Governor’s Council on Climate Change

July 10, 2015
Governor’s Council on Climate Change (GC3)

Executive Order 46 (April 22, 2015)

The Council Charge:

• Examine the efficacy of existing policies and regulations designed to reduce greenhouse gas emissions and identify new strategies to meet reduction targets

• Monitor greenhouse gas emission level in CT annually

• Recommend interim statewide greenhouse gas reduction targets to ensure meeting the 2050 target

• Recommend policies, regulations, or legislative actions to achieve targets

• Report findings to the Governor and the Office of Policy and Management
Connecticut climate change action & legislation
## Connecticut climate action

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>2001</td>
<td>CT signs NEG/ECP 2001 Climate Change Action Plan</td>
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<td>2001</td>
<td>Creation of Governor's Steering Committee (GSC) on Climate Change</td>
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<td>2004</td>
<td>9-month stakeholder dialogue process develops 2004 Connecticut Stakeholder Recommendations</td>
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<td>2005</td>
<td>GSC finalizes <em>CT Climate Change Action Plan</em></td>
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<td>2008</td>
<td>CT Global Warming Solutions Act (Public Act 08-98) reaffirms commitment to GHG targets for 2020 and 2050</td>
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<td>2010</td>
<td>GSC Adaptation Subcommittee issues <em>Impacts of Climate Change on Connecticut Agriculture, Infrastructure, Natural Resources and Public Health</em></td>
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<tr>
<td>2013</td>
<td>NESCAUM publishes <em>CT Greenhouse Gas Emissions: Mitigation Options Overview and Reduction Estimates</em></td>
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An Act Concerning Climate Change (Public Act 04-252) sets GHG goals that align with NEG/ECP regional goals.

CT and other northeastern states participate in first auction of Regional Greenhouse Gas Initiative (RGGI), the nation’s first carbon cap-and-trade program.
2008 Global Warming Solutions Act
Public Act No. 08-98

Reaffirmation of GHG reduction targets
- 10% below 1990 levels by 2020
- 80% below 2001 levels by 2050

Climate Action Planning
- Framework for monitoring and reporting progress to meet mandated targets
- Framework for engaging stakeholders

Regional Greenhouse Gas Emissions Inventory
- Implement CT’s participation in RGGI, nation’s first market-based regulatory program to reduce GHG emissions
Greenhouse gas emissions — Goals & current progress
Statewide, Connecticut achieved a 10.5 percent reduction in greenhouse gas emissions between 1990 and 2012.
Distribution of greenhouse gas emissions by sector, 2012

- Transportation: 40%
- Electric Power: 18%
- Residential: 17%
- Industrial: 10%
- Commercial: 8%
- Waste: 6%
- Agriculture: 1%
2012 GHG emissions: Transportation

- Passenger cars: 45%
- Heavy-duty vehicles: 27%
- Light-duty trucks: 17%
- Other: 6.3%
- Aircraft: 4.2%
- Alternative-fuel vehicles: 0.2%
- Motorcycles: 0.2%
- Locomotive: 0.3%
- Boats: 0.7%
GHG emissions over time: Electric power
GHG reduction pathways

A. Maintaining 1990 and 2012 average annual reduction (~0.04 MMT/year) until 2050 would fail to meet 2050 target of 9.3 MMT

B. Linear reduction from 2012 to 2050 goal would require average reduction of ~0.8 MMT/year

C. Between 2004, when emissions peaked, and 2012 emissions decreased at rate of ~1.3 MMT/year; maintaining this linear rate of reduction would achieve the 2050 target of 9.3 MMT by ~2034
State & regional strategies beyond 2020

Northeast States for Coordinated Air Use Management (NESCAUM)
The Northeast States for Coordinated Air Use Management (NESCAUM)

The NESCAUM states are:
ME, NH, VT, MA, RI, CT, NY and NJ

The NESCAUM directors are the 8 state air agency chiefs
Climate change planning

*Context and background*

- **State level** – Climate planning processes on-going in neighboring states:
  - Massachusetts
  - Rhode Island

- **Regional level** – NEG/ECP investigating a 2030 GHG progress marker toward 2050 goal

- There is interest in using consistent analytical methods across state & regional planning efforts
NESCAUM support for climate planning

Connecticut

• NESCAUM was prime contractor during development of CT’s Comprehensive Energy Strategy
  – Baseline data collection of CT energy use and GHG emissions
  – Assessment of opportunities and barriers for taking actions in line with State’s energy and climate plans
  – Identification of sector-specific energy strategies capable of meeting multiple State goals

Massachusetts

– Analytical support for evaluating progress toward State’s climate goals

NEG/ECP

– Regional “wedges” analysis of climate mitigation options
– Analytical support in evaluating mid-term regional GHG progress marker
Examples of cost-competitive technologies for the future
Onshore wind is already cost-competitive with natural gas.
Solar PV installations are growing as costs decline.
Electric vehicles are becoming a viable option

In one generation (2012-2017), affordable full-battery electric vehicles will have increased range by about 2.5x while holding costs consistent.

