

**CLIMATE CHANGE ADVISORY COMMITTEE
MEETING MINUTES
April 25, 2023
9 a.m. – 12 p.m.
Rachel Carson State Office Building,
and via Teams**

MEMBERS/ALTERNATES PRESENT:

Chairperson Steve Krug	Flora Cardoni
Jason Kelso	Glendon King (for Rep. Daryl Metcalfe)
Kim Kipin-McDonald	Lindsay Baxter
Jaret Gibbons	Jennifer Greenberg
Patrick Henderson	Christopher Sandvig
Joseph Sherrick (for Gladys Brown Dutrieulle)	Laura Edinger (for Elizabeth Marx)
Greg Czarnecki (for Cindy Dunn)	Rep. Perry Stambaugh
Rep. Ben Sanchez	Leah Friedman (for Rep. Sara Innamorato)
Adam Walters (for Rick Siger)	Marc Mondor

MEMBERS ABSENT:

Paul Morris, Terry Bossert.

PA DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) STAFF:

Lindsay Byron, Megan Porta, Christopher Nafe, Kerry Campbell, Laura Rigge, David Althoff, Special Murray, Cole Gessner, Ezra Thrush.

INVITED GUESTS: Jean Krack, Helaine Barr, Robert Kettig, Mark Stewart.

MEMBERS OF THE PUBLIC:

Kailee Glock, Chad Heister, Eli Brill, Tom Batrone, Emily Eyster, Grant Gulibon, Martha Hart, Danielle Fleischmann, Nick Troutman, Michelle Moses, Brian Smiley, Adam Agalloco, Nate Wardle, Roy Gothie

MEETING:

The April 25, 2023, meeting of the Climate Change Advisory Committee (CCAC or Committee) was called to order at 9:02 a.m. by Chairperson Steve Krug. With only 9 members present at the beginning of the meeting, there was no quorum so approval of the meeting minutes from February was postponed until a quorum could be established.

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

IIJA and IRA-Funded Programs – David Althoff, DEP

Mr. Althoff reviewed the funding the Energy Programs Office (EPO) is set to receive through the Infrastructure Investment and Jobs Act (IIJA or Bipartisan Infrastructure Law) and the Inflation Reduction Act (IRA). He also reviewed the objectives for each program and the EPO's priorities for this

funding. Funding is grouped into formula grants to state energy offices where they receive and identify specific uses, with an emphasis on environmental justice (EJ) and equity, and competitive grant programs for which EPO and partners are eligible to apply for specific subject areas.

IIJA: EPO is eligible for approximately \$67 million in formula funding. Objectives for this funding include: invest in EJ communities to reduce energy burden; expand access to energy efficiency solutions and measures for families, communities, and businesses; increase generation of reliable, clean, and affordable power; deploy clean and resilient energy infrastructure to combat the effects of climate change; and develop a clean energy workforce and manufacturing capabilities. EPO previously applied for state energy program funding of \$14 million to implement programs/initiatives to address energy efficiency and renewable energy sources, including: planning for implementing energy efficiency and energy management systems for equitable outcomes, Shared Energy Manager for local communities with an emphasis on EJ, clean energy infrastructure deployment projects, and energy security/energy assurance planning, duties, and exercises. The Energy Efficiency Revolving Loan Fund provides \$3.3 million in new funding to capitalize or support a revolving loan fund for commercial and residential energy efficiency loans. The Energy Efficiency and Conservation Block Grant Program provides \$3 million to support small local governments and nonprofits with grants/rebates/financing for energy efficiency, renewable energy, and zero-emission transportation. Preventing Outages and Enhancing the Resiliency of the Electric Grid allows PA to receive \$40.5 million over 5 years to mitigate impacts of the grid from extreme weather and requires 15% in matching funds. EPOs focus will be on projects that enhance grid resiliency for communities, focusing on EJ. An Energy Auditors Training Program provides a maximum of \$2 million for State Energy Offices to provide workforce development for the energy efficiency sector. Building Codes Assistance Training has funds to be made available over the next 5 years to be used for energy code workforce development. IIJA also has other funding directed at other agencies, utilities, or other DEP programs that will positively impact PA's future climate planning.

