
Governor's Council on Climate Change (GC3) MEETING MINUTES

Meeting Date: April 13, 2017

Meeting Time: 1:30 — 3:30 p.m.

Meeting Location: CT DEEP,
Gina McCarthy Auditorium,
79 Elm Street, 5th Floor, Hartford

ATTENDANCE

Council Member	Title	Organization	Present
George Bradner (on behalf of Commissioner Wade)	Property and Casualty Director	Connecticut Department of Insurance	Y
Melody Currey	Commissioner	Department of Administrative Services	N
Michael Caron (on behalf of Chair-person Dykes)	Commissioner	Public Utilities Regulatory Authority	Y
Katie Dykes	Chair-person	Public Utilities Regulatory Authority	N
Garrett Eucalitto	Undersecretary. For Trans. Policy & Planning	Office of Policy and Management	N
Bryan Garcia	President and Chief Executive Officer	Connecticut Green Bank	Y
T.J. Hanson	Product Director	Thule, Inc.	N
John Humphries	Director	CT Round Table for Climate & Jobs	Y
Rob Klee (chair)	Commissioner	Department of Energy & Environmental Protection	N
David Kooris	Director of Rebuild by Design and National Disaster Resilience	Department of Housing	Y
Tom Maziarz (on behalf of Commissioner Redeker)	Bureau Chief	Department of Transportation	Y
James O'Donnell	Executive Director	Connecticut Institute for Resilience and Climate Adaptation	N
James Redeker	Commissioner	Department of Transportation	N
David Robinson	General Counsel	The Hartford	Y
Mary Sotos (on behalf of Commissioner Klee)	Deputy Commissioner	Department of Energy & Environmental Protection	Y
Catherine Smith	Commissioner	Department of Economic & Community Development	Y
Lynn Stoddard	Director	Institute for Sustainable Energy	N
Don Strait	Director	Connecticut Fund for the Environment	Y
Katharine Wade	Commissioner	Connecticut Department of Insurance	N

Associated Staff	Title	Organization	Present
Tracy Babbidge	Bureau Chief	Bureau of Energy & Technology Policy, DEEP	Y
Keri Enright-Kato	Director	DEEP Office of Climate Change, Technology & Research	Y

Stanley McMillen	Consultant		Y
Paul Miller	Deputy Director & Chief Scientist	Northeast States for Coordinated Air Use Management	N
Jason Rudokas	Policy Analyst	Northeast States for Coordinated Air Use Management	Y - phone
Kate Boucher	Staff Attorney	PURA	Y

AGENDA & NOTES

Welcome and Announcements

Mary Sotos, Deputy Commissioner for Energy

- Mary Sotos, Deputy Commissioner for Energy facilitated the meeting on behalf of Commissioner Rob Klee due to the Commissioner's scheduled testimony in Washington, D.C. on the Clean Air Act.
- PURA Commissioner, Michael Caron attending on behalf of Chairperson Dykes.

Recap state and local climate actions discussion with Gina McCarthy

Mary Sotos, Deputy Commissioner for Energy

- Thank you to Lynn Stoddard for arranging an opportunity for GC3 members and staff to speak directly with former EPA Administrator, Gina McCarthy.
- The conversation was insightful and energizing.
- Key takeaways from the meeting included:
 - Transportation policy planning is critical to meet the 2050 GHG reduction target
 - Developing unlikely partnerships
 - Developing a set of principles to guide GC3 recommendations
 - Regional efforts and collaboration is essential
 - State planning efforts should address and integrate climate change policies/objectives
 - Also important to focus on equity, job creation, and co-benefits

REMI Building Sector Inputs and Assumptions

Jason Rudokas and Stanley McMillen

- Review draft energy efficiency and building technology scenarios
 - Residential and commercial renewable thermal inputs were based on California GHG reduction strategy.
 - Air source heat pumps approximately 90%
 - Ground source heat pumps approximately 10%
 - Expanded electric and gas energy efficiency – continue current energy efficiency investments out to 2035.
 - Historic data from the Energy Efficiency Fund annual report was used to build the energy efficiency scenario.

- Savings as a percent of sales is not necessarily the best metric to use to plot out future energy efficiency savings. Evaluate utilizing a different metric to model energy efficiency looking forward, E.g. annual MW reduced or some percentage of annual load.
- Interest in modeling energy efficiency measure savings beyond 2035.
- Measures modeled assume a 15 year lifetime savings.
- Direct costs from LEAP modeling were used for REMI modeling
- Increased electricity spending and reduced fossil fuel spending. Increased demand as space heating and cooling is electrified. Important to note that it is hard to project fuel costs out to 2050 which creates uncertainty the further out you model.
- Changes in total investment spending on residential and commercial heating and cooling equipment, which were broken out into labor, capital and material costs.
- Incremental spending on efficiency measures which were broken out into labor, capital, materials, and other local industries involved in energy efficiency deployment.
- Health related co-benefits will be evaluated once the scenarios are finalized.
- REMI modeling compares reference case to three mid-term target scenarios for the renewable thermal scenario. For the energy efficiency scenario each mid-term target utilized the same "Expanded energy efficiency" scenario.
- Request for Analysis, Data, and Metrics (ADM) work group meeting to work through REMI modeling questions.