2012 Nissan Leaf: $35,200 / 84 Miles
(2012 MSRP)

2017 Chevrolet Bolt: $37,500 / 200 Miles
(projected MSRP)

GM Press Release: “Chevrolet Commits to Bolt EV Production”

2017 Tesla Model 3: $35,000 / 200 Miles
(projected MSRP)

Visualizing GHG pathways — linear vs. non-linear options
GHG wedges tool — Example 1
Uniform 10% reduction in energy consumption across all sectors
GHG Wedges Tool Example 2
Varying reductions in energy consumption across all sectors
GC3 guiding principles and organization
Informed by the executive order, three overarching principles will serve as lenses for Council’s deliberations and outcomes:

The Council will be guided by commitment to analytical rigor, accountability, and transparency while also cultivating climate leadership among all stakeholder groups.
The following reports will be submitted to the Governor and Office of Policy and Management in accordance with Connecticut General Statutes 22a-200a

**Exploratory report (Dec. 31, 2015)**
- Summary of GC3 activities to date
- Recommendation for deeper analysis of GHG reduction measures
- Recommended models of leadership & accountability
- Scope & process for 2016

**Final report (2016)**
- 2013 GHG inventory
- Completed modeling (GHG reductions and economics)
- Recommendation for interim targets
- Recommendation for specific reduction measures plus leadership and accountability models
- Scope & process for subsequent reports
Structure of working groups

Working Groups: Exploratory Phase
(July 2015 - January 2016)

- Analysis Group
  Chair

- Leadership Group
  Co-Chairs
  - State government models
  - Municipal & regional government models
  - Business & industry models
  - Non-governmental organizations models
  - Cross-sectoral partnership models

- Accountability Group
  Chair
  - Monitoring progress & metrics
  - Models of stakeholder engagement & transparency

Working Groups
- Council members
  (4 - 8 members per working group)
  - Agency staff members

Sub-Groups
- Council members
- Agency staff members
- Invited participants
Examples of climate action — Accountability

CalEPA’s GHG Reduction Report Card
Annual public report card to measure progress toward achieving GHG reduction goals.

Federal agency priority goals
Agency action on climate change is one of seven Cross-Agency priority goals for the federal government. Cross agency priority goals address the longstanding challenge of tackling horizontal problems across vertical organizational silos.

Equity Work Group, Portland, OR
As a part of the city’s climate action planning process an Equity Work Group has been tasked with reviewing proposed climate actions to identify potential impacts (positive and negative) for communities of color, low-income populations and other marginalized groups.

GreenWorks Philadelphia
Interactive map to highlight sustainability initiatives implemented by the City of Philadelphia and its partners to meet the city’s GHG reduction targets.
Evergreen Jobs Leadership Team, WA
A leadership team was created to take on the responsibility of fulfilling the goals of the WA Evergreen Jobs Act, which required that 15,000 new green jobs be created by 2020.

CT Lead by Example — Energy Efficiency for State and Local Government
Lead By Example program (LBE) will reduce energy use in Connecticut’s State and local government buildings and operations.

Sustainable Transportation for a Sustainable Future, Salt Lake City, UT
Multi-stakeholder coalition and outreach campaign to reduce motor vehicle emissions through alternative transit choices.

Boston Green Ribbon Commission
The Boston Green Ribbon Commission is a group of business, institutional and civic leaders in Boston working to develop shared strategies for fighting climate change in coordination with the city’s Climate Action Plan.
Leadership Working Group

- Co-chairs
- Other council members and staff

State Government Models Sub-Group

*Examine state GHG reduction report card models*

- Council member 1, 2, 3, etc.
- Agency support staff 1, 2, 3, etc.
- Invited participant(s)
GC3 exploratory phase timeline (2015)

**GC3 Meetings**
- **July 10**
  - 1 - 4 pm

**Analysis Working Group**
- **July 10**
  - 1 - 4 pm
- Identify chair & members
- Launch first meeting

**Leadership Working Group**
- **July 10**
  - 1 - 4 pm
- Identify chairs & members
- Launch first meeting

**Accountability Working Group**
- **July 10**
  - 1 - 4 pm
- Identify chair and members
- Launch first meeting

**Analysis Working Group meetings** – schedule determined by Chair
- Review preliminary GHG reduction strategy selections

**Leadership Working Group meetings** – schedule determined by Chair
- Provide Leadership Working Group update

**Accountability Working Group meetings** – schedule determined by Chair
- Provide Accountability Working Group update

**November 13**
- 2 - 4 pm
- Review strategy evaluations

**December 16**
- 2 - 4 pm
- Present recommendations

**December 16**
- 2 - 4 pm
- Present recommendations

**December 16**
- 2 - 4 pm
- Present recommendations
2015 GC3 meeting dates

- September 15 2:00 – 4:00 p.m.
- November 13 2:00 – 4:00 p.m.
- December 16 2:00 – 4:00 p.m.