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

Meeting Date: Jan. 22, 2016

Meeting Time: 1:30 p.m. — 3:30 p.m.

Meeting Location: CT Department of Energy & Environmental Protection
Russell Room 3rd Floor
79 Elm Street
Hartford, CT 06106

ATTENDANCE

GC3 Members	Title	Organization	Present
Robert Klee (chair)	Commissioner	Department of Energy & Environmental Protection (DEEP)	Y
Bryan Garcia	President and Chief Executive Officer	CT Green Bank	Y
Scott Jackson	Under Secretary for Intergovernmental Policy	Office of Policy Management	Y
Melody Currey	Commissioner	Department of Administrative Services	N
John Humphries	Organizer	CT Round Table on Climate & Jobs	Y
Tom Maziarz (on behalf of James Redeker)	Commissioner of Transportation	Department of Transportation (DOT)	N
Arthur House	Chairman	Public Utilities Regulatory Authority (PURA)	Y
Hermia Delaire (on behalf of Evonne Klein)	Program Manager	Department of Housing	N
Jay Bruns (on behalf of David Robinson)	Environment Champion	The Hartford	Y
Lynn Stoddard	Director	Institute for Sustainable Energy	Y
Don Strait	Director	Connecticut Fund for the Environment	Y
Catherine Smith	Commissioner	Department of Economic & Community Development	Y
James O'Donnell	Executive Director	CT Institute for Resilience & Climate Adaptation (CIRCA)	Y (phone)
Katharine Wade	Commissioner	Department of Insurance	Y

Associated Staff	Title	Organization	Present
Keri Enright-Kato	Director	DEEP Office of Climate Change, Technology & Research	Y
Jeff Howard	Environmental Analyst	DEEP Office of Climate Change, Technology & Research	Y
Paul Miller	Deputy Director and Chief Scientist	NESCAUM	Y
Jason Rudokas	Climate Policy Analyst	NESCAUM	Y
Jessie Stratton	Director of Policy	DEEP	Y
Tracy Babbidge	Bureau Chief	DEEP, Bureau of Energy and Technology Policy	N

AGENDA & NOTES

Welcome and Review

Robert Klee, GC3 Chair

- Review of administrative procedures — Signing in for this meeting, accessing materials on www.ct.gov/deep/gc3, making oral comments today, submitting written comments, signing up for GC3 e-mail distribution list.
- Announcement that CT was awarded 54.3 million as part of the HUD Sandy Natural Disaster Resiliency Competition. This will fund a pilot project in Bridgeport and a Connecticut Connections Coastal Resiliency Plan.
- Introduction of new GC3 member T.J. Hanson, Project Director, Thule. Thule has been a long time leader in sustainability.
- NESCAUM will be walking through the reference case and will speak on the assumptions that were used.
- The Leadership, Accountability and Engagement working group will review their recommendations.

Review and finalize business as usual reference case, review terminology, LEAP analysis examples, and next steps

Paul Miller and Jason Rudokas, NESCAUM

- NESCAUM has built a reference case as a base-case for CT scenario analysis.
- LEAP (Long-Range Energy Alternatives Planning) will be utilized as the modeling tool for assessing technology and measures for CT specific GHG mitigation scenarios.

Development of the Reference Case

- Included in the reference case - laws that are “on the books.”
 - State renewable portfolio standards (RPS)
 - Regional Greenhouse Gas Initiative (RGGI)
 - The Clean Air Interstate Rule (CAIR)
 - Mercury and Air Toxics Standards (MATS)
 - Regional Haze Rule
 - All federal regulations aimed at energy efficiency and renewable energy.
 - Up-to-date 2025 CAFÉ standards
- Not included in the reference case - Proposed federal rules.
 - Cross State Air Pollution Rule (CSAPR)
 - The Clean Power Plan (CPP). The CPP does not make a big change in Connecticut's emissions. RGGI accomplishes the same thing as the CPP.
 - State-specific energy initiatives are generally not included in the federal data. NESCAUM does have methods for including them in the data.
 - Future EPA heavy-duty vehicle standards.
- The above lists are not exhaustive. The reference case should be a reasonable reflection of what is currently on the books.
- The reference case has reproduced the GHG emissions found when using the EPA state inventory tool (SIT). This indicates that the reference case is a reasonable reproduction.
- The model shows, through the projections, that if nothing on the books changed we would be roughly 50% short of meeting the 80% reduction goal by 2050.

