



Via electronic submission: DEEP.EnergyBureau@ct.gov

July 12, 2018

Commissioner Robert Klee
Department of Energy and Environmental Protection
Bureau of Energy and Technology Policy
Ten Franklin Square
New Britain, CT 06051

Re: Scope of the 2018 Integrated Resource Plan

Dear Commissioner Robert Klee and DEEP Staff,

On behalf of Northeast Energy Efficiency Partnerships (NEEP)¹, I am pleased to submit comments relative to the scope of the 2018 Integrated Resource Plan (IRP) for the State of Connecticut. NEEP is a non-profit with a mission to accelerate regional collaboration to promote advanced energy efficiency and related solutions in homes, buildings, industry, and communities. With the goal to assist the region's leaders to reduce building sector energy consumption three percent per year and carbon emissions 40 percent by 2030, our vision is that the region's homes, buildings, and communities will be transformed into efficient affordable, low-carbon, resilient places to live, work, and play.

We thank the Department of Energy and Environmental Protection (DEEP) for the opportunity to provide input on the scope of the IRP. Connecticut has much to be proud of in terms of policies and programs offered in various topics addressed in the scope of the IRP. NEEP applauds Connecticut's commitment to regional collaboration to advance policies and programs and policies to lower the cost of electricity while meeting environmental and resiliency goals in an expedient and equitable manner.

Introduction

As a part of the IRP process, DEEP is required to take the state's greenhouse gas (GHG) emissions reduction requirements into consideration when deliberating options to reduce electric rates and costs. The GHG reduction targets are as follows:

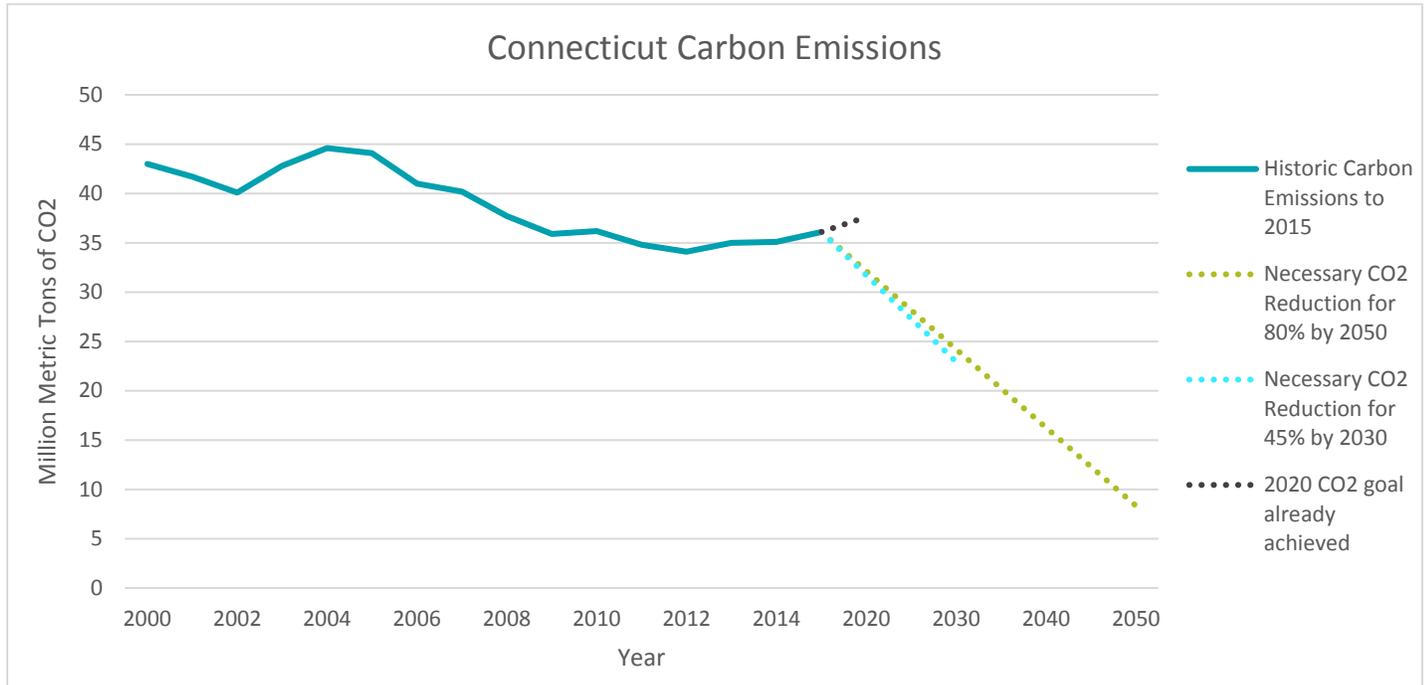
- 10 percent below 1990 levels by 2020
- 45 percent below 2001 levels by 2030
- 80 percent below 2001 levels by 2050

While Connecticut is a leader in energy efficiency and establishing policies and programs to better enable achievement of GHG mitigation goals. However, the graph below shows that more needs to be done to achieve

¹ These comments are offered by NEEP staff and do not necessarily represent the view of the NEEP Board of Directors, sponsors or partners. NEEP is a 501 (c)(3) non-profit organization that does not lobby or litigate.



the State's GHG reduction goals.



