CLIMATE CHANGE ADVISORY COMMITTEE **MEETING MINUTES**

December 22, 2020 9 a.m. – 12 p.m. Via WebEx

MEMBERS/ALTERNATES PRESENT:

Chairperson Steve Krug Luke Brubaker Vice-Chairperson Marc Mondor Lindsay Baxter Greg Czarnecki (for Cindy Dunn) Jaret Gibbons

Representative Stephen McCarter Kimberly Kipin-McDonald

Robert Graff Gary Merritt **Zachery Smith** Glendon King (for Representative Metcalfe) Alissa Burger Terry Bossert Zakia Elliot Joe Sherrick (for Gladys Brown Dutrieuille) Marc Mondor

Adam Walters (for Dennis Davin)

Patrick Henderson

MEMBERS ABSENT:

Representative Ryan Bizzarro, James Felmlee

PA DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) STAFF:

Kerry Campbell, Lindsay Byron, Heidi Kunka, Dave Althoff, Allen Landis, Darek Jagiela, Sarah Pinter, Brian Chalfant, Andrew Hansrote, Libby Dodson, Meredith Dibert, Jennie Demjanick

INVITED GUESTS:

Cassandra Bhat, Deb Harris, Tommy Hendrickson, William Prindle, Kristin Carter

MEMBERS OF THE PUBLIC:

Robert Barkanic, Travis Gery, John Bell, Sam Lehr, David Hess, Nick Troutman, John Walliser, Laura Legere, David Gelman, Mark Huncik, Andrew Zwally, Robert Routh, Charles Thompson, Andrew Ritter, Evan Endres, Brandin McDonough, Larry Carlson, Eli Brill, Curtis Schreffler, Barbara Sexton, Gary Merritt, Peter Gleason, Rachel Gleason

MEETING:

The December 22, 2020 meeting of the Climate Change Advisory Committee (CCAC) was called to order at 9:03 a.m. by Chairperson Steve Krug. With 13 of 21 seated members present at the start of the meeting, a quorum was established. Mr. Krug reminded those members whose appointments have expired to contact their sponsors about renewing their CCAC memberships. Ms. Byron explained that members who were appointed by the Governor retain their participation after their terms expire until they are reappointed or replaced.

MINUTES:

The minutes of the October 27, 2020 CCAC meeting were presented to the committee for approval. A motion to approve the minutes was made by Mr. Czarnecki and seconded by Mr. Bossert. There were no requests to edit the minutes. The motion to approve the minutes 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.)

Summary of CCAC Feedback

Ms. Byron explained the new process for submitting comments via a spreadsheet that she will share with all members. She then gave a presentation that summarized the feedback that had been received from CCAC members on the October meeting materials. Comments were received on the 2021 IA initial draft, business-as-usual (BAU) scope and methodology memo, and the working list of greenhouse gas (GHG) reduction strategies. Mr. Graff asked about the climate projections in the 2021 IA. Ms. Bhat explained that, while risk ratings will focus on changes by 2050, climate projections through the end of the century will be included. He also inquired about more detail on the CCAC feedback. Ms. Byron noted that the CCAC had received the summary of comments received via email, and that a more detailed documents had not been prepared.

ICF Presentation on 2021 Climate Impacts Assessment

Ms. Bhat of ICF explained that additional data analysis had been conducted for the IA and the draft final was completed. She then gave a summary of the climate science key findings that will be explained in the IA. She also talked in depth about the risk assessment by reviewing the process, key findings, and how the risk ratings were generated for each hazard. She finished her presentation by going over the next steps for the climate impacts assessment. Ms. Bhat noted that, once the IA is final, it will be used to inform adaptation planning for the CAP.

A discussion on the materials presented followed. Mr. Graff asked how the current average temperature compares to the baseline average, and he noted we are now closer to the midcentury than we are to the baseline. Ms. Bhat could not provide additional context at the moment but stated she would look up the answer. Mr. Graff also asked which emissions pathway is used the climate projections, to which Ms. Bhat responded RCP 8.5. However, she noted there are also projections in the IA appendix for RCP 4.5. Mr. Graff inquired about why heat waves pose much less risk on forests, ecosystems and wildlife than increasing temperatures. Ms. Bhat stated that heat waves are short lived and thereby have less impacts. Representative McCarter asked why the risk assessment only goes through 2050 and not 2100. He followed up by saying how it is important to look at risks past 2050 to support our actions and policy decisions. He explained that section 6.3 of the IA states "as such decision making must use an approach that accounts for deep and dynamic uncertainties..." but that sentence doesn't match how the risk ratings were done. Ms. Bhat said they will change how that sentence is written. Mr. Bossert asked for a definition of downscaled climate model data. Ms. Bhat explained that global climate models are generally run for the entire world. Downscaling is an approach used throughout the climate science community to transform that data, so it can be applied locally for decision making. Mr. Bossert also noted that he still feels the benefits of climate change are portrayed as an afterthought in the IA. Mr. Mondor asked if "built infrastructure" is considered to be anything that is manmade. Ms. Bhat answered saying that is correct and provided examples such as roads, bridges, buildings and electric grids. Mr. Mondor mentioned that environmental justice (EJ) and equity are new for the plan and thus DEP will want to make sure they approach it correctly. He therefore asked how DEP is defining EJ. Ms. Bhat responded by explaining how EJ area boundaries are defined by census block groups. Representative McCarter opined that the IA should explain what would happen if we do not act on climate change. Ms. Bhat responded that impacts in the report are those that would come to pass if no action is taken. ICF will review the report to make sure this message is clear.

