



**Governor's Council on Climate Change (GC3)  
Analysis, Data, and Metrics Working Group (ADM)  
MEETING MINUTES**

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**Meeting Date:** September 16, 2015

**Meeting Time:** 3 p.m. —5p.m.

**Meeting Location:** CT Economic Resource Center  
CERC Board Room  
845 Brook Street, Building #4  
Rocky Hill, CT 06067

**ATTENDANCE**

<b>Working Group Members</b>	<b>Title</b>	<b>Organization</b>	<b>Present</b>
Catherine Smith	Commissioner	Department of Economic & Community Development	Y
James O'Donnell	Executive Director	CT Institute for Resilience & Climate Adaptation	Y
John Humphries	Director	CT Roundtable for Climate & Jobs	Y
Don Strait	Director	Connecticut Fund for the Environment	Y
Robert Klee	Commissioner	Department of Energy & Environmental Protection	Y
Lynn Stoddard	Director	Institute for Sustainable Energy	Y
Kathryn Boucher (on behalf of Arthur House)	Staff Attorney	Public Utilities Regulatory Authority	Y
David Elder (on behalf of James Redeker)	Transportation Supervising Planner	Department of Transportation	Y

<b>Associated Staff</b>	<b>Title</b>	<b>Organization</b>	<b>Present</b>
Melody Currey	Commissioner	Department of Administrative Services	Y (Phone)
Keri Enright-Kato	Director	DEEP Office of Climate Change, Technology & Research	Y
Jeff Howard	Environmental Analyst	DEEP Office of Climate Change, Technology & Research	Y
Tracy Babbidge	Bureau Chief	DEEP	Y
Paul Miller	Deputy Director and Chief Scientist	NESCAUM	Y
Jason Rudokas	Climate Policy Analyst	NESCAUM, Climate and Energy Team	Y
Michelle Manion	Senior Associate	Abt Associates, NESCAUM	Y

**ADM = Analysis, Data, and Metrics Working Group**

**AGENDA & NOTES****Welcome and Introductions** (Slide 1)

*ADM co-chair Rob Klee and Jeff Howard, of DEEP's Office of Climate Change*

- Introductory remarks and a request for working group members and the public to state their name and affiliation.
- Review of administrative procedures — Signing in for this meeting, accessing ADM materials on [www.ct.gov/deep/gc3](http://www.ct.gov/deep/gc3), making oral comments today, submitting written comments, signing up for GC3 e-mail distribution list, intent to post audio recording on the web page. [NOTE: Written comments may be submitted to [deep.climatechange@ct.gov](mailto:deep.climatechange@ct.gov) through Sept. 30, 2015.]
- Public comments will be heard in the last half hour (4:30 p.m.). If in room and want to give a comment, use the sheet located in the back of the room. Those online should send an e-mail or

chat with their comment. Focus comments on today's agenda of the ADM Working Group, through September 30.

- PowerPoint and recording will be posted on the website, still in the processes of making webinar series available on the web.