LEAP Projections by Sector

- The transportation sector represents the largest wedge at about 40%. The combination of our built environment in the commercial, residential, and industrial sectors also represent about 40% of emissions.
- A large portion of our existing structures are still going to be around in 2050. It is important to not only have standards in place for new construction but to also look at the technological retrofits.
- The emissions associated with buildings are from coming from thermal energy consumption (heating and cooling).
- The Green Bank is currently working with DEEP to look at the deployment of renewable thermal technologies.

Terminology Review

- Technologies are machinery or equipment such as ground source heat pumps or electric vehicles.
- Measures are changes in business or consumer practices such as reducing vehicle miles traveled.
- Scenarios are combinations of measures and technologies modeled in LEAP intended to achieve mid and long-term emissions reduction goals.

Scenarios

- Scenario 1 shows the effect of 70% zero emissions vehicles on the road by 2050, which is what California is projecting, coupled with 80% carbon free electricity generation by 2050.
 - This still does not get the 80% reduction goals economy wide by 2050. It needs to be noted that this does not take into account any changes in the commercial, industrial, or residential sectors.
 - The linkage between the two sectors is key to note. If you deploy electric vehicles then you need to have a clean source of electricity to power those vehicles in order to attain significant GHG reductions.
- Scenario 2 shows the electrification of vehicles impact on the electric power sector.
 - In the Electric Power BAU scenario, electrification of the transportation sector causes emissions from the power sector to increase due to increased demand of electricity.
 - Electrification of the transportation sector along with zero carbon electricity generation shows the largest GHG reductions.
 - This scenario shows the interaction between the two sectors and emphasizes the need to shift both the electric power sector to cleaner generation when transitioning the transportation sector to electric fuel sourcing.

Next Steps

1. Continue incorporating technologies and measures.
2. Evaluate fuller scenarios based on the mixes of different scenarios and measures.
3. Develop future trends of GHG emissions.

4. Develop sector specific technology, measures, and scenario sets.
5. Build technologies, measures and scenarios into LEAP.
6. Develop a policy narrative around GHG mitigation scenarios.
7. Perform additional analytics.

Questions and Comments

- While the LEAP model can track direct emissions of other air pollutants, a more complicated and resource intensive air quality model would need to be used to simulate pollutants not directly emitted but formed in the atmosphere, like ozone and fine particle aerosols. There are ways, however, to do a more simple air quality benefit assessment but it will lack the technical rigor of using an air quality model.
- How does the model factor in technologies that aren't available yet?
 - That is the difficult part about modeling. It can make things look more expensive as future control costs are often overestimated in retrospect. Unfortunately, nobody can predict well technology innovations that can lower cost. It's important to develop an iterative climate strategy that is responsive to changes in technology over time.
- A general agreement between members that it would be helpful to have information such as the slides ahead of time to allow for deliberation rather than seeing information for the first time at the meeting. It would also be helpful for NESCAUM to prepare a list of questions ahead of time for Council members to review in order to be ready to discuss and answer at the meetings.
- LEAP models the costs but it is important to also weigh the benefits.
- In order to truly engage people, we need to look beyond reducing GHG emissions to co-benefits. Co-benefits such as reducing the need for a child to use an inhaler need to be highlighted.

Review and discuss Leadership, Accountability, and Engagement working group recommendations

Bryan Garcia, CT Green Bank

Scott Jackson, Office of Policy and Management

We have been able to identify common themes that shape the recommendations of the Leadership, Accountability, and Engagement working group. There are several priority recommendations for 2016 that fall under the key themes.

Competition and recognition

Priority Recommendations

1. Investigate revitalizing the Climate Leadership Awards Program.
2. Collaborate with Connecticut industry associations to enhance reporting and recognition programs. Stakeholders have come forward and stated that they want to help and get involved in the process.

3. Support and promote work-based challenges that mitigate GHG emissions associated with transportation. Examples include the DOE Workplace Charging Challenge.

Resources and Training

Priority Recommendations

1. Strengthen relationships with Connecticut colleges and universities to leverage resources, expertise and resource support. DEEP and Lynn Stoddard will take the lead on this priority.
2. Promote climate-related learning and training opportunities. DEEP will continue the exploring climate solutions webinar series.
3. Develop or promote existing mitigation and adaptation tool kits. A number of people have stepped up and have indicated they will be able to help with the development and identification of these tool kits.