ICF Presentation on 2021 Climate Action Plan

Mr. Hendrickson provided updates on the CAP development and timeline, as well as the BAU scenario. He showed projected sector trends, including how the BAU modeling projects nuclear retirements after 2035 that will be replaced by natural gas. Ms. Harris reviewed the finalized GHG reduction strategies. She also touched on the enabling technologies characterization. Ms. Harris finished the presentation by providing next steps and the climate action plan timeline. The CAP will be finalized by June 2021.

CCAC members provided their feedback. Mr. Sherrick noted that DEP and ICF should be addressing fugitive emissions from natural gas. Ms. Harris responded that this topic will be addressed in the CAP. Mr. Henderson stated that all four nuclear power plants have extended their licenses, so he doesn't think this energy source should be removed from the BAU projections. Mr. Henderson also opined that PA's participation in the Regional Greenhouse Gas Initiative (RGGI) should not expire in the BAU, since it is meant to be a permanent regulation. He also voiced his concern in not accounting for GHG emissions outside of Pennsylvania. Mr. Althoff stated that DEP welcomes any other comments from the CCAC on the RGGI expiration in the BAU, as well as the current approach with nuclear energy. Mr. Graff asked what is causing the reduced electricity generation in the BAU scenario, to which Ms. Harris responded that it is driven by both a reduction in exports and in-state demand. Mr. Graff also asked if other sections were going to be developed more in the CAP. Ms. Harris answered yes, explaining that the intent was to provide a working draft. Mr. Graff asked if the CAP will address potential effects from COVID. Ms. Harris stated that ICF will look at the new Annual Energy Outlook in January and use that data to show COVID impacts. Mr. Krug asked what the difference is between industrial and industrial process emissions, to which Ms. Harris responded that the former is from energy use and the latter is from the nonenergy process emissions, such as those from cement manufacturing. Mr. Krug echoed Mr. Henderson's concerns about electricity assumptions in the BAU. Mr. Krug also suggested some terminology clarifications.

Ms. Byron reminded everyone that written feedback is due to DEP by January 12th.

Public Comment(s)

There were no public comments provided at this meeting.

Carbon Capture Utilization and Sequestration (CCUS) Presentation

Ms. Carter of PA DCNR provided a presentation titled "Supporting Responsible Natural Resource Management, CO2 Transport Infrastructure, and Economic Development in Pennsylvania." She defined CCUS (carbon capture, utilization and storage) and explained Pennsylvania's work on that technology. Capture is removing carbon dioxide (CO₂) from the emissions stream. Utilization is the beneficial use of CO₂, and storage is done in the subsurface. Ms. Carter explained that there are very few scenarios where a 2-degree reduction in warming can be achieved without CCUS. She also shared info on various PA workgroups and initiatives that support CCUS, as well as regional partnerships. Ms. Carter detailed where the CO₂ emissions are located, with power plants being the largest source, and the infrastructure that can transport it (i.e. roads, rail and waterways). She explained how the PA Geologic Survey determined the best storage locations in PA by county and geologic formation, and discussed PA's CO₂ storage capacity. The CCUS Interagency Workgroup, formed in 2019, is

comprised of DCED, DEP, and DCNR and focuses on technical, regulatory, economic and policy drivers for CCUS. The workgroup is currently preparing an interagency memorandum of understanding (MOU). She also noted that PA signed on to an MOU for a regional CO₂ transportation infrastructure action plan that would enable large-scale carbon management and will be finalized in October 2021.

A discussion on the presentation followed. Representative McCarter inquired about storage potential and asked how much need there would be for plugging all orphan oil and gas wells, to which Ms. Carter responded with the number of legacy wells in the PA landscape. Mr. Henderson asked about legal liability with CCUS, to which Ms. Carter responded that the MOU action plan will address this issue. Mr. Graff expressed concern about the economics of storing carbon versus investing in reducing fossil fuel combustion. Mr. Graff noted concerns over the danger that people will think we can store all CO₂ and continue emitting GHGs. Mr. Bossert asked if the group has looked at other uses for captured CO₂ such as using it as a raw material. Ms. Carter stated they are surveying opportunities for projects that use CO₂. Mr. Merritt asked who owns the subsurface pore space, to which Ms. Carter responded that the discussion has centered around how leases may be worded for handling the pore space after the hydrocarbons are extracted. Mr. Walters commented that Ms. Carter should be asked to speak to the CCAC again once the action plan is final.

Status of PA's Proposed Cap and Trade Regulation

Mr. Landis provided an update on PA's participation in the Regional Greenhouse Gas Initiative (RGGI). The draft rulemaking was approved by the Environmental Quality Board (EQB) in September 2020. Public comment period ends on January 17th. Four-hundred fifty-five people have made comments during the public hearing process and approximately 2,000 written comments have been received thus far. The comments are mostly supportive, but some comments do focus on the negative impacts to coal workers. The final regulation will be presented to the EQB in summer 2021 and will be effective by fall 2021.

New Business/Next Steps

Mr. Krug opened discussion about the agenda for future meetings and inquired whether future meetings should be focused solely on the IA/CAP or include educational presentations. The Committee agreed to focus on the IA and CAP for the next meeting on February 23rd.

Ms. Byron stated she would follow up with members and provide meeting dates for 2021 as well as the IA and CAP feedback form.

Adjournment

A motion to adjourn was made by Mr. Graff and seconded by Ms. Baxter. The motion carried, and the meeting was adjourned at 12:12 PM.