



Ohio House Energy and Natural Resources Committee

The Honorable Thomas Hall, Chairman

Proponent Testimony HB 358

Neeraj Gupta | Battelle

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Chairman Hall, Vice Chairman Lear, Ranking Member Rogers, and members of the Ohio House Energy & Natural Resources Committee, thank you for the opportunity to provide proponent testimony on HB 358. I am Neeraj Gupta, Technical Director for Carbon Management at Battelle, providing technical and strategic leadership for Battelle's Carbon Capture, Utilization, and Storage (CCUS) work. I earned a Ph.D. in Geological Sciences from The Ohio State University, investigating the geologic layers that are being considered for CO₂ storage in the Midwest. I have worked on CCUS at Battelle since the mid-1990s, overseeing hundreds of government-, private-, and internationally funded projects regarding carbon sequestration. Our program has also included excellent partnerships with the Division of Geological Survey at the Ohio Department of Natural Resources (ODNR) over the last 25 years. Battelle CO₂ storage work also includes Battelle Carbon Services, our commercial carbon sequestration group that has projects across the United States and hopes to someday have projects in Ohio. Over the last two years, I have been involved in the development of Battelle's leadership role for hydrogen and direct air capture hubs.

Battelle is the largest independent nonprofit applied science and technology organization in the world. We support a diverse spectrum of clients, from small start-up companies to multinational corporations and government agencies. Battelle operates in a fast-paced environment to solve the world's most difficult scientific challenges. Our partners trust us to provide independent and advanced solutions that transform our world for the better. With 90 years of innovations and counting, we're committed to problem-solving for the future.

While our first presenter spoke on opportunities that can be created by carbon capture and sequestration, I wanted to drill down a bit further on a project that Battelle is running called the Appalachian Regional Clean Hydrogen Hub (ARCH2), a blue hydrogen hub comprising 14 projects in Ohio, Pennsylvania, and West Virginia. ARCH2 is a \$6 billion investment in Appalachia, which will create 10,000 jobs in the early stages of siting and construction and reach almost 3,200 jobs towards the project's end.

This investment wouldn't be possible without both low-cost natural gas and carbon sequestration, as blue hydrogen uses natural gas as a feedstock coupled with carbon sequestration to create a low-carbon hydrogen that can transition our energy economy.

Appalachia constitutes an ideal region to accelerate the adoption of clean hydrogen across multiple sectors within the regional market and eventually throughout the United States economy as a Department of Energy (DOE) Regional Clean Hydrogen Hub. The region offers an abundance of low-cost natural gas to produce economically viable clean hydrogen (H₂) and H₂-derived products at scale. The region's vast industrial base a workforce already trained in these types of operations looking for opportunities for employment for the next generation provides a substantial opportunity to leverage existing infrastructure to decarbonize hard-to-abate sectors.

The ARCH2 region comprises the fastest growing and most significant natural gas producing region in the U.S. With the availability of abundant amounts of natural gas feedstock for the foreseeable future and the fact that natural gas produced in the region sells at a significant discount compared to other areas of the country, ARCH2 is a naturally competitive location to jumpstart the H₂ economy with a lower cost base and more rapid deployment.

Of our 14 projects that will produce over 2,000 tons of hydrogen a day, our current projects in Ohio will only produce 1 of those tons. Most of these larger hydrogen producers are looking to locate in West Virginia and Pennsylvania because they are further along in developing rules and regulations on carbon sequestration, which is necessary to make blue hydrogen. Unfortunately, I would say Ohio is currently a distant third and why I'm here today as a proponent of the objectives outlined in HB 358

If we are to court new energy companies into ARCH2 and into Ohio specifically, we must make sure that we have regulations that will allow for carbon sequestration. In a perfect world, we would be working toward receiving primacy for our own Class VI well-permitting process like most other oil and gas-producing states, but starting the framework of that conversation is a good first step. In addition to attracting the hydrogen production industry, such regulations are also essential for decarbonization Ohio's industry and power generation, which is required by international and federal law for corporations to locate new industries in the state and remain globally competitive.

States like North Dakota, Wyoming, and Louisiana all have received primacy putting them in the driver's seat to attract new investment related to carbon capture and hydrogen. West Virginia isn't far behind them as they are going through the process now, which is why most of our hydrogen partners in ARCH2 have located their operations there.

But it isn't too late for us to catch up and attract the next wave of hydrogen investment. We regularly receive inquiries from companies across the country looking to locate in the ARCH2 region and become a part of the hydrogen hub. We should make sure that Ohio is well-positioned to attract that investment and the jobs that will come with it. A regulatory framework allowing for carbon sequestration would better position Ohio to make a play for those projects and we welcome your support.

Thank you for the opportunity to address the committee and I'd be happy to answer any questions you may have.