

Good morning Chairman Yaw and Chairwoman Comitta and distinguished members of the Senate Environmental Resources and Energy Committee. My name is Adam Walters and I have the pleasure of serving as the Senior Energy Advisor for the Pennsylvania Department of Community and Economic Development. PA DCED's mission is to encourage the shared prosperity of all Pennsylvanians by supporting good stewardship and sustainable economic development initiatives across our commonwealth. With a keen eye toward diversity and inclusiveness, we act as advisors and advocates, providing strategic technical assistance, training, and financial resources to help our communities and businesses flourish.

I am delighted at the invitation to address this committee and share with you PA DCED's endeavors around carbon capture, utilization, and storage (CCUS) and clean hydrogen development opportunities for the commonwealth.

CCUS can perhaps best be understood as a range of technologies and activities associated with the removal of carbon dioxide from the atmosphere where it can then be deployed in various commercial reuses or stored permanently in deep geologic formations.

Hydrogen is an energy carrier that, when produced from a variety of low carbon technology solutions, can play a key role in meeting the decarbonization goals of multiple sectors of the economy. On the face of it, the two concepts are quite distinct. They are, however, increasingly discussed together given a) the role that CCUS can play as one of the aforementioned low carbon technology solutions in producing clean hydrogen, and b) the strong interest nationally and globally in accelerating the deployment of both to meet aggressive goals around decarbonization.

In April 2021, PA DCED hosted a roundtable discussion with energy practitioners with perspectives ranging from local to international to better understand the potential market viability of CCUS and hydrogen in the commonwealth. From that meeting came the clear indication that it was time to begin taking seriously these technologies as emerging opportunities that could play a transformative role in Pennsylvania's energy, environment, and economic development prospects.

In March 2022 PA DCED, in coordination with PA DCNR and PA DEP, submitted a response to US Department of Energy (DOE) to inform the structure around their strategy to fund regional clean hydrogen hubs in accordance with the Infrastructure Investment and Jobs Act. Our comments encouraged US DOE to consider proximity to energy resources, diversity of end-users, and Environmental Justice as prerequisites for investing in regional hydrogen hubs. Governor Wolf has further expressed his intention for Pennsylvania to be one of the places in which US DOE invests in a regional hydrogen hub and has received bipartisan support from the state's federal congressional delegation.

We have been continuing to advance this work in various ways, perhaps most notably of which has been the creation of the Pennsylvania Energy Horizons Cross-Sector Collaborative. The Collaborative is an initiative that we have established with the Team Pennsylvania Foundation and represents a coordinated partnership consisting of leaders from more than 55 organizations including state agencies, industry, academia, and non-governmental entities focused on charting a path for economy-wide decarbonization with CCUS and clean hydrogen development as leading technology solutions.

The Collaborative has been hard at work on a number of fronts such as developing the content for an Op-Ed published in Penn Live on August 30, 2022 which underscored Pennsylvania's opportunity for clean hydrogen. We are also preparing to host an official 'side event' at the upcoming Global Clean Energy Action Forum in Pittsburgh held on September 21-23 to ensure Pennsylvania's voice is well-represented on this international stage.

The Collaborative is also preparing to release a *Roadmap on Carbon Management and Hydrogen Development in Pennsylvania* that will highlight the technical, policy, and regulatory needs to successfully implement CCUS and hydrogen. Team Pennsylvania on behalf of the Collaborative commissioned the work to be completed by the Great Plains Institute and their findings make clear that our state is well-positioned to use carbon management and hydrogen technologies to support our goals around decarbonization while protecting and creating well-paying jobs that boost the state's economy. We anticipate the final document to be released later this week, and I have included as an addition to my prepared remarks a summary fact sheet as a preview for this Committee.

There is a tremendous amount of work that needs done. However, I am optimistic given that Pennsylvania has everything it needs to be successful: a competitive advantage in energy production, promising geology for permanently storing carbon dioxide underground, a diverse economy with a strong industrial base, aggressive emissions reduction goals, and the partnerships emerging to bring about solutions to issues that cannot be solved by one actor or organization alone. There is no better place than Pennsylvania to deploy the next generation of energy and industrial infrastructure.

I would like to again express my appreciation for the opportunity to address this Committee and am happy to answer any questions you might have.