

**United States House of Representatives
Select Committee on the Climate Crisis**

**Hearing on February 2, 2022
“Manufacturing a Clean Energy Future:
Climate Solutions Made in America”**

Questions for the Record

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The Honorable Kathy Castor

- 1. Benefits from renewable energy generation can be maximized by expanding the capacity of the electric grid to maintain reliability, including during severe weather events such as extreme cold in Texas or wildfires in California. While there are a number of technologies and strategies (such as expanded transmission, battery storage, clean hydrogen, pumped storage hydropower, demand response efforts, energy efficiency, and more) that will help maintain or even improve grid reliability as we deploy more renewables, you spoke specifically to the potential of green hydrogen here.**

Can you elaborate on the role green hydrogen can play to store renewable energy, for use during extreme weather events as well as during normal operations, to maintain grid reliability?

Response: Green hydrogen has the capability to store renewable power. Green hydrogen, hydrogen produced from renewable resources, is the only color of hydrogen that stores intermittent renewables like solar power and wind power, and allows us to deliver them when and where they are needed. It solves the intermittency problem by capturing this power in chemical form, so that it can be used at a later time, and at a different location.

The US power grid is most heavily penetrated by wind and solar power in places like California and Texas, and these power grids are already showing a need to store renewable power to be ready for extreme weather events. Extreme heat and drought in California last summer resulted in large, long-lasting power shortages, and the winter storm Uri in Texas did the same. These power grids are currently making massive investments in Lithium-ion battery energy storage to meet their short-term storage needs; but, to address week-long extreme weather events like Texas and California have recently

endured, long duration storage technologies like green hydrogen will be needed. In addition, green hydrogen provides an alternative to building new high-voltage direct current (HVDC) transmission. Converting renewable energy to green hydrogen, transporting it via pipeline, and converting it back to electricity can be an attractive alternative to building new electricity transmission infrastructure.

2. How would a hydrogen production tax credit help encourage domestic manufacturing of hydrogen?

Response: Thank you for this important question. As I mentioned in my testimony, capturing the green hydrogen opportunity relies on the right policy environment to attract investment in green hydrogen manufacturing which has the potential to create jobs, economic growth, and potentially export markets for American-made renewable energy.

Congress took a great first step in including the hydrogen research and development provisions in the Bipartisan Infrastructure Law (BIL). FFI fully supported the inclusion of those provisions in the BIL and currently we are working with the Department of Energy to ensure that those provisions are implemented in a manner that helps advance the domestic production of green hydrogen.

While FFI appreciates and applauds Congress for including these initial investments, we believe Congress can take additional steps to promote an attractive business environment for further investment that will help commercialize and scale up the green hydrogen sector. Specifically, we fully support and urge Congress to enact the green hydrogen provisions included in the Build Back Better Act which includes both a production tax credit (PTC) and an investment tax credit (ITC).

We believe a PTC and an ITC for green hydrogen provides much needed certainty to our industry by creating a favorable business environment to attract increased investment and level the playing field in the hydrogen sector. Today, green hydrogen and green ammonia projects are not eligible for tax credits, while fossil fuel-based hydrogen and ammonia projects are eligible to receive a subsidy in the form of 45Q carbon capture credits. It is important to ensure that hydrogen technologies that have access to the 45Q credit are not able to “double dip” and access both the 45Q and the new hydrogen tax credits that are included in the Build Back Better Act.

Should Congress fail to enact a PTC and an ITC for green hydrogen, the US will become a less attractive market for investing in the growth of the green hydrogen sector. Other countries across the globe are investing in this industry and the most significant risk the US faces should these tax credits not be enacted is losing its competitive edge in this sector and missing the economic benefits a green hydrogen economy can provide. The US is in the beginning stages of investing in this industry and we want to ensure the US

remains competitive in this space globally as the imperative of transitioning to renewable energy sources boosts domestic energy security and diplomacy.