Marcus Koblitz
Sr. Policy Advisor,
Climate & ESG
API
202-682-8024
koblitzm@api.org

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Public Hearing - Hydrogen's Potential as an Energy Source

Testimony of Marcus Koblitz, Senior Policy Advisor, Climate & ESG, American Petroleum Institute

Good morning,

Chairman Metcalfe and Chairman Vitali, members of the committee, thank you for the opportunity to testify today on behalf of the American Petroleum Institute (API). My name is Marcus Koblitz, I am a Senior Policy Advisor on Climate and ESG. I lead API's task force on Hydrogen, our member group oriented toward developing and supporting policies that can help grow the low-carbon hydrogen economy. Briefly, API is the only national trade association representing all facets of the oil and natural gas industry, with nearly 600 members including large integrated companies, as well as exploration and production, refining, marketing, pipeline, and marine businesses and service and supply firms. Based, in Washington DC, API has the dual role of both being an advocate for the industry as well as a standards-setting organization.

API and member companies believe in the potential of low-carbon hydrogen to contribute to global decarbonization goals and the foundational role of oil and natural gas in building a hydrogen economy. The oil and natural gas industry is already actively involved in this space and positioned well to play a significant role its development. In March of 2021, API released its Climate Action Framework. The Framework is a combination of industry and government actions to address climate change while meeting the world's long-term energy needs. It is built on 5 pillars, the first of which is the acceleration of technologies and innovation to reduce emissions while meeting the growing energy needs of the US and the world. The advancement of low-carbon hydrogen production technologies and infrastructure is a key element of this pillar. The details of API's Climate Action Framework can be found at api.org/climate.

This summer, API doubled-down on our support for low-carbon hydrogen. At a time when energy prices were high and supply challenges had become evident, API issued a 10-point plan to restore U.S. energy leadership and maintain the promise of American opportunity. While most of the plan focuses on immediate needs like debottlenecking supply chains and addressing permitting issues, API's 10 in '22 plan includes support for a federal hydrogen production tax credit to spur investment and accelerate the deployment of low-carbon hydrogen.

The oil and natural gas industry is not alone in its support for low-carbon hydrogen. The US Department of Energy's Hydrogen Shot program is working to lower the cost of zero-emission hydrogen, and the Hydrogen Hubs program included in the Bipartisan Infrastructure Law presents an opportunity to prove the viability of both the production and consumption of hydrogen as a low-emission fuel source. Industries across the spectrum, including steel, chemical, and fertilizer producers, and engine and turbine manufacturers are working to ensure that their assets are ready for low-carbon hydrogen.

This broad support for low-carbon hydrogen can be traced directly to its versatility. As a low-carbon energy carrier, hydrogen has broad applicability as a fuel and as an energy storage medium in the power, heavy industry, transportation, and chemical sectors. Hydrogen's versatility and ability to decarbonize hard to abate and hard-to-electrify sectors make it one of the most exciting technologies in the energy transition.

The value of hydrogen, in addition to its broad potential consumer base, is rooted in the ability to produce hydrogen using our domestic resources. Low-carbon hydrogen can be produced using electricity from renewable and nuclear sources, or using domestically abundant natural gas when coupled with carbon capture and sequestration.
In its nascent stage, the low-carbon hydrogen economy is dependent on well-developed policies to become robust, competitive, and beneficial for all Americans. API has identified three key factors that should be considered to support the advancement of a low-carbon hydrogen economy:

First, hydrogen support should be pathway agnostic, neither tied nor weighted to a specific production technology. Policies that value hydrogen's attributes and its abilities to displace emissions regardless of production method can help lead to a more robust economy, greater emission reductions, and larger investments across the nation.

Second, governments must support the expansion of essential infrastructure, including pipelines and storage facilities. Policies should be developed to address both the current physical and regulatory barriers to buildout.

Third, governments can drive growth of the low-carbon hydrogen economy by supporting end-use applications. Such support can range from direct incentives to hub approaches. End-users of hydrogen will need a strong reason to move from traditionally produced hydrogen to low-carbon hydrogen. Good will is not enough.

A level-playing field approach to U.S. energy policy in which resources can play by the same set of rules to meet consumer demands will be the most beneficial path towards achieving decarbonization goals. Input costs have been falling across technologies due in large part to the shale gas revolution as well as decreasing costs of renewables, but building infrastructure remains a key challenge.

Last year, the *Bipartisan Infrastructure Law* included eight billion dollars for the development Regional Clean Hydrogen Hubs. The U.S. Department of Energy has spent much of this year laying the groundwork for those hubs, and we expect to see a call for applications this fall. This summer, the *Inflation Reduction Act* was signed into law, which includes a hydrogen production tax credit as called for in API's 10 in '22 plan. Unfortunately, the credit was designed to overvalue zero-emission hydrogen over near-zero. It falls into the old trap of prioritizing the perfect at the expense of the good. Nevertheless, we are encouraged by these legislative efforts, though regulatory and infrastructure challenges continue to be a risk.

Currently, 95% of hydrogen production uses natural gas without CCS. The vision of a low-carbon hydrogen economy rests on decarbonizing current production volumes and growing the economy to meet the needs of many more consumers. This will require all low-carbon hydrogen production technologies, though we believe that production that continues to leverage natural gas with CCS can be the leader – and offers significant near-term growth potential. A forthcoming study by ICF, commissioned by API, found that evenly-weighted technology-neutral incentives offer the potential for low-carbon hydrogen to account for 15% of energy demand in 2050 – five times larger than when incentives are applied unevenly. Naturally, this differential implies an additional impact on GHG emissions. The larger low-carbon hydrogen economy has the potential to avoid more than 180 million metric tons of greenhouse gas emissions on average per year through 2050. And with respect to economic development, the study found that the capital investment necessary to meet these targets, including hydrogen storage, pipelines and local distribution systems could total approximately $1 trillion through 2050.

Of course, a low-carbon hydrogen economy will not grow overnight. The US will continue to rely on oil and natural gas as key fuels for economic growth for many years to come. Earlier this year, the US Energy Information Administration (EIA) stated in their most recent Annual Energy Outlook that “Petroleum and Natural Gas remain the most-consumed sources of energy in the United States through 2050.” According to the EIA, energy consumption will continue to increase through 2050, following population and economic growth. We cannot simply stop producing and using oil and natural gas. We must continue to leverage our domestic natural gas resources to continue to fuel our economy while also fueling the low-carbon economy of the future.

Mitigating greenhouse gas emissions is a long-term focus of the oil and natural gas industry. By reducing methane emissions through voluntary programs and federal regulation, deploying carbon capture and sequestration, and advancing alternative energy sources like hydrogen, we can secure America’s energy future while working to address climate change.

Thank you.