### **Agendas & Working Groups (Slides 2-8)**

*Rob Klee and Jim O'Donnell, ADM co-chairs*

- Review of agenda [slide 2].
- Review of two working groups and their members [slide 4]
- Description of Leadership, Accountability, and Engagement Working Group (LAE, GC3's other working group): Chaired by Bryan Garcia and Scott Jackson. It will explore and identify best-practice leadership models, develop systems to ensure accountability across sectors, and develop a process for effective stakeholder engagement. Group had its first meeting on August 28 [slide 5].
- ADM will provide guidance on the technical modeling of mitigation scenarios, assessment of policy proposals, and a review of analyses published in CT and elsewhere. The working group is responsible for technical modeling, metrics and indicators, and policy assessment [slide 6].
- Initial working group questions that ADM will be investigating in the next few months as they develop recommendations [slide 7]:
  - What are the pros and cons of achieving reductions sooner rather than later?
  - What assumptions should be used to determine the state's base-case scenarios?
  - How far do strategies "on the books" and "on the way" for Connecticut and adopted federally for emissions reductions get us? How big is the remaining gap?
  - Is further analysis needed? If so, by whom? And how should it be funded?
  - Which emissions-reduction measures have proven successful elsewhere?
  - What are the primary wedges and/or measures that have the greatest GHG reduction potential?
  - Should the Council establish one interim target, or several?
  - How should the GHG accounting methodology address the regional nature of electricity market?
  - What metrics and indicators should be used to measure success — e.g., CO<sub>2</sub>e/GDP, CO<sub>2</sub>e/per person, sector specific: CO<sub>2</sub>e/VMT, CO<sub>2</sub>e/electricity consumption?
- Commissioner Klee asks GC3 members if this list is missing any key questions or if there are any blind spots. Several suggestions are offered:
  - Co-benefits and job and health impacts. Potentially co-benefits by sector?
  - Regional questions due to the electricity market: Are there regional markets that come up in transportation, such as charging infrastructure for electric vehicles? Is there a way to collaborate on what California is doing regarding cars?
  - Which strategies depend on or interact with each other?
- Review of the 3 deliverables for which both the LAE and ADM groups are responsible: updates at GC3 meetings, recommendations to be incorporated into GC3 Exploratory Report, and presentation of final recommendations to GC3 — an iterative process between the working group and full council [slide 8].

**Schedule & Structure of Meetings in 2015** (slides 9-11)

*Rob Klee, ADM co-chair*

- Review of meeting schedule of GC3, ADM Working Group, stakeholder workshop, and webinars [slide 10].
- December 16 is the last meeting before finalizing GC3 report to General Assembly. ADM meets three times before the final gathering. LAE meets three times as well, and it is holding a stakeholder workshop during this period. The workshop is intended to be interactive and to elicit stakeholder and working group ideas that will inform the final LAE recommendations.
- DEEP staff will be pulling together the “Exploring Climate Solutions Webinar Series,” with invited guest presenters addressing specific climate-related topics (detail on potential topics is on slide 11). The webinars are optional for Council members and staff, and they are open to the public. LAE has already committed to hosting webinars, with the first planned for Sept. 22. Megan Saunders, the Executive Director from the Stamford 2030 District, will be presenting [slide 10]. Please e-mail any ideas for other webinars to the Office of Climate Change [deep.climatechange@ct.gov](mailto:deep.climatechange@ct.gov).

**GC3 outreach tools**

*Keri Enright-Kato, Director, Office of Climate Change, Technology and Research*

- Four tools for GC3 members and staff to use when speaking about the Council and CT’s climate program [slides 12-15]:
  - (1) An executive summary of statewide greenhouse gas emissions from 1990 to 2012 is already available.
  - (2) A factsheet on GC3 is being developed and will be available soon.
  - (3) A brief set of talking points about GC3.
  - (4) Two PowerPoint slides incorporating the talking points.
- ADM members should feel free to use these materials, and the Office of Climate Change would be glad to coordinate with communications personnel in other agencies and organizations to craft additional materials as needed.

**Consistent State GHG Accounting in a Regional Electricity Market** (slides 16-21)

*Keri Enright-Kato, Director, Office of Climate Change, Technology and Research & Paul Miller, NESCAUM*

- Explanation of consumption-based inventory vs. in-state inventory. Connecticut has always used an in-state inventory; however, electricity consumed here is generated, in part, elsewhere in New England. Oregon uses both inventory methods, which includes an economy-wide consumption methodology. CT can’t embark on an economy-wide consumption-based inventory, but this is something the GC3 can look at in the future. It is feasible for CT to look at and compare GHG’s associated with electricity consumption versus in-state electricity generation.
- Discussion on various forms of energy generation in CT (nuclear, natural gas, renewables). The present inventory methodology (in-state generation) gives no credit for contracts with renewable energy sources outside of our borders. How do we take credit for carbon-emission reductions achieved through policy recommendations such as the RPS that enables renewable generation in the region? We need to consider adopting a way to fairly and accurately account for the state’s emissions.
- RGGI is the primary tool to focus on achieving in-state electricity sector reductions.
- Comment on the idea of extending the life of nuclear reactors; since they are free of GHG emissions, should this be a strategy to meet the state’s target?