IRA: Provides \$369 billion total for energy and climate change (\$261 billion formula funds to EPO) and is projected to reduce GHG emissions to 40% below 2005 levels by 2030 nationwide. Investments in new technologies from this Act will drive emissions toward net-zero by 2050. Major areas of investment include transportation, buildings, clean energy development, and tax credits, with a particular focus on EJ communities. A large focus for EPO will be the residential rebate program. IRA objectives are similar to the IIJA with an additional objective to plan for and support the deployment of the technologies of tomorrow to reduce GHGs. Home Energy Performance-Based Whole-House (HOMES) and High-Efficiency Electric Home (HEERA) rebates for energy efficiency each provide around \$4.3 billion for State Energy Offices to offer rebates for energy efficiency improvements and rebates for electric appliances, respectively. PA EPO will receive \$129 million for each program, a total of \$258 million over 10 years. The Climate Pollution Reduction Grant (CPRG) provides about \$3 million to PA DEP with Pittsburgh, Philadelphia, and the Lehigh Valley areas receiving \$1 million each in addition to this amount. DEP's application was submitted on April 24th. A Priority Climate Action Plan (PCAP) is due by March 1, 2024. Later, EPA will issue a separate notice of funding opportunity to access \$4.6 billion in CPRG implementation grants, which will be awarded through a competitive process for initiatives covered by the PCAP. There is also a Building Energy Codes competitive grant (\$670 million total) to support efforts to achieve zero energy provisions of the 2021 IECC and a plan to promote full compliance. The GHG reduction grants provide competitive funding of \$27 billion for zero-emission technology projects. A Clean Heavy-Duty Vehicles (school buses, garbage trucks) grant of \$1 billion is also available, along with other grants that will positively impact our climate planning.

Discussion: Mr. Mondor asked if we have staff capacity to take advantage of the funds; Mr. Althoff said that EPO is looking at all available tools and resources, including possible staff augmentation and accepting help from other organizations. Ms. Cardoni asked about EPO's plans to educate stakeholders who need assistance developing applications to take advantage of these funds, and added that groups like PennEnvironment can provide that assistance. Mr. Althoff said that EPO has been providing some technical assistance with SEP funds, and is looking to expand that work with additional funds. Mr. Sandvig asked what role from a reporting/measuring perspective does DEP have in the various transportation funds, as a lot of this funding is discretionary and tied to more holistic projects. Mr. Althoff responded that EPO has a role as state energy office even if we aren't the applicant. Our relationship with PennDOT has come a long way and as the Energy Office/Climate Program and we will be monitoring those efforts.

Phoenixville's Hydrothermal Carbonization (HTC) Wastewater Treatment System – Jean Krack

Jean Krack of Phoenixville Borough presented on the borough's new HTC wastewater treatment system, a first of its kind in North America. Phoenixville experienced an explosion at their wastewater treatment facility in 2009 that resulted in a partial facility closure and reduced capacity until 2013. This led Phoenixville to examine other technologies for their wastewater treatment system, and look for improvement opportunities.

Phoenixville's old system used anaerobic digestion to process wastewater. The new HTC system has resulted in several benefits to the borough, including energy efficiency. Phoenixville has set a goal of 100% clean energy for the WWTP and other borough offices. Additional benefits of the HTC system include regulatory risk reduction, as it is no longer necessary to conduct land-application of biosolids; generation of a sellable product – hydrochar; additional biosolids processing capacity; and up to 40% project cost coverage with new IRA tax credits.

