

House Majority Policy Committee

“Pennsylvania’s Next Economic Opportunity:
Hydrogen, Carbon Capture and Jobs of the Future”

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By:

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- I am pleased to provide brief testimony today on behalf of U. S. Steel regarding opportunities to help grow a sustainable economy while also addressing the impacts of climate change. Some of the material I will present today can also be found in greater detail in U. S. Steel’s [Climate Strategy Report](#).
- Climate change is not easily addressed. For our company, we must think differently about how we make and use steel from the raw materials to the processes used. Our team of engineers and research scientists are continually exploring innovative ways to develop steel solutions and create better products for consumers.
- As part of this vision, U. S. Steel is intensifying efforts to become an industry leader in lower-carbon production methods. We have been progressing on our 2030 goal to reduce our global greenhouse gas (GHG) emissions intensity by 20%, and in April 2021, we announced an ambitious goal to achieve net-zero carbon emissions by 2050.
- While we are committed to doing all that we can, we know that one company’s actions are not enough, which is why we have partnered with like-minded companies and stakeholders to seek solutions.

- The challenges of climate change must be addressed by the global community and supported by our governments to create an environment where innovation and investment are encouraged.
- Moving from our 2030 goal to our 2050 net-zero goal will involve the development and commercialization of various technologies, some of which have yet to be invented or available on a broad scale. As a result, we are actively engaged in various industry initiatives, task forces and discussions with policymakers, universities, NGOs, and corporate partners to advance technology required to meet our carbon reduction goals.
- One of the technology approaches crucial to decarbonizing the steel industry and will help us achieve our net-zero by 2050 target involves hydrogen.
- Advancements in hydrogen technologies are essential in the transition to green steel. Government funding for hydrogen R&D and pilot projects can help drive down costs and other barriers to implementation, allowing us and other steelmakers to adopt hydrogen as a reasonable alternative to natural gas.
- At U. S. Steel, we are committed to doing our part to enabling a shift towards a cleaner, healthier future. However, we cannot walk the path to net-zero alone. The road to mitigate climate change starts with the collective actions of governments and companies, like U. S. Steel, working together.

Appalachian Energy Future: www.appalachianenergyfuture.org

- One organization that U. S. Steel is very active with is the Appalachian Energy Future, or AEF. AEF is an industry-led alliance of companies from the energy, industrial, and manufacturing, sectors, working with community leaders and others to develop a Tri-State regional hub for hydrogen and CCUS. (Ex: U. S. Steel, Shell, EQT, GE Power, Equinor, Williams and Marathon Petroleum, among others.)
- The alliance for the Appalachian Energy Future views the Hydrogen Hub opportunity as perfect for our region. The ecosystem they are planning to develop could serve as a model for the rest of the country on how to advance clean energy evolution and sustainably.
- Our region is home to a highly skilled, experienced workforce and a strong, growing startup ecosystem that are primed to be the catalysts for this once-in-a-generation opportunity. There is a national and global movement to reduce carbon emissions in an urgent manner, and the Appalachian Energy Future approach answers this call.

Pennsylvania Energy Horizons Cross-Sector Collaborative

- Another organization that U. S. Steel is an active participant with is the Pennsylvania Energy Horizons Cross-Sector Collaborative – a statewide organization lead by the Team Pennsylvania Foundation, which is co-chaired by Governor Tom Wolf.
- The Team Pa Foundation, on behalf of the Pennsylvania Energy Horizons Cross-Sector Collaborative, has enlisted the help of the Great Plains Institute to develop a study which will provide a “ROADMAP ON CARBON MANAGEMENT AND HYDROGEN DEVELOPMENT IN PENNSYLVANIA.”
- The study will be released very soon, and you will see recommendations on how PA can grow opportunities for its citizens and maintain its leadership role in the nation’s industrial and energy sectors, while meeting anticipated climate and decarbonization goals.
- However, the Commonwealth of PA must consider how best to support and deploy the full suite of carbon management (capture, transport, storage, and utilization) and hydrogen infrastructure, and hydrogen production and storage opportunities.

United States Steel, Equinor and Shell Cooperation Agreement

- Recently, United States Steel Corporation, Equinor US Holdings Inc and Shell US Gas & Power LLC have entered into a non-exclusive Cooperation Agreement to advance a collaborative clean energy hub in the Ohio, West Virginia, Pennsylvania region.
- The hub would focus on decarbonization opportunities that feature carbon capture utilization and storage (CCUS), as well as hydrogen production and utilization. The development of this hub, and its associated infrastructure, would generate new, sustainable jobs, stimulate economic growth, and help achieve significant reductions in carbon emissions.
- The regional CCUS and hydrogen hub aligns with both the United States’ and project partners’ ambitions to realize net-zero carbon emissions by 2050. To support its development, Equinor and Shell will jointly apply for US Department of Energy funding designated for the creation of regional clean energy hubs. U. S. Steel is evaluating the role it may play in the hub, including as a potential funding participant, customer, supplier, or partner.
- With an abundance of low carbon gas, a robust industrial sector, and a skilled workforce, the tri-state region boasts the optimal location for a potential hub.

What can the members of the state legislature do to help support this effort?

Answer: Create the right statutory framework.

- Pennsylvania currently lacks a sufficient statutory framework to allow for large scale deployment of carbon management projects. Without laws and policies that provide a supportive environment for project developers, and investors, the Commonwealth may miss out on this opportunity.
- To remedy this deficiency, the PA General Assembly should aggressively pursue legislation and work with the appropriate state agencies to enact rulemaking to support regional decarbonization, development of a hydrogen hub and deployment of carbon capture and sequestration opportunities.
- Importantly, there is significant funding under the “Federal Bipartisan Infrastructure Law” set aside specifically to address many of the issues and tasks necessary for the full-scale commercial deployment of carbon management projects and hydrogen production to decarbonize.
- The Commonwealth should consider as many funding mechanisms as possible to advance Pennsylvania-centric deployments, such as those outlined in the Federal Bipartisan Infrastructure Law technical assistance guide.