

**CLIMATE CHANGE ADVISORY COMMITTEE  
MEETING MINUTES**

**April 27, 2021  
9 a.m. – 12 p.m.  
Via WebEx**

**MEMBERS/ALTERNATES PRESENT:**

|  |                                |
|--|--------------------------------|
| Chairperson Steve Krug                       | Paul Morris                    |
| Vice-Chairperson Marc Mondor                 | Patrick Henderson              |
| Greg Czarnecki (for Cindy Dunn)              | John Bell (for Luke Brubaker)  |
| Stephen McCarter                             | Lindsay Baxter                 |
| Robert Graff                                 | Jaret Gibbons                  |
| Griffin Caruso (for Representative Metcalfe) | Kimberly Kipin-McDonald        |
| Alissa Burger                                | Jason Kelso (for Gary Merritt) |
| Joe Sherrick (for Gladys Brown Dutrieuille)  | Zachery Smith                  |
| Adam Walters (for Dennis Davin)              | Representative Sara Innamorato |

**MEMBERS ABSENT:**

Zakia Elliot, Terry Bossert, James Felmlee

**PA DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) STAFF:**

Kerry Campbell, Lindsay Byron, Heidi Kunka, Dave Althoff, Darek Jagiela, Sarah Pinter, Andrew Hansrote, Allen Landis

**INVITED GUESTS:**

Cassandra Bhat, Deb Harris, William Prindle, Adam Agalloco, Bansari Saha, Logan Pfeiffer

**MEMBERS OF THE PUBLIC:**

Travis Gery, Sam Lehr, David Gelman, Eli Brill, Brittney Hiller, Michael Wright, Representative Benjamin Sanchez, Lauren Barr, Stephen Holcomb, Robert Barkanic, Mayaz Alam, Larry Godlasky, J Gaskey, Thomas Konitzer, Josephine Martin, Rachel Gleason

**MEETING:**

The April 27, 2021 meeting of the Climate Change Advisory Committee (CCAC) was called to order at 9:01 a.m. by Chairperson Steve Krug. With 12 of 21 seated members present at the start of the meeting, a quorum was established.

**MINUTES:**

The minutes of the February 23, 2021 CCAC meeting were presented to the committee for approval. A motion to approve the minutes was made by Mr. Mondor and seconded by Mr. Graff. There were no requests to edit the minutes by any members. 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 gave a presentation that summarized the feedback that had been received from CCAC members on the February meeting materials. Comments were received on the Climate Action Plan (CAP) Final Draft and February 2021 Meeting Slides.

### **ICF Presentation on 2021 Climate Action Plan**

Mr. Agalloco of ICF explained updates recently made to the greenhouse gas (GHG) modeling in the CAP, including to the business-as-usual (BAU) scenario and distributed solar results. He also talked in depth about how the modeling showed GHG reductions from various strategies. Mr. Saha of ICF continued the presentation by giving an overview on how to interpret economic modeling in the CAP, which is depicted via the following key outputs: gross state product (GSP), disposable income and employment. Ms. Bhat of ICF continued the presentation by going over adaptation planning and strategy in the CAP, addressing the impacts of increasing heat and flooding and reviewing case studies. Mr. Pfeiffer of ICF provided an overview of the implementation approach. He ended the presentation reviewing the climate action plan timeline.

CCAC members had many questions. Mr. Mondor asked for clarification on job creation. Mr. Saha gave clarification that in 2050 there will be around 80,000 new jobs. The 38,000 value is an average per year over the time series.

Mr. Bell asked for more detail on the projected increases in employment and slight decrease in disposable personal income. He asked on what reasoning, analyses, studies or other justification are these estimates based. Ms. Harris replied the CAP has more detailed information and the results are explicit to this analysis, not based on other macro-economic estimates.

Mr. Krug asked if there is a discussion in the CAP on how to pay for a resilient grid and distributed generation. Ms. Harris replied that it is not included. Mr. Sherrick stated that a lot of these costs are already being realized, as generation facilities and substations have been doing storm hardening and resilience updates that are incorporated into utility bills.

Mr. Graff asked how the analysis incorporates the costs of reconfiguring the grid (both distribution and transmission) to handle distributed energy resources (DER) and renewables, which will not be located where current power plants are. Ms. Harris replied that ICF does not assume or capture the costs of expansion, maintenance, etc., but the modeling does include the sale cost of exporting power for PA. Mr. Graff also asked for clarification on employment in "Fuel Supply" and "Electricity Generation." Where do lost jobs in natural gas production fall? What does "Fuel" mean in this context? Mr. Saha answered stating changes in use of natural gas would be in fuel supply, whereas changes in natural gas related to electricity generation is in the electricity sector. To the extent fuel is used by electricity generation, it is captured in electricity generation.

