

**MINUTES OF
CITIZENS ADVISORY COUNCIL
June 11, 2024**

CITIZENS ADVISORY COUNCIL (CAC) MEMBERS PRESENT:

Jerome Shabazz, Chairperson	Duane Mowery
Timothy Weston, Vice Chairperson	Trisha Salvia
George Ambrose	James Schmid
Robert Barkanic	John St. Clair
Jacquelyn Bonomo	Thaddeus Stevens
Cynthia Carrow	John Walliser
William Fink	James Welty

DEP STAFF PRESENT (other than Presenters):

Ian Irvin, Executive Director
Jessica Shirley, Acting Secretary
Casey Damicantonio, Policy Office
Max Schultz, Policy Office

CALL TO ORDER:

Chairperson Shabazz called the meeting to order at 12:32 PM.

DEP UPDATE

Acting Secretary Jessica Shirley provided the following update:

Critical Mineral Industry in Pennsylvania – As our society continues to make technological advancements, the demand for the non-traditional materials that make these advancements possible has risen and will continue to rise. Known as critical minerals, these rare elements are used in consumer electronics, electric vehicle batteries, as well as energy, medical, and defense applications. Demand is booming, critical mineral prices are up roughly 500% year on year. However, the United States lags in the industry. China, Chile, and Australia dominate the global market—producing 90% of the world’s \$8 billion lithium. Thus, the United States’ dependency on foreign import of these critical minerals puts us at a severe disadvantage when it comes to advanced manufacturing and the clean energy transition.

The U.S. has only one operational lithium mine—in Nevada—with others scheduled to open in California and North Carolina. Given our rich history of mining and manufacturing expertise, Pennsylvania is looking to be at the forefront of the industry. Recently, researchers from the National Energy Technology Laboratory and University of Pittsburgh identified fracking wastewater from Marcellus Shale gas wells as a significant source of lithium; concluding that Pennsylvania could supply 38-40% of current domestic consumption. Often treated and recycled for use in ongoing fracking operations, the fracking byproduct could be beneficially reused by extracting the critical minerals contained within. Lab results demonstrated that lithium could be extracted from the wastewater with up to 90% efficiency.

Similarly, researchers at the Penn State University have explored critical mineral reclamation processes from resources such as acid mine drainage/sludge, coal refuse, and conventional oil and gas well produced waters. The Department has been involved with these efforts, particularly Penn State's research, and is preparing to make Pennsylvania an industry leader. To that end, our internal focus has and will continue to focus on:

- Regulatory regime
- Permitting
- Cost
- Efficiency
- Environmental harms and consequences
- Royalty issues

Assessment of Solar Development on Previously Impacted Mine Lands –

Pennsylvania's rich mining history also means that we have a lot of previously mined land. This land is primed for restoration, development, and reuse. And we believe it is key to growing clean energy and bolstering Pennsylvania's energy economy.

DEP released its "Assessment of Solar Development on Previously Impacted Mine Lands," to demonstrate the opportunities and challenges associated with solar development on previously mined lands. Based on our report there are 169,000 acres of Abandoned Mine Lands in Pennsylvania that could host solar facilities, but only 27,000 or 16% have been reclaimed over the last 45 years, while the remaining 142,000 acres are still awaiting reclamation. Utilizing just 5% of these Abandoned Mine Lands for solar development would result in 9,000 acres that can be repurposed to produce 1.5 gigawatts of solar capacity. This is enough electricity

to power 140,000 Pennsylvania homes - or every household in Pittsburgh and then some. Siting on Abandoned Mine Lands brings about additional environmental benefits by taking pressure off other areas and preserving agricultural land, forest land, and valuable habitat.

The Acting Secretary further emphasized that Abandoned Mine Lands are not the only opportunity for new clean energy development. Thanks to the Inflation Reduction Act, there is a federal Department of Energy program that is encouraging ideas for clean renewable energy development on sites that previously housed fossil fuel energy. On Saturday, June 1, DEP issued a Request for Information on developing Clean Energy Campus Projects on abandoned mine lands controlled by the Commonwealth. This includes 1,850 acres of unreclaimed abandoned mine lands that belong to the Commonwealth of Pennsylvania. We want to hear ideas of what kind of renewable energy projects we can put on these properties after reclaiming them. We will take the best ideas and present them to the federal Department of Energy to see if we can get loan guarantees for the projects and make them a reality.

Q & A included the fact that DEP is currently looking into whether there would have to be new regulations regarding rare earth minerals, and as of this meeting it seems that there would not need to be additional statutory changes. Also, it is still too early to tell how much rare earth materials can be extracted from abandoned mine drainage compared to mining itself.

PRESENTATIONS:

[Mid-Atlantic Hydrogen Hub](#)

Matt Krayton, Communications Lead

Manny Citron, VP of Partnerships and Community Engagement

The Mid-Atlantic Clean Hydrogen Hub (MACH2) was one of seven winners announced by President Biden in October 2023 to receive up to \$750 million in federal cost share to support its development, production, distribution and use of hydrogen as part of the United States' transition to carbon neutrality.

After the introduction, Manny went on to explain different kinds of hydrogen production and why MACH2's goal is to mainly produce pink and green hydrogen. Green hydrogen is hydrogen made with renewables to power the required electricity. Pink hydrogen, alternatively, comes from existing nuclear sources. The carbon footprint for using these types of hydrogen is incredibly minimal.

Manny then discussed how a large percentage of greenhouse gas emissions come from industrial facilities and transportations, two sectors that have been difficult to electrify. MACH2 believes that hydrogen is the best solution to transition these industries to electricity. The plan is for MACH2 to produce 97% green and pink hydrogen while the remaining 3% will come from biogas.