CT's Efficient Buildings: Capturing opportunities for emission reductions, job creation, and increased competitiveness

Diane Duva, Director of Energy Demand, CT DEEP

- Key Strategies for better buildings:
 - Prioritize energy savings as a financing resource and as an energy resource
 - Improve energy performance of existing buildings; Increase productivity of processes
 - Integrate efficiency, storage, rates, and renewables to reduce peak demand
 - Ensure interoperability of demand response communications between grid and buildings
- CT has a goal of weatherizing 80% of its 1.5 million homes by 2030. Our two programs for accomplishing this, the Home Energy Solutions program funded by ratepayers through the Energy Efficiency Fund, and federal Weatherization Assistance Program (WAP) funds for low income residents are allowing us to achieve this and stay on track at approximately 40-45k homes per year.

- Energy efficiency works. It means local jobs. It means money is invested locally in the value of homes and businesses. It improves the health and safety of residents and by improving cost control it improves the competitiveness of Connecticut's businesses
- Energy intensity of our commercial and industrial sectors continues to increase. This means more productivity per unit of energy used. In recent years, a 29 percent reduction in electricity per dollar of CT gross state product.
- Efficiency employs 34,000 in Connecticut, per 2017 US DOE report.
- Every three years the energy savings from these efficiency investments equates to the generation of electricity from a mid-sized power plant.
- Managing peak demand is key, especially to capture the benefit of emission reductions. Overall energy consumption is in check, but summer peak is growing. Focusing on how to flatten peak demand is critical, thus customized solutions for different customer types is essential.
- Important to focus on mainstreaming efficiency to reduce costs to electric ratepayers.
- Energy Efficiency Policies that target GHG emission reduction in the building sector:
 - Procure efficiency as a resource
 - Increase performance of new and existing buildings
 - Reduce peak demand
 - Increase efficiency of thermal equipment
- Specific approaches may include:
 - Regulate:
 - Building Codes, Product Efficiency Standards, Efficiency before or with Solar
 - Economic Incentives:
 - Time of Use Rates, Peak Time Rebates, Insurance Discounts
 - Education:
 - Home Energy Score. Benchmarked buildings , Train skilled workforce
 - State authority to procurement – 15-107 allows for energy efficiency procurement

Building Sector Policy Discussion

Mary Sotos

- Discussion of energy efficiency targets. How aggressive can we be?
 - Should evaluate alternative metric to savings as a percent of sales. We need to mainstream energy efficiency and this metric doesn't evaluate whether this is occurring.
 - We can spend more like Massachusetts, but this does not necessarily mobilize the deployment of energy efficiency technologies that we need to get to these targets.
 - One idea is to focus on changing behavior by leveraging private capital like the Green Bank does.

- MA and RI use an all cost-effective spending approach that is not capped. Is this something that CT should explore? By definition, if we are not achieving the “all cost-effective” level of efficiency, then consumers are paying more for electricity generation than it would have cost to procure more efficiency.
 - Currently, CT utilities use the Utility Cost test to evaluate benefit-cost ratios of energy efficiency investments. Should explore framework for fully quantifying benefits and costs, including fuller quantification of emissions costs.
 - On June 15th DEEP is sponsoring a public workshop looking at cost-effectiveness testing and how to equitably value benefits and costs.
 - Take a look at Stamford2030 as a model on lessons learned for commercial energy efficiency initiatives.
 - In NYC commercial buildings over a certain size are required to make energy efficiency investments that have a return on investment less than 3 years. Benchmarking buildings is the foundation of an approach like this.
 - CT first state in country to utilize EPA Home Energy Score tool. This is a voluntary mechanism to help home owners/buyers receive a score that evaluates the energy performance of their home. The goal is to mainstream this tool.
- Policies to incentivize heat pumps since this technology is critical to achieving emission reduction goals.
 - Yale heat pump study shows that switching electric resistance customers to heat pumps makes the most sense economically.
 - How can we target customers beyond electric resistance?
 - Critical foundational work that needs to be completed to fully develop the heat pump market in CT. This includes: developing tools and strategies to develop a robust installer network, training, developing customer outreach and education materials, and developing a marketing strategy for customer classes/types.
 - Managing peak demand:
 - Need to understand customer demand by class.
 - More collection of data to understand where opportunities exist.

Public comments

- Henry Link
 - General questions about energy efficiency programs and REMI modeling.

NOTE: Slides are available on GC3 web page: www.ct.gov/deep/gc3