### **Public Comment(s)**

One person provided public comment at this meeting. Michael Wright of York County suggested that there should be climate scientists on the CCAC. He also provided suggestions for soliciting public feedback on the CAP. Mr. Wright discussed life cycle emissions from methane, considerations for vehicle miles traveled emissions reductions. Mr. Wright commented that, based on his understanding from today's presentation, the economic model does not appear to account for

long term benefits of mitigating climate change from energy efficiency. He stressed the importance of participation in the Regional Greenhouse Gas Initiative (RGGI). He also provided ideas on how Pennsylvania can preserve the climate and the economy.

### **ICF Presentation on 2021 CAP Discussion (continued)**

Mr. McCarter pointed out that in the implementation approach there is a disconnect with educating involved stakeholders so they can make the necessary decisions. Ms. Harris stated this is a good point and the kind of insights ICF and DEP are looking for. ICF will work with DEP to discuss how this concept can be integrated into the plan.

Mr. Graff asked regarding slide 41 where electric vehicles (EVs) fit in, and suggested that the letters for each lettered strategy be included for cross-referencing. Ms. Harris responded that the letters can be included and stated that they are in the EV light duty strategy and the medium- and heavy-duty vehicle (MHDV) strategy. The low carbon fuel standard (LCFS) takes them into account too. Mr. Graff also had questions regarding how the model relies on historical inputs and outputs (I/O). He noted that the relationships between sectors are likely to change over time. For example, the historic I/O relationship between the electricity generation sector and coal mining sector has and will continue to change over time. He asked how the model takes these changes over time into account. Mr. Saha answered that this is partially correct. It starts with historical I/O, then projects in the future looking at how relationships might change over time. The macroeconomic model starts with the reference point of a historical I/O, and based on peer reviewed research, then projects what the relationship might look like down the road. Sometimes, there might be better data to adjust those relationships. ICF did not adjust relationships but relied on the model's understanding of relationships.

Mr. Henderson asked if the analysis concluded that carbon capture utilization and sequestration (CCUS) will not be cost effective. Ms. Harris answered that the model includes generation with CCUS as an option and it did not appear as cost effective right now. Mr. Henderson also asked if the modeling includes RGGI past 2030, and if it does, does it reduce the number of credits available or hold it steady. Ms. Harris answered that the model holds the cap constant beyond 2030. Mr. Henderson stated that he believes this is not realistic since the cap will decrease and RGGI is working on a reduced cap now. Mr. Henderson asked if emission changes in other states are considered in the economic and cost-effectiveness assessment. Ms. Harris answered that emission changes in other states are not assessed in the analysis. Mr. Althoff mentioned that the CAP only shows one slice of scenarios and follows what the model chooses at this point in time. Further enabling technologies will need to be part of the solution.

Mr. Gibbons inquired about the policy case on slide 26 and whether it includes waste coal, as it appears coal fully phases out between 2030-2040. He asked if the CAP accounts for the lost environmental benefits and added public cost from the loss of abandoned mine land reclamation. Mr. Althoff and Ms. Harris both replied yes, and Ms. Harris mentioned ICF will need to look at the 80% reduction by 2050 scenario as coal generation shows a complete drop off in the model results.

Mr. Bell pointed out the need to be cognizant of differences in information technology. Mindset and temperament of many in the agricultural sector is not conducive to group education or uniform education and public outreach. Ms. Harris replied that this would be good to think about in the education and outreach component and ties into the equity piece. Mr. Bell also mentioned that part

of the education process needs to include education on the model itself, as there are a substantial number of people who are skeptical of modeling results and approaches.

Mr. Graff asked about the building sector employment results around year 2040 on slide 37. Mr. Agalloco replied stating that employment impacts are a summation of all building strategies. What is observed within the modeling, for example in the 2039-2040 bump, is additional investment in energy efficiency.

### **AEPS 2020 Annual Report**

Mr. Sherrick gave a short presentation on the highlights from the Alternative Energy Portfolio Standard (AEPS) 2020 Annual report.

### **New Business/Next Steps**

Mr. Althoff shared the link to the GreenGov 2020 Annual Report and mentioned there is a stakeholder meeting for the GreenGov Council on May 5<sup>th</sup> that members can participate in. Mr. Krug mentioned Governor Wolf's solar procurement announcement. He also noted that CCAC members have until May 11<sup>th</sup> to submit their final comments on the CAP draft. Ms. Byron stated there will be a final presentation on the CAP at the June 22<sup>nd</sup> CCAC meeting and that members will be asked to submit letters that will be appended to the CAP. She also clarified that there will be no public comment period on the 2021 CAP, as it is not a regulatory document.

### **Adjournment**

A motion to adjourn was made by Mr. McCarter and seconded by Mr. Graff. The motion carried, and the meeting was adjourned at 12:00 PM.