Discussion: Mr. Krack stated that they are confident that HTC process also significantly reduces PFAS and microplastics in the resulting product. They will be investigating the use of the biochar produced at water treatment plant as filtration for drinking water to replace chemical usage. He also noted that the process takes 4 hours vs 14 hours of traditional process, reduced energy use, and reduced water content in landfilled materials, which saves up to 50% of shipping costs. Phoenixville is looking into the availability of federal funds for expanding on this project; Mr. Althoff stated EPO will reach out and coordinate on that.

Public Comment: No public comments were presented at this meeting.

MINUTES: As there was now a quorum with 17 of 20 seated members present, the minutes of the February 13, 2023, CCAC meeting were presented to the Committee for approval. A motion to approve the minutes was made by Mr. Gibbons and seconded by Mr. Kelso. There were no requests to edit the minutes by any members. The motion to approve the minutes carried by a voice vote and passed.

New Jersey's Global Warming Response Act 80 x 50 Report – Helaine Barr and Robert Kettig

Helaine Barr and Robert Kettig of New Jersey Department of Environmental Protection presented on the state's Global Warming Response Act 80 x 50 report. NJ is currently not on a trajectory to achieve their 80 x 50 GHG emissions reduction goals. The pathway to 2050 presented in the report would result in net emissions of 19 MMTCO_{2e}, achieving the goal. Highlighted strategies in the report by sector include:

- Transportation emissions pathways: electrify light-duty vehicles; decarbonize medium and heavy-duty vehicles; increase NJ transit ridership and transit villages; incentivize work from home policies, home delivery, and other strategies; and support regional and national efforts to improve fuel economy of light-duty fossil-fuel powered new vehicles
- Residential pathways: electrify space/water heating and maximize energy efficiency
- Electric generation pathways: reduce energy demand, transition from fossil fuel electric generation to renewable generation, and procure out-of-state renewable energy
- Industrial pathway: invest in energy efficiency in industrial operations
- Waste and agriculture pathways: reduce and recover food waste, optimize energy recovery in wastewater treatment plants, and improve soil management practices
- Short-lived climate pollutants pathways (methane, black carbon, and halogenated gases): modernize natural gas infrastructure, improve operations through advanced leak detection, and non-pipeline solutions
- Halogenated gases pathways: containment through leak repairs, strict materials handling, and recycling and product phase out involving outright bans by law or regulation
- Carbon sequestration pathways: reforestation, avoided conversion of natural lands, salt marsh and sea grass restoration/enhancement, conservation management of agricultural lands, and proactive forest management. Reforestation has the largest potential for carbon gain.

Discussion: Mr. Walters noted that there was a precipitous drop in NJ's industrial sector emissions from 2005 to today, and asked what accounts for that drop. Mr. Kettig said they believe it is due to loss of a couple of major refineries and a market shift away from domestic petrochemical refining. Pharmaceuticals manufacturing was also reduced. Mr. Walters asked what how electricity generation is expected to shift as more renewables, such as offshore wind, are deployed in-state. Mr. Kettig responded that they have investigated various scenarios and that the state plans to discuss this with PJM.

Maryland's 2030 Greenhouse Gas Reduction Act Plan and 2022 Progress Report – Mark Stewart

Mark Stewart of Maryland's Department of the Environment presented on progress towards Maryland's 2030 GHG reduction goals. Maryland exceeded their 2020 goal of 25% reduction from a 2006 baseline, achieving a 30% reduction. Maryland's two largest sectors contributing to GHG emissions are transportation at 35% and electricity use at 21%. Most of the reductions that MD has achieved have resulted from shifting from coal to cleaner sources of electricity generation. Transportation emissions have been relatively flat. Recent industrial emissions have reduced due to the closure of a few manufacturing facilities. Maryland updated its GHG reduction goal from 40% reduction to 60% by 2031 and net-zero by 2045, and will be updating the state's GHG reduction plan by the end of 2023 to reflect those goals. It is projected that MD's current policies will achieve a 48% reduction in GHG emissions by 2031. Select new policies include adopting California's Advanced Clean Cars II and Advanced Clean Trucks rules; build 8500 MW of off-shore wind power by 2031; achieve 100% clean power generation by 2035; requiring large buildings to achieve net-zero direct emissions by 2040; adapting EmPOWER MD to achieve greater GHG reductions; and adopting new landfill methane regulations. Maryland's State Climate Commission recommendations include expanding electric vehicle and charging infrastructure incentives, adopting low-carbon fuel standards for motor fuels, adopting clean heat standards, adopting zero-emissions appliance standards, and adopting all-electric standards for new construction.

