

**CLIMATE CHANGE ADVISORY COMMITTEE
MEETING MINUTES
April 24th, 2018
10:00 a.m. – 3:00 p.m.
Conference Room 105
Rachel Carson State Office Building**

MEMBERS/ALTERNATES PRESENT:

Chairperson Steve Krug,	Zakia Elliott
Vice-Chairperson Terry Bossert	Robert Graff
Sara Nicholas	Mark Hammond
Joseph Sherrick	Patrick Henderson
Paul Opiyo	Gary Merritt
Lindsay Baxter	Marc Mondor
Luke Brubaker	Mike Winek
Grant Gulibon,(alternate for Luke Brubaker),	Leda Lipton (alternate for Marty Causer)

MEMBERS ABSENT:

Representative Ryan Bizzarro

PA DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) STAFF:

John Krueger, Kerry Campbell, Allen Landis, Dave Althoff, Dennis Maloskey, Abbey Cadden, Libby Dodson

INVITED GUESTS: Deb Harris and Cory Jemison (ICF Inc.), Greg Czarnecki (DCNR)

MEMBERS OF THE PUBLIC:

Mary Keenan - Pennsylvania Waste Industries Association

MEETING:

The April 24th, 2018, meeting of the Climate Change Advisory Committee (CCAC) was called to order at 10:00 a.m. by Chairperson Steve Krug. With 15 of 17 seated members present at the start of the meeting, a quorum was established.

MINUTES:

The minutes of the February 6th, 2018, CCAC meeting were presented to the committee by Mr. Krug for approval. A motion to accept the minutes, as presented, was made by Mr. Graff and was seconded. The motion carried by voice vote.

MEETING SUMMARY: (This narrative provides a summary of the discussions that took place during the meeting. It is not a transcript of the proceedings.)

Membership Update

George Ellis's retirement from the committee was announced. George's vacancy will be filled by Zachery Smith from CONSOL Energy. Representative Marty Causer appointed Leda Lipton as his alternate and representative Ryan Bizzarro appointed Timothy Vickey as his alternate. The CCAC

now carries four vacancies (one Senate majority, one Senate minority, one House minority and one House majority).

PUC & Building Code Updates

Joe Sherrick from the Public Utility Commission (PUC) provided an update on its Net Metering & Critical Infrastructure Declaratory Order, as well as the April 5 statement by the PUC on the Combined Heat & Power (CHP) working group. The CHP statement included a description of reporting requirements by the utilities and as well as the date for the first working group meeting, which will be May 30th.

Joe also updated the group on the April 19 Act 40 Final Implementation Order, which “closed the border” on the solar renewable energy credit’s (SREC) market. Rob Graff followed up with a question regarding the value of the SREC relative to the value of the electricity being sold. Mark Hammond added that the history of the SREC and electricity varies and can change relative to each other. Joe said that the supply of the SRECs primarily dictates the price, and that will shift over the next few years as number of banked credits decrease.

Libby Dodson from DEP provided an update of recent developments in the building code requirements in Pennsylvania. First, she provided an overview of the Department of Labor and Industry’s Review Advisory Council (RAC) that is tasked with building code review. A recent law requires RAC to review and make recommendations on the 2015 building code updates by May 1, 2018. The RAC has been reviewing the code updates and will be presenting a report to the Department of Labor and Industry for implementation by October 1st.

RAC’s report will likely include recommending accepting all residential and commercial updates included in the 2015 code updates. If Pennsylvania updates the state’s code to 2015, it is expected to save \$7,000-\$11,000 in lifecycle costs for residential properties and save 30% of energy costs (\$0.53/ft²) by 2030 for commercial properties.

A discussion by the committee ensued regarding the implementation date and how the code will be inspected by the state. It was also noted that Philadelphia has until October 2018 to update their code requirements to the 2018 building codes. It is their only chance to increase building code requirements beyond the statewide requirements.