Goal Setting, Measurement, and Evaluation

Priority Recommendations

1. Highlight prominent examples of goal setting, and transparency in CT.

Cross Sector Partnerships & Collective Action

Priority Recommendations

1. Support expansion of the GoNewHavenGo model into other cities. DEEP to work with DOT/CTRides to explore.
2. Facilitate dialogue between sectors to identify opportunities and shared values. The Connecticut Council on Climate and Jobs is willing to step up and help with facilitating dialogue.

Communication and Stakeholder Engagement

Priority Recommendations

1. Investigate the Portland, OR equity work group model to ensure equity is incorporated in the states climate plan. The Connecticut Council on Climate and Jobs is will to lead on this recommendation.
2. Ensure that there are clear communication channels between the state and stakeholders. DEEP will continue to lead on this.

Comments

- DEEP is part of the state government and resources have shrunk. State agencies should look to each other to see how some of the load could be shared. Other groups outside of the state government could also assist.
- The focus should be on doing a few things well rather than trying to take on too many different tasks and not being able to fully implement.

Stakeholder Engagement Opportunities 2016 and Beyond*Recommendation Long-Term: The creation of a Climate Change Stakeholder Engagement Group*

- At the end of 2015 a stakeholder engagement workshop was held. There were about 100 people from all walks of life and all different levels of exposure to climate and environment related issues.
- The key question was to how to keep energy and engagement moving forward.
- A key theme that was heard over and over again at the workshop was the idea of having a trusted messenger. A message coming from DEEP is not always the best way to get information out to the stakeholders.
- There is sometimes a more trusted voice, such as a leader in the faith based community, who can act as an ambassador.
- 9 sectors have been identified to represent the group, but there could be more.

2016 Stakeholder Engagement Opportunities

- This spring we would like to provide stakeholders with the opportunity to learn about the reference case, the assumptions that were made, and how the LEAP tool works. An in person meeting and/or webinar will be utilized.
- During the summer months we will meet with stakeholders to review which technologies and measures are being modeled and ask if anything is missing?
- In the fall the draft report will be released and a workshop to review, discuss, and provide input will be provided.

Comments

- Bringing people together in the spring, summer, and fall will work well.
- Create as many opportunities to engage as many people as possible as early as possible so people are not just finding out about the process when we present the report in the fall. As a part of the stakeholder engagement process John Humphries would like to investigate the possibility of hosting an event in which stakeholders at satellite locations could participate in an engagement activity hosted from a central location. A presentation could be made with facilitated conversations to follow. Libraries and educational institutions could serve as satellite locations.
- Businesses should be engaged in the process.
- Identifying co-benefits is important when engaging different groups.
- It probably make sense to inform the legislature of the work of the GC3.
- It's important to note that the Comprehensive Energy Strategy provides another opportunity for engagement, much of the work being completed by the GC3 in parallel to the CES. DEEP is currently in the early stages of developing the CES and will soon be reaching out to stakeholders for input.

New Items: None

Public Comments

Ray Albrecht, National Biodiesel Board:

Kudos to the entire team. It is important to decarbonize electricity. The picture is not bleak it is promising. Breakthrough and disruptive technology is coming.

Steven Marlin, Metropool:

When discussing challenges of which technologies will be there in the future. The first thing you see is that EV adoption rates are down. You see from CA that it is important to have incentives to get buyers on board with EVs. Technologies are ready to be demonstrated but how do you get them to market? How to you make the technologies viable? Connecticut could be an open bed for the testing of these technologies. I support the engagement process.

Mike Morrissey, State Director of the National Propane Gas Association:

I am speaking on behalf of the Alternative Fuels Coalition of CT. The propane industry stands ready to assist the state of CT in meeting its climate change goals. Our industry is positioned in 14 different applications to help immediately. The important sectors are the residential and commercial sectors, particularly in space heating and water heating. We are position in the off-road, and agricultural sectors as well. Most importantly we are positioned in the on road sector in light duty vehicles, school busses, and bob tail trucks. Our investments are working to allow for clean burning propane in different vehicles. School busses running on propane are gaining a lot of traction here in CT. We as an industry are making a lot of progress. Technology is available through propane and natural gas to help reduce greenhouse gas reductions because the electric technology is not there. Until electric vehicle technology is mainstream, propane and natural gas can be used to bridge the gap.

Anne Hulick, Clean Water Action:

I would like to thank the council and would like to applaud the time and work they have committed. Clean Water Action is here to help and would like to be a player. Getting out into the communities is so important. It may be difficult to quantify public health benefits but it is very important to use it as an incentive for engagement as the Council works toward its goals.

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