Bloomenergy

May 2, 2023

Hon. Senator Mark Lawrence, Senate Chair

Hon. Representative Paige Zeigler, House Chair

Joint Standing Committee on Energy, Utilities, and Technology

100 State House Station

Augusta, Maine 04330

**RE: Bloom Testimony in Support of LD 1775, *An Act to Establish a Clean Hydrogen Pilot Program***

Dear Senator Lawrence, Representative Zeigler, and members of the Energy, Utilities, and Technology Committee:

Good afternoon, my name is Jordan Garfinkle. I'm with Bloom Energy – thank you to the committee for allowing me to testify today.

Bloom is a hydrogen and distributed energy company that makes fuel cells and electrolyzers. Electrolyzers convert renewable electricity into hydrogen with no emissions, which is critical for continued decarbonization. There are a few different kinds of electrolyzers - our systems are based on a solid oxide platform, which our founders first developed for NASA for the Mars program in the 1990s. Today, we're proud to make the most efficient electrolyzer on the market, a fact that was validated last year through extensive testing at Idaho National Lab.[i]

**Benefits of Hydrogen**

- At its core, hydrogen is an energy *carrier* – fundamentally, it's a form of long-duration energy storage.
- As we build out the massive renewables necessary to decarbonize, we will need to contend with intermittent generation – we will need energy storage.
- Hydrogen can be generated during times of high renewables output and stored, moved and used when and where it's needed.
- We need all options on the table as we build out renewable energy. Solar and wind are critical, but they are intermittent – the grid and energy users need support from a range of flexible storage and clean energy options.

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- Maine in particular has enormous offshore and onshore wind potential and relatively low electricity demand – down the road, this creates the opportunity to be a hydrogen exporter across the region.

**Electrolysis and the Proposed Pilot**

- This bill is innovative and insightful, in that it anticipates the value of hydrogen while acknowledging the need to jump start production.
- Around 80% of the cost of generating hydrogen comes from the cost of electricity to power electrolyzers. Therefore, efficiency is paramount.
- By addressing T&D charges for making hydrogen under the pilot, this bill helps make these projects more viable.
- Given the historic increase in electricity prices recently, it's not clear that the proposed exemptions are quite enough to overcome the cost of power to electrolyzer projects in Maine right now. Power price increased have hit everyone hard, and they threaten hydrogen development just as the industry is poised to take off.
- If the committee is interested in exploring additional ways to support projects, it would be interesting to consider property tax exemptions for electrolyzers. The sister technology, fuel cells, have received property tax exemptions in a number of other states for years.
- Finally, consider a scoring mechanism that takes into account efficiency – renewable electricity is precious and we should be mindful to use it as efficiently as possible.

Thank you again for the opportunity to provide testimony. As a global leader in hydrogen and electrolyzers, we are eager to support the committee with technical expertise if requested.

**About Bloom Energy**

Bloom Energy is a manufacturer of solid oxide fuel cell technology that utilizes an electrochemical process to power non-combustion microgrids as well as advanced electrolyzer systems capable of converting renewable electricity into renewable hydrogen. Our solid oxide fuel cells and electrolyzers are designed in a modular fault-tolerant format that provides mission critical reliability with no downtime for maintenance. Bloom Energy has installed around 1,000 of its non-combustion solid oxide fuel cell systems for customers in thirteen U.S. states and several international locations, with approximately 100 operating in New England. Our systems have proven resilient through outages caused by hurricanes, winter storms, earthquakes, forest fires, and other extreme weather and natural disasters.

[i] https://www.bloomenergy.com/news/idaho-national-lab-and-bloom-energy-produce-hydrogen-at-record-setting-efficiencies/