Department of Conservation and Natural Resources Climate Change Mitigation & Adaptation Plan Presentation

Greg Czarnecki, DCNR’s Climate Change & Research Coordinator, presented on the agency’s upcoming release of its Climate Change Mitigation & Adaptation Plan. The plan identifies vulnerabilities related to climate change impacts and considers different adaptation and mitigation strategies to minimize those vulnerabilities. The Plan included input from more than 80 DCNR staff across all the agency’s bureaus.

Some of the vulnerabilities include resource management and planning, forests pests, emergency management, rare species, drinking water, invasive species, and more. Some strategies include increased monitoring, restoring hydrologic connectivity, incorporating climate change considerations into pest response plans and monitoring, and more. Examples of mitigation strategies include carbon sequestration as well as energy conservation and sustainable design.

The committee asked questions concerning interaction with municipalities, neighboring states and federal agencies on the strategy implementation, especially given the limited resources of state agencies to enact all the strategies. The committee also brought up how climate change will impact marketing of tourism in the state, to which Greg replied that it isn't explicitly outlined in this Plan but is something the agency has been studying.

Public Comment(s):

Mary Keenan (Pennsylvania Waste Industries Association) shared her thoughts on removing barriers to the continued operation and development of projects that beneficially use landfill gas. She requested that the 2018 Climate Change Action Plan renew its original recommendation for creation of this General Permit, which incentivizes increased beneficial use of landfill gas, and reduces downtime due to maintenance at existing projects.

ICF – Work Status Update:

Deb Harris and Cory Jemison of ICF, Inc., discussed ICF's progress on the Climate Action Plan (CAP), including the Energy Assessment Report, mitigation strategies, and GHG accounting framework.

With the Energy Assessment Report, ICF summarizes past and predicted energy production and consumption trends in Pennsylvania by sector (residential, commercial, industrial and transportation) and fuel type (fossil, alternative and renewable fuels).

Key Conclusions from the Energy Assessment Report:

- Pennsylvania has significant and diverse energy resources.
- The business as usual analysis shows a major shift from coal to gas in power generation and rising renewable energy production.
- Energy consumption increases only modestly and renewables are supported by policies like the AEPS.
- Energy resources are significant on the supply and demand side.
- Lower emission sources provide opportunity for Pennsylvania to grow its energy economy while reducing emissions footprint.

Final Steps for the Energy Assessment Report:

- Report shared with the CCAC one week prior to this meeting.
- Discussed verbal feedback from CCAC at this meeting.
- CCAC to provide additional written feedback to DEP by May 1st.
- DEP and ICF to address comments and prepare report for final publication in Spring 2018.

Deb provided a summary of the draft mitigation strategies, including the methods, sources, and process for how they were developed.

The context of the strategies included:

- Strategy is used to describe a high-level approach that encompasses multiple policy options or actions.
- A key component of the 2018 CAP update is to include strategies that have both mitigation and adaptation impacts for the Commonwealth, where feasible.
- Developing integrated strategies is an iterative process that requires us to first consider strategies that have mitigation impacts and adaptation impacts individually, and then tie them

together.

- Materials provided for CCAC review have a primary focus on strategies with mitigation impacts, but also include the first iteration of tying in adaptation impacts.
- The CAP will include quantitative and qualitative discussions of strategies – not all policies and actions will be modeled.

The approach for developing the strategies was as follows:

- Develop framework for compiling mitigation-focused strategies in line with CAP outline
- Compile list of strategies to consider from:
 - Previous PA Climate Action Plans
 - Suggestions from DEP
 - Strategies with adaptation benefits draft list
 - Suggestions from the CCAC
 - List of what other jurisdictions are doing (based on Plan reviews conducted in 2017)
 - Objective reviews of the Pennsylvania GHG Inventory and Energy Assessment
- Map strategies into the framework
- Map mitigation strategies that intersect with adaptation strategies

The selection criteria for the strategies included:

- Addresses substantially large energy use or production and/or GHG emissions in Pennsylvania.
- Overlaps with one or more adaptation strategies previously identified.
- Covers existing programs and actions Pennsylvania currently invests in.
- Was highlighted as important by DEP and/or the CCAC prior to the April 2018 CCAC meeting.

