

April 24, 2023

Via publicaccess.bpu.state.nj.us

Carmen D. Diaz
Acting Secretary of the Board
44 South Clinton Ave., 1st Floor
P.O. Box 350
Trenton, NJ 08625-0350

**Re: Docket No. QO21010085; In the