**NESCAUM Scope of Work**

*Paul Miller, NESCAUM*

- Three-phase analytical approach is being undertaken by NESCAUM.[slide 23]
- Phase 1: Model levels of technology deployment/fuel switching that will be needed to achieve GHG reductions by target years.[slide 24]
  - Now collecting quantifiable input for use in LEAP tool (Long-range Energy Alternatives Planning), which allows analysts to customize options to meet the state's goals.
  - LEAP is a bottom-up technology with multi-state capability. Other states are using it, as are more than 190 countries. Can also be used as a regional planning tool.
  - LEAP gives options for managing all investments in order to get you where you want to be in the long run. The model will have cost information on technological deployment and will shed light on relative costs. Will not have local economic information.
- Phase 2: Analyze potential policies and strategies to achieve needed levels of technology deployment. [slide 25]
  - Here the focus is feasible options in CT, hypothetical pictures of penetrations from mixing and matching the given policy options.
  - Will select strategies that will have the greatest emissions impact and economic benefits and create a package of possible scenarios. Information will be given on jobs, gross state product, etc.
- Phase 3: Revise results based on GC3 and stakeholder feedback.[slide 26]
  - Final strategies will be determined through an iterative process. Interactive information is built into a model.

**Discussion & Questions**

- Achieving any mid-term target is really a question of doing a little bit of everything across all sectors vs. doubling down on one sector.
- Is there a standard reporting time frame that other states have committed to?
  - There is a magnitude of changes in economic forecasting, we should take a 5 year planning and strategy adjustment approach.
- Experiences in other states have different combinations of technology and strategies on what they can do. Can be compared to, "How do I save for retirement?" You can control things you have control over, but you do not have control over greater economic forces. For 2030 and 2040 interim targets, the LEAP tool gives us a lot of flexibility to create the best likelihood to get us there and we can adjust along the way.
- Have other states seen success in their planning and implementation efforts?
  - Most of the plans are still young, and NESCAUM cannot tell the effectiveness of them; must consider them measure by measure, strategy by strategy.
- Setting the reference case is not based on climate policy, but rather uses predicted economic prices and fuel availability.
- How does using the consumption accounting methodology change the 2001 baseline?
  - Based on initial analysis, the two methodologies are about the same for the 2001 baseline. It may not affect the 2001 baseline, but using the consumption accounting methodology may change future projections as CT becomes a larger exporter of electricity.
- How do we incorporate new gas plants, and what does that do to future projections? Are future federal plans incorporated?
  - Incorporate these measures into the mitigation projections.

- Priorities on waste management seemed to be really cost effective in terms of GHG, but emissions from waste constitute only 2 percent of total inventory. Transportation, which constitutes about 40 percent, is going to be a lot more expensive.
- Some policies that look cost effective won't produce the necessary GHG reductions.
- Transportation won't look good in terms of economics, but it can't be ignored.
- What is the process for the resolution of in-state vs. consumption-based accounting?
  - We have time to run the numbers before we need to make a decision. NESCAUM will work on this to present at the next ADM meeting in October.
  - Staff can also provide more information on Massachusetts' and Oregon's approaches to ADM members.

### **Public comments**

*Joel Gordes, Environmental Energy Solutions:*

(a) Most of what he heard was on mitigation and not adaptation. He thinks we should be looking at something that will give us a more adaptation and resilient community.

(b) Looking at years on measuring GHG and metrics- what portion was due to economic recession? What was done well and what was done by economic accident?

(c) He feels uncertain about what is being said about accounting for out of state generation. He recommends the book, "Reason at a Dark Time," by Dayle Jameson.

*Ray Albrecht, National Biodiesel Board:*

Believes the slide on renewable thermal is a great idea. Business people do respond to pricing signals and can act. Transportation is tough. Adding geothermal to RPS. Add to community to try some pilots in transportation. 80-90% reduction can happen right away by some technologies currently available for heating. Notes that Austria is another clean country and that bringing more natural gas to New England will not be as easy as hoped due to opposition in NY to fracking and pipelines.

*Chuck Brody:*

(a) Make sure we do not unintentionally inflate consumption in state with other means of electricity.

(b) Focus on things that create double benefits.

NOTE: Slides are available on GC3 web page: [www.ct.gov/deep/gc3](http://www.ct.gov/deep/gc3)