ICF asked the following questions of the CCAC:

- Are there strategies and policy options that you would suggest adding or removing from Table 1, indicating that they should or should not be included in the CAP?
- Which strategies and policy options would you prioritize as most important for modeling and focus in the CAP?

The next steps for the mitigation strategies are:

- Receive additional CCAC feedback on mitigation-focused strategy list – May 1, 2018
- Finalize adaptation-focused strategies list – May 2018
- Finalize strategy list, addressing both mitigation and adaptation – May 2018
- Share final strategy list with CCAC – May 2018

Deb then reviewed the procedure for how the Climate Action Plan will account for GHG emissions. She explained that instead of accounting for emissions based on production, emissions would be based on consumption. Consumption-based accounting properly attributes Pennsylvania-specific actions to direct impacts on GHG emissions and reduces the ability for actions from other states to be attributed towards meeting GHG reduction goals. This gives Pennsylvania leaders and citizens greater leverage to reduce GHG emissions towards meeting set goals. It also allows DEP to realize the benefits from strategies that target both electricity generation and electricity consumption.

Further Discussion:

The group raised multiple questions about the Energy Assessment Report. Primarily, there was

confusion about what will be included in the report and what it will be used for. In addition, there were questions regarding the resources and methods that were chosen, what is meant by BAU (Business as Usual) and potential, how do BAUs and potential estimates relate, how is electricity generation/consumption handled/classified as part of energy consumption and generation, what is included in the term renewable and alternative fuels, inclusion of more details about renewable and alternative fuels, and what uncertainties exist in the numbers that are presented.

ICF responded with specific answers to most of the questions, however it was decided that there should be clarity in the report, especially in the Executive Summary, about definitions, processes, resources, etc. for the reader.

There was also significant discussion about the mitigation strategies presented to the committee. The committee supported the majority of the strategies presented, however there were concerns about including the SF 6 emission reductions as a strategy, as the committee stated that they reviewed that in 2015 and it was not very impactful.

There was also discussion about including strategies that put some sort of price on carbon emissions. Mark Hammond said that he understood the value of it as a GHG reduction strategy, but had doubts about the ability of it to be implemented. In general, the committee wanted to ensure the strategies that are included have the best chance of being implemented, have significant total reductions (>1 MMT) and are cost effective.

Lindsay Baxter also had a statement regarding the appropriateness of including a feed-in tariff as a strategy. She wasn't sure that would be valuable or necessarily beneficial regarding GHG emissions reductions.

The CCAC members also discussed some strategies more in-depth:

- Microgrids for resiliency adaptation
- Fuel switching
- LED street lighting
- High performance government buildings.
- Energy Star Portfolio Manager for tracking energy use
- Continued tax credits and other government incentives for geothermal, etc.
- High Occupancy Vehicles lanes
- Forest planting for sequestration
- Waste-to-Energy and recycling

The committee was generally supportive of the GHG emissions accounting framework presented by ICF. The discussion centered on the details of the accounting, and it was suggested that the accounting should be clearly described in the plan.

Greenhouse Gas Inventory Presentation

Allen Landis from DEP presented the results of the 2017 GHG Inventory. The presentation highlighted the latest (2014) data available in EPA's State Inventory Tool (SIT) and identified emissions and trends for seven sectors in PA.

The data presented showed an overall decrease in GHG emissions between 2013 and 2014 of 1.3%,

due to decrease in transportation and electricity generation combined with slight increases in emissions from the residential, commercial, industrial, and waste management sectors.

CCAC member Mark Hammond suggested that there may be better data available for the waste sector than what is available in the US EPA, SIT. He explained the data sources and how DEP can get access to them to ensure the numbers are the most accurate.

Steve Krug also suggested including numbers regarding the GDP and weather to fully put emissions fluctuations into context. Gary Merrit asked a question about how the number of coal plant retirements correlates to emissions decreases, as well as how much exporting electricity has increased and the impact that has on emissions.

Adjournment:

A motion to adjourn was made and seconded. The motion carried, and the meeting was adjourned at 3:00 p.m.

ADMINISTRATIVE ITEMS:

Post DCNR's, DEP's, and ICF's PowerPoints to the CCAC website.