Discussion: Mr. Sherrick asked if MD's GHG inventory account for in-state electricity generation and imports/exports. Mr. Stewart stated that they do account for emissions for all in-state electricity

generation and net imports. Ms. Edinger asked if weatherization measures were being considered with energy efficiency policies, especially with regard to affordable housing. Mr. Stewart said that energy efficiency and weatherization are a big focus in MD, and they are currently designing programs for electrification. Mr. Henderson asked for a definition of clean energy, and whether that definition includes GHG emissions from the point of energy generation or are GHG emissions accounted for in the life cycle of different energy generation technologies. Mr. Stewart stated that typically on the national scale clean energy is defined by direct emissions from the point of energy generation. Mr. Stewart added that MD is still developing policy and definitions in their forthcoming updated plan. Mr. Henderson also inquired as to whether MD's plan will consider energy reliability and resiliency. Mr. Stewart responded that energy reliability and resiliency will be included and is in the forefront of their thinking when developing the plan. Mr. Sandvig asked if a shift in travel mode is part of the strategy. Mr. Stewart responded that there are incentives for ride sharing, teleworking, and public transit use. Mr. Krug inquired if future energy imports are anticipated to be from clean energy generation sources. Mr. Stewart said that some models show that MD may no longer be a net importer of electricity in the future.

DEP Updates:

Ms. Byron shared that the 2024 Climate Impacts Assessment and Climate Action Plan is still in the contract procurement process. Mr. Nafe gave an update on the status of EPO's Climate Action for EJ Communities project. He shared that a series of meetings have been completed and EPO received input on issues faced by the communities. The final report will be completed by the end of June.

Mr. Nafe also provided an update on EPO's LCAP and Shared Energy Program. The current cohort have completed draft climate action plans.

Ms. Byron provided an update on the Commonwealth's Climate Pollution Reduction Grant application. DEP submitted a Notice Of Intent to Participate to EPA on March 10th. DEP expects to receive \$3 million in non-competitive grant funds for climate pollution reduction planning on behalf of the Commonwealth. Management of the grant will be a joint effort of EPO and the Bureau of Air Quality. The deliverables required include: Priority Climate Action Plan (PCAP), due 3/1/24; Comprehensive Climate Action Plan (CCAP), due 2 years from date of award; and a Status Report due at close of 4-year grant period. In addition to the required deliverables, DEP will develop a comprehensive stakeholder outreach plan. Recipients of planning grants, and eligible entities covered by the Commonwealth's PCAP, will be eligible to apply for forthcoming competitive implementation grants. The PCAP will identify actions eligible for implementation grants. The Commonwealth's PCAP and CCAP will cover all municipalities in PA. Three metro areas within Pennsylvania are also eligible for their own \$1 million planning grants: Pittsburgh, Philadelphia, and Allentown. DEP has met with Regional Planning Organizations leading CPRG efforts for each metro area, and will be coordinating with those entities. DEP anticipates funds to be available by the end of August.

Other notable events: TheBurg magazine, *A Change in the Weather*; April 12, US DOE Better Buildings summit, April 17: Municipal-Academia Cooperation for Climate Action.

Next Meeting

The next meeting will be held on June 27, 2023.

Adjournment

A motion to adjourn was made by Mr. Sherrick and seconded by Ms. Baxter. The motion carried, and the meeting was adjourned at 12:02 p.m.