Historic data source: EIA State Carbon Emissions

With roughly 30 million metric tons of CO₂ to go to achieve the 2050 target (roughly the impact of 6.4 million automobiles driven for one year), least-cost, equitable carbon reduction should be a top priority goal for the IRP scope and recommendations. As discussed further below, this will involve decarbonizing the grid with clean energy resources while decarbonizing building heating and transportation. Energy efficiency can play an important role to cost-effectively achieve this three-part decarbonization strategy – grid, buildings and transportation - by reducing the amount of energy needed to keep Connecticut homes, buildings and facilities comfortable, safe, healthy and productive.

The Scope of the IRP

The proposed scope of the 2018 IRP includes a good list of topics that including changes from the previous IRP that reflect strategies outlined in the 2018 Comprehensive Energy Strategy. The additions of beneficial electrification, system resiliency and emerging technologies, and thermal energy portfolio standard are good additions in this era of decarbonization, growth of distributed resources and the growing need for energy resiliency due to grid emergencies and extreme weather.

When considering the implementation of a thermal energy portfolio standard, it should be considered in addition to Connecticut's current renewable energy standard and energy savings targets because they are much related. Renewable thermal technologies include biomass, solar thermal, and geothermal (air, ground, and water). Setting thermal energy targets will help integrate the electrification of building heating and cooling, while



increasing efficiency and use of renewable energy. Connecticut can learn from similar steps taken in Massachusetts with the alternative portfolio standard.²

While the proposed scope is a step in the right direction, another resource to consider is the evolution of a “Smart Grid” which values buildings as a grid asset that respond to customer service needs as well as grid needs for energy, capacity and ancillary services through integrated demand side solutions (efficiency and demand response enabled by energy storage, distributed generation, and load management) that provide substantial cost-effective energy and peak demand savings. This issue may be informed by PURA’s Distribution System Planning inquiry (Docket 17-12-03)³ investigating evolving current needs and issues in distributed system planning. Findings in this proceeding regarding changing patterns in customer, electric demand and consumption patterns, as well as technology and service options to respond to these, could be important to Connecticut’s IRP recommendations regarding the role of energy efficiency combined with innovative demand-side technologies and business models, non-wires alternatives to meet evolving needs in CT for clean, affordable, reliable and resilient power. In any case, buildings as a grid-responsive resource (not just load) and the investment to build a smart grid that supports that is likely an important element of Connecticut’s clean energy future.

Beneficial Electrification

The inclusion of beneficial electrification in the scope of the IRP is an important element of carbon reduction strategies, and should consider:

- i. Building decarbonization
- ii. Transportation
- iii. Industrial solutions

These all begin with energy efficiency first to reduce energy requirements, followed by fuel-switching to low-carbon heating solutions, and grid integration strategies that minimize the contribution of new thermal loads to system and T&D peaks. NEEP’s Regional Assessment of Strategic Electrification and Regional Strategic Electrification Action Plan provide information and recommendations that could help inform this element of Connecticut’s IRP Scope.

Conclusion

A common theme seen throughout the scope and this letter is the use of buildings as a grid resource. While buildings account for over 20 percent of emissions in Connecticut, they also represent a solution to creating an affordable, resilient, and low-carbon energy sector.

² MA, Alternative Portfolio Standard, <https://www.mass.gov/service-details/alternative-portfolio-standard-rulemaking>

³ Docket 17-12-03, PURA Investigation into Distributed System Planning of the Electric Distribution Companies, <http://www.dpuc.state.ct.us/dockcurr.nsf/8e6fc37a54110e3e852576190052b64d/54ac456ccb8f5b79852581f300753644?OpenDocument>



More than anything, to achieve the Connecticut's carbon reduction goals while providing affordable, reliable energy supplies, NEEP emphasizes the importance of increasing the thermal efficiency of homes and buildings while transitioning to clean electricity to displace carbon intensive heating fuels. Supported by controls, this will allow buildings to respond to grid and customer needs. Considering NEEP's recommended proposed changes and additions to the scope of the IRP will help Connecticut minimize the need for new investment in transmission and distribution infrastructure and reduce the cost of such resources over time, maximizing benefits to customers. A full and thorough analysis of such demand-side solutions is critical to developing a practical, cost-effective IRP that meets the State's IRP goals.

Thank you for the opportunity to comment on the scope of the 2018 IRP. Please consider NEEP a resource to provide technical assistance as DEEP continues to pursue clean, efficient energy solutions for Connecticut's long-term future.

Sincerely,

A handwritten signature in black ink that reads "Samantha Caputo". The signature is written in a cursive, flowing style.

Samantha Caputo
Policy and Research Analyst
Northeast Energy Efficiency Partnerships
781-860-9177 ext. 102 or scaputo@neep.org