansion reduces ratepayer and utility costs while maximizing economic and environmental benefits such as GHG reductions.

The Connecticut legislature passed Public Act 13-298 in 2013, requiring PURA to determine whether it is appropriate to implement EV TOU rates.²⁶ While PURA opened a docket to consider the question, it has yet to reach a final decision.²⁷ The GC3 should continue to push for PURA to move forward with implementing TOU rates.

- c. Decarbonizing the Transportation Sector Will Produce Significant Public Health Benefits

Electrifying Connecticut’s vehicles will not only help achieve Connecticut’s GHG reductions goals, but also will help reduce conventional, dangerous fossil-fuel tailpipe pollutant emissions. Exposure to NO_x, as well as ground-level ozone, which it forms after reacting with other pollutants, aggravates existing heart and respiratory diseases, including asthma, leading to increased hospitalizations and premature death.²⁸ Dangerous vehicular emissions

²⁵ https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350

²⁶ C.G.S. § 29-252(a).

²⁷ See CT Public Utilities Regulatory Authority Docket 13-08-39 (Aug. 20, 2015, 3:00pm), available at: [http://www.dpuc.state.ct.us/dockcurr.nsf/\(Web+Main+View/All+Dockets\)?OpenView&StartKey=13-08-39](http://www.dpuc.state.ct.us/dockcurr.nsf/(Web+Main+View/All+Dockets)?OpenView&StartKey=13-08-39).

²⁸ See U.S. EPA, *Integrated Science Assessment for Sulfur Oxides—Health Criteria* (2008); 75 Fed. Reg. at 35,525; see also U.S. EPA, *Our Nation’s Air: Status and Trends Through 2008*, 4 (2010) (noting that the health effects of SO₂ exposure include aggravation of asthma, leading to wheezing, chest tightness, increased medication use,

disproportionately harm the most vulnerable members of our society, including children, the elderly and low-income families.

Sierra Club retained Sonoma Technology, Inc. to conduct sophisticated source apportionment modeling using the Comprehensive Air Quality Model with Extensions (“CAMx”) with Ozone Source Apportionment Technology. The source apportionment modeling was conducted for the 2011 ozone season (May to September), which is the most current ozone season for which EPA has prepared a complete modeling platform. The model tracks the contributions of emissions of ozone precursors from tagged sources and categories of sources and calculates their contribution to modeled ozone levels at locations throughout the country. It is therefore possible within the model to identify the contribution of in-state mobile source emissions to ozone levels on the worst ozone days during the 2011 ozone season.

Based on the model, the 2011 ozone season had 41 exceedances of the 75 part per billion (ppb) 2008 ozone standard at monitors in Connecticut (i.e., exceedances at a specific monitor location on a given day), and an additional 22 modeled monitor-days exceeding the recently finalized 70 ppb 2015 ozone standard. On twelve of the 41 monitor-days exceeding the 75 ppb standard, the contribution of in-state mobile source emissions exceeded the increment of nonattainment (i.e., if the in-state mobile source contribution were removed, the air would have met the 75 ppb standard). On fifteen of the monitor-days exceeding the 70 ppb standard, the contribution of in-state mobile source emissions exceeded the increment of nonattainment (i.e., if the in-state mobile source contribution were removed, the air would have met the 70 ppb standard). Moreover, on 19 of these monitor-days, the in-state mobile source contribution was greater than 5 ppb, and on two monitor-days the in-state mobile source contribution exceeded 10 ppb. This modeling highlights the enormous impact that in-state mobile sources have on local air quality in Connecticut.

In contrast to gasoline-powered vehicles, EVs themselves produce no air emissions. Even factoring in the emissions from the electricity sources in the region, EVs are significantly cleaner than conventional vehicles today. Moreover, with Connecticut’s renewable energy goals and electric sector emissions reductions, the electricity needed to power Connecticut’s vehicles is becoming ever cleaner. Electric vehicles are also far more efficient than standard internal combustion engines. In short, electrifying Connecticut’s fossil-fuel vehicle fleet will not only help achieve Connecticut’s GHG emissions reductions targets, but will also dramatically reduce emissions of other harmful air pollutants, providing safer air and reduced healthcare costs.

III. Conclusion

As shown in the March GC3 presentation, to fulfill Connecticut’s GWSA 2030 and 2050 GHG reduction goals, Connecticut must achieve significant GHG reductions from both its electric and transportation sectors, and should strive for a nearly 100% EV market share and 100% renewable electricity generation as a 2050 benchmark. For the electric sector, we urge Connecticut to advocate that the RGGI states model a robust set of 2030 cap levels, including a cap that declines by 5% each year from 2020 to 2030, consistent with the result of Synapse’s

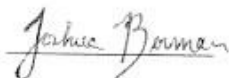
hospital admissions, and emergency room visits), *available at* <http://www.epa.gov/airtrends/2010/report/airpollution.pdf>.

analysis. Establishing a RGGI cap consistent with Connecticut and the other RGGI states' 2030 climate goals is the best way to ensure Connecticut is on the necessary trajectory for decarbonization of the electric sector.

To reduce GHG emissions in the transportation sector and achieve that nearly 100% EV market share, Connecticut should work with its TCI partners as well as with DEEP to secure long-term funding for EV lease/purchase rebates and EV charging rebates. In order to provide the charging capability necessary to support a 100% EV market share, we urge the GC3 to institute a specific proceeding to work with PURA, DEEP, Connecticut's utilities and the EV charging and auto industries to incentivize the rapid deployment of EVs and charging infrastructure.

We look forward to working with the GC3 further on these issues.

Respectfully submitted,



Joshua Berman
Staff Attorney
Sierra Club

Mark Kresowik
Eastern Region Deputy Director
Beyond Coal Campaign
Sierra Club

Martin Mador
Legislative Chair
Connecticut Chapter
Sierra Club

Gina Coplon-Newfield
National Director of Electric Vehicles Initiative
Sierra Club

Jameelah Muhammad
Senior Organizing Representative, Electric Vehicles
Sierra Club

Additional document submitted for review: http://www.synapse-energy.com/sites/default/files/RGGI_Opportunity_2.0.pdf