Finally, Manny mentioned that MACH2 will be partnering with PGW and the city of Philadelphia Water Department to reduce methane emissions from water treatment plants. The proposal is that PGW will capture the waste methane and convert it into hydrogen using steam methane reformation, though there are still details that need to be worked out.

Q&A included a discussion about the phases of these hydrogen hub programs from the Department of Energy. According to Manny, MACH2 is near the end of negotiating the initiation of phase one of four, which will take about 15 months and will involve a continuation of community engagement. The end goal of phase one will be the creation of a screening tool, while phase two will be the permitting phase which they expect to take 33 months.

South Carolina Electronic Waste Program

**Sallie Williams, Program Manager of Solid Waste Regulation Development
South Carolina Department of Health and Environmental Control**

Sallie presented to the Council about South Carolina's electronic waste clearinghouse program (Act 234) that was enacted in 2011 and created a way for the counties in the state to manage and recover televisions, monitors, computers, and printing devices. The Act was revised in June of 2022, establishing a convenience standard for TV and monitor manufacturers as well as updating requirements for collectors of covered electronic devices. The South Carolina Department of Health and Environmental Control will hold stakeholder meetings again in 2026 to see if further revisions are necessary.

The convenience standard is something the counties can opt-into voluntarily every year. If a county chooses not to opt-in, but a municipality in that county wants to opt-in, they can opt-into another county's program if their population is more than 17,000. Manufacturers can participate individually or as part of a manufacturer clearinghouse as part of group plans. The counties that opt-in are assigned groups annually.

There is no fee for counties to opt-in or out of the program. The larger the population of a county, the more collection sites or events they are required to provide. This is subject to negotiation with the clearinghouse in conjunction with the Department. The counties can act as collectors, in which case they also provide labor and equipment to assist with the packaging and stacking of the e-waste. The wrap and pallets to help transport the waste will be provided by the manufacturers. Manufacturers also fund the transportation of materials.

Q&A included that there was no need for any policy or legislation in order to make Act 234 successful and when writing the language for the Act, South Carolina used Illinois as a model regarding definitions for the e-waste they collect.

Ag-Grid Energy

Rashi Akki, Partnership for Electric Pathways (PEP)

When Rashi created Ag-Grid energy, the idea was to build an anerobic digester. It was known that the manure from dairy farms contains the microbes required to perform anaerobic digestion, but Rashi wanted to focus on organic waste rather than use farmland to create carbon content like in Europe. So, Ag-Grid focused on this in order to help sustainability on dairy farms. In the beginning, the plan was to produce electricity, and later they would work with larger dairies and produce renewable natural gas that could be converted to electricity.

Even though Rashi lives in Pennsylvania, Ag-Grid has yet to start a project in the state. Ag-Grid does have projects in Connecticut and Massachusetts because the price of electricity in those states are much higher compared to Pennsylvania. Connecticut, Massachusetts and New York also have bans on food waste, so Ag-Grid is able to get tipping fees from those states to support their projects. They are looking to start a project in Cochranville, PA at a dairy farm with 2,500 animals, but they are unable to get the project off the ground because of these two factors. It's also difficult to find other farms to start projects with because the farms in PA have too few animals to create renewable natural gas projects.

Q&A included an explanation on wastewater lagoons in dairy farms, in which Ag-Grid will extract the carbon, leaving the nitrogen, potassium and phosphorus behind and then the farms will then use the manure to grow crops for their livestock.

PUBLIC COMMENT:

The following individuals, and the organizations they represent, if any, provided comments at the meeting. Links to their written comments are provided. In cases where written comments were not provided, a brief summary is provided:

[Tracey Carluccio Comments](#)

[Tom Pike Comments](#)

[Karen Feridun Comments](#)

[Ginny Marcille-Kerslake Comments](#)

[Dr. Barbara Brandom Comments](#)

CAC COMMITTEE REPORTS:

Legislative Committee

Will be meeting on Friday at 10:30 to talk about HB2277 (PACER) analysis. HB 2393 (FPR Bill) has also come out.

Strategic Issues Committee

Will be meeting at the end of the month. Upcoming presentation on crypto mining and their data centers. Let the Committee know if members have any ideas for subjects that will interest CAC and EJAB for the joint meeting in November.

Public Participation Committee

May be scheduling bi-monthly meetings and sharing past work on public participation to increase participation.

Policy and Regulatory Oversight Committee

No new regulations.

APPROVAL OF MEETING MINUTES:

Chairperson Jerome Shabazz solicited additions or corrections to the May 14, 2024 Minutes. Hearing none:

Tim Weston motioned to approve the [Minutes of the May 14, 2024](#) meeting. George Ambrose seconded the motion, which was unanimously approved.

CHAIR & VICE CHAIR ELECTIONS

The Citizen's Advisory Council's Nominations Committee oversaw and tabulated the results for elections for a new Chair and Vice Chair of the Council. **Starting July 1, Robert Barkanic will be Chair and Trisha Salvia will be Vice Chair.**

NEW BUSINESS/OPEN DISCUSSION:

Mining Reclamation Advisory Board

There is still one CAC member spot available on the MRAB. Jason Foster showed interest but if anyone else is interested, let Ian know. The next MRAB meeting is July 25.

CAC Member Handbook

Jerome and Ian have been working on putting together a handbook for incoming CAC members and are hoping to complete it before July.

The next meeting of the CAC will be July 9, 2024 at 12:30 PM.

ADJOURNMENT:

With no further business, George Ambrose moved to adjourn the meeting. Cynthia Carrow seconded the motion, and all were in favor.

The June 11, 2024 meeting of the CAC was adjourned at 4:16 PM.