

**CLIMATE CHANGE ADVISORY COMMITTEE
MEETING MINUTES
February 25, 2020
10:00 a.m. – 3:00 p.m.
Conference Room 105
Rachel Carson State Office Building**

MEMBERS/ALTERNATES PRESENT:

Chairperson Mark Hammond	Joseph Sherrick (for Gladys Brown Dutrieuille)
Vice-Chairperson Steve Krug	Adam Walters (for Dennis Davin)
Greg Czarnecki (for Cindy Dunn)	Marc Mondor
Zachery Smith	Luke Brubaker
Representative Steve McCarter	Lindsay Baxter
Robert Graff	Timothy Vickey
Zakia Elliot	Jaret Gibbons
Glendon King (for Representative Metcalfe)	Kimberly Kipin-McDonald
Terry Bossert	Gary Merritt
Alissa Burger	
Patrick Henderson	

MEMBERS ABSENT:

James Felmlee

PA DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) STAFF:

Kerry Campbell, Lindsay Byron, Heidi Kunka, Dave Althoff, Allen Landis, Jennie Demjanick, Kara Fetter, Brian Chalfant, Stacey Box, Kristina Peacock-Jones, Amanda Eyer, Natahnee Miller, Krishnan Ramamurthy

INVITED GUESTS:

Chris Linn, Mike Nassry, Jim Shortle, Dave Abler, Robert Nicholas, Doug Wrenn

MEMBERS OF THE PUBLIC:

Anna Gerner, David Hess, Bob Barkanic, Sean Welch, Leah Bobula, Travis Gery, Nick Troutman, Sam Lehr, Grant Gulibon, Brian Evans

MEETING:

The February 25, 2020 meeting of the Climate Change Advisory Committee (CCAC) was called to order at 10:00 a.m. by Chairperson Mark Hammond. With 20 of 21 seated members present at the start of the meeting, a quorum was established.

MINUTES:

The minutes of the December 10, 2019 CCAC meeting were presented to the committee for approval. A motion to approve the minutes was made by Mr. Graff and seconded by Mr. Krug. Several minor comments were requested by members of the Committee and all were noted. The motion to approve the minutes with corrections carried by a voice vote and passed.

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

CO₂ Budget Trading Program

Mr. Landis gave a presentation on DEP's CO₂ Budget Trading Program, with Ms. Demjanick assisting in answering questions. The implementation timeline for the program was covered: the draft annex will be presented to DEP's Air Quality Technical Advisory Committee (AQTAC) on April 16th and will be shared with the Environmental Quality Board in July. Mr. Landis explained that the model rule is a template that can be adapted to fit each state. He also described the basics of the Regional Greenhouse Gas Initiative (RGGI) and how it is not an economy-wide program, but rather for the power sector only. Quarterly auctions are conducted (i.e. primary market), and then these allowances can be sold in the secondary market. RGGI is a cap and invest program, meaning that proceeds from auctions go to fund air pollution reduction and other programs. Mr. Landis mentioned that DEP's CO₂ Budget Trading Program will be an added subchapter to Chapter 145 and the draft regulation is currently posted online. He covered the affected sources of the draft regulation, which will be electric generating units of 25MW or more in capacity and supplying 10% of gross generation to the grid. There will be an exemption for combined heat and power. DEP is proposing a waste coal set aside, due to the fact that nonpoint source pollution comes from these piles, so the Commonwealth wants to continue using this fuel source. Mr. Landis explained that 7.9 million allowances will be set aside for waste coal each year, and this number will not decrease with the cap. DEP added one offset provision to the model rule for abandoned well plugging.

Several committee members had questions and comments for Mr. Landis and Ms. Demjanick. Mr. Graff asked about the Clean Air Fund and how DEP plans to use the proceeds from the auctions. Mr. Demjanick responded that the Clean Air Fund requires those dollars to be used for reducing air pollution. Mr. Merritt requested that any comments made at the AQTAC meeting be shared with the CCAC members, especially public comments. A list of facilities that will be affected by this regulation was requested by Mr. King. Mr. Landis responded that referring to the EPA's list is best. Mr. Henderson asked who sets the cap for PA. Mr. Landis and Ms. Demjanick explained that RGGI states each set their own budgets, but it is a regional cap, meaning the budgets of all participating states are added together. In response to a question from Mr. Krug, Ms. Demjanick described that all decisions are consensus-based, and thus no state gets more power than another. Mr. Henderson expressed concern over whether there could be manipulation in the market, since you don't have to be a power plant to be a qualified participant in RGGI. Mr. Landis responded that RGGI hires an independent market monitor to watch for manipulation, and such manipulation has not been an issue to date. A summary of the benefits of participating in RGGI was requested by Mr. Mondor. Mr. Brubaker asked how the agriculture sector could help with RGGI, and Mr. Landis responded that digesters could sell offset credits.

Pennsylvania's Climate Impacts Assessment

Several representatives from Penn State University attended the meeting to provide an overview of the PA Climate Impacts Assessment Update, which has yet to be posted publicly. Mr. Shortle began by explaining how this update focused more deeply on climate-sensitive sectors in PA: the

Chesapeake Bay, infrastructure, and livestock. Mr. Nicholas presented on the extreme precipitation section of the report. He explained that extreme precipitation has increased in PA and is expected to continue increasing. He described how global climate models are downscaled to regions in order to forecast future precipitation. Mr. Abler then presented on the livestock section of the report, which focused on making projections for the year 2050 of climate change impacts on the size of Pennsylvania's livestock industry, as well as nutrients generated from livestock. He explained the methodology his team used to assess livestock impacts. There will be a growth in milk cows by 2050 in northwest PA but a decline will be seen in southeastern PA, due to heat stress. There will also be an overall increase in beef cows, hogs, and pigs, but we'll see the most increase in poultry. Poultry are heat sensitive, and thus we'll be seeing a migration of this industry from southern states to PA. The poultry industry could double in size in PA. As a result, Mr. Abler noted that manure nitrogen and phosphorus will increase throughout PA, which will in turn negatively impact water quality. Mr. Nassry presented on how Chesapeake Bay Total Maximum Daily Loads (TMDLs) will be impacted. He said we must be smart about where we place best management practices (BMPs) in the landscape. Climate change will reduce the effectiveness of some BMPs. For instance, riparian buffers are a vulnerable BMP. Thus, BMPs will require adaptations in their design, placement, and maintenance. Mr. Wrenn then explained how the report also assesses the most significant risks to PA infrastructure. He noted that the electric grid, natural gas, and rail infrastructure are all vulnerable to climate change. Landslides are a climate change impact in southwest PA. Mr. Wrenn mentioned that property damages in PA are mostly driven by flooding, and flooding poses the greatest climate-related risk in PA.

Several CCAC members had questions or comments for the presenters. Mr. Merritt asked about design standards for BMPs. Mr. Nassry responded that individual BMPs will not be able to handle increased floods, and so a suite of BMPs will be required. He added that the degradation of wetland conditions will occur due to climate change. Mr. Henderson asked how we apportion climate change's responsibility. Mr. Wrenn answered that most damages are the result of poor planning or placement, not climate change. He further explained that there are things we need to change without considering climate changes, just simply due to welfare losses. In response to a question from Mr. Mondor about design standards, Mr. Shortle said that our pathway to making decisions should consist of asking what the risk is that we are facing and what can we do about it. Mr. Graff noted that we need to account for increasing precipitation when building roads and bridges, and Mr. Brubaker said he wants agriculture to be part of the solution to climate change. Mr. Graff asked why Penn State used RCP8.5, as it is an increasingly unlikely scenario. Mr. Nicholas responded that the other climate scenario, RCP6, lacks precise enough data for the scale of this study.

Public Comment(s)

There were no public comments.

Coastal Effects of Climate Change in Southeast PA: A Story Map

Mr. Linn of Delaware Valley Regional Planning Commission (DVRPC) gave a live demo of a climate change story map of the Delaware River tidal region, which launched in November 2019. He explained that 29 municipalities in southeast PA are touched by the tidal Delaware and will thus be impacted by climate change. DVRPC's story map looks at the 1% and 10% storm floods, or the 1% and 10% chance of a flood height happening in any given year. For the story map, they used 50% probability and sea level rise estimates from a Rutgers University report. DVRPC did projections for 2050, 2100 (low emissions scenario), and 2100 (high emissions scenario, or

RCP8.5). Mr. Linn explained that most of the damages aren't from sea level rise itself, but rather from storm surge. He described "chronic inundation" as those areas that are flooded 26 times/year. He explained how the "Infrastructure Risk" tab focuses on roads, schools, structures, and emergency services & which assets would be impacted by sea level rise. Mr. Linn showed the various interactive maps. He noted that the "Property Value Risk" tab looks at several sea level rise scenarios for how much property value would be chronically inundated. Flood insurance premiums are decreased if a town participates in the Community Rating System (CRS), so there is a CRS tab. One of the maps shows the impact of joining CRS and how many policy holders there are in each Delaware Estuary Coastal Zone (DECZ) community.

Several CCAC members had questions or comments. Mr. Sherrick asked about the 1% storm and whether that was analogous to a 100-year flood, which Mr. Linn confirmed. Mr. Graff asked about storm surge. Mr. Linn explained the story map only shows static storm risk and that storm surge hasn't been modeled. Representative McCarter inquired about the eventual need to relocate the Philadelphia airport, based on sea level rise projections.

2021 Climate Action Plan Framework Discussion

Ms. Byron led a discussion on the framework for the 2021 Climate Action Plan (CAP). She asked how the CCAC wants DEP to use the Climate Impacts Assessment Update. Mr. Graff said DEP should incorporate sections from prior impacts assessments into the current report to make it more cumulative in nature. Mr. Krug asked if Penn State did a road show for the climate impacts assessment in the past, and Ms. Byron responded that they did make fact sheets based on the report before. Mr. Krug went on to suggest that the Penn State team should review and comment on our 2018 CAP. Mr. Mondor asked if DEP could make a documentary on the impacts assessment, to which Mr. Althoff said it is possible, as DEP has made videos in the past. As an effective way to promote the impacts assessment, Mr. Hammond suggested targeted marketing to certain organizations and trade groups. Mr. Brubaker said that promoting the impacts assessment to the PA Farm Bureau is very important.

As for a tentative schedule for the 2021 CAP, Ms. Byron said that bid docs would be issued by mid-March, the contractor would be on board by July, the contractor would consider all public comments received in winter/spring 2020, the contractor would speak to the CCAC, a final draft would be completed by June 30, 2021 and the report would be finalized by October 2021. Mr. Graff asked if the CCAC can review a copy of the RFP, to which Mr. Althoff said yes. One week for review was requested by Mr. Graff. Mr. Hammond inquired as to whether there would be public comment on the draft CAP, and Mr. Althoff said no. Mr. Hammond reminded DEP of the importance of interaction between the CCAC and the consultant.

Ms. Byron asked if DEP should issue the next impacts assessment and CAP together. Mr. Hammond responded that Penn State has always done the impacts assessment, but he asked if they also had the capability to compose a CAP. Ms. Baxter likes the idea of combining the two documents for user-friendliness and promotions. She said that by marrying mitigation and adaptation the document may be more powerful. Mr. Bossert would like the impacts assessment to inform the CAP, whether or not they are together or apart, to which Mr. Hammond agreed. Ms. Baxter noted that the assessment is focused on adaptation, and the CAP's goal is mitigation. The CAP is a policy document, according to Mr. Henderson. He said the statue creates a bright line between the two reports and that the impacts assessment focuses more on science, to which Mr. Hammond agreed. Mr. Henderson and Mr. Hammond noted that the status says cost effectiveness must be considered, no matter what. Mr.

Sherrick cautioned that DEP might not get many bids if the two reports are combined in one contract, as that ask might be too voluminous, and advised DEP to keep the two separate.

Ms. Byron asked the committee to provide input on the scope of the CAP and stated that DEP intends change the electricity sector modeling from being consumption-based to generation-based, so it aligns more closely with the greenhouse gas inventory and Governor Wolf's executive order 2019-01. Mr. Hammond explained the difference between the two modeling scenarios, and Mr. Henderson then said there would be consistency if DEP sticks with what they have been doing (i.e. keep it consumption-based). Mr. Krug agreed and said the consumption-basis helps keep the CAP a policy document. Overall, the consensus was that DEP should keep the CAP consumption-based. However, Mr. Hammond and Ms. Baxter did mention that they thought the plan could assess emissions from both electricity consumption and generation.

Ms. Byron state that DEP would like a greater focus on public health in the 2021 CAP. Mr. Krug noted the CDC's National Environmental Public Health Tracking Network is a nice resource and that several states focus on health in their CAPs. He said health should be addressed in the cost effectiveness section of the CAP, as it directly relates. Mr. Mondor advised that non-monetary metrics could be used to assess health-related policy impacts. Mr. Althoff suggested that health be a focus on the impacts assessment.

Ms. Byron stated that information on technological advancements and emerging technologies for mitigating GHG emissions, including energy storage and carbon capture and sequestration (CCUS) should be included in the next CAP. Mr. Krug mentioned that another emerging technology to consider in the CAP involves enriching natural gas with hydrogen. Representative McCarter said DEP should focus on trees for sequestration in the CAP. Mr. Hammond suggested that instead of focusing on sectors in the CAP, DEP should focus on legislation, regulation, private business, commercial, and local government. Mr. Sherrick countered that sectors should still be a focus.

Next, Ms. Byron solicited committee input as to whether the actions should be more prescriptive or focus on who implements individual actions. Ms. Burger, Mr. Sherrick, and Mr. Hammond all agreed that the report needs to connect the dots a little more. Mr. Hammond continued that citizens shouldn't have to search for their actions within a large sector chapter. According to Mr. Sherrick and Mr. Hammond, the CAP should be organized by target audience (i.e. policymakers, residents, legislators, local leaders, etc.). Ms. Baxter said to focus on sectors with the largest impacts only, to which Mr. Hammond agreed.

New Business

Mr. Hammond clarified that Governor Wolf appointed CCAC members for the remainder of the prior representative's terms, which had been a question from the December meeting.

Representative McCarter had suggested having a college student on the CCAC, but DEP has stated that all members must be appointed. However, Mr. Hammond explained that the Committee could have a student engage as part of the public comment period. Representative McCarter introduced the student he brought along to the meeting, Sean Welch from Temple University. Mr. Welch was the inspiration for a student representative on the CCAC. Representative McCarter proposed that the CCAC setup a Youth Subcommittee and have a few members connect with those students. Mr. Welch spoke briefly to request that youth have a seat at the table, especially since they are the ones that will have to deal with the impacts of climate change longer.

Representative McCarter then made a formal motion to establish a subcommittee to evaluate allowing student participation in the CCAC. Mr. Vickey seconded the motion, and discussion commenced. Ms. Baxter suggested, rather than a requirement that the representative be a student, setting an age range of 18-25. Mr. King questioned whether non-committee members can be on a subcommittee, to which Mr. Hammond replied yes, according to the bylaws. Ms. Elliot stated that allowing for greater diversity on the committee should be explored. Mr. Graff said it would be nice to invite the environmental justice community and youth to present at our meetings. Mr. King suggested tabling the discussion. Ms. Kipin-McDonald offered that an informal committee be started via conference call due to time constraints. Committee members were asked to confirm their interest in such a conference call with Ms. Byron, who would arrange the call.

Adjournment

A motion to adjourn was made by Mr. Krug and seconded by Mr. Sherrick. The motion carried, and the meeting was adjourned at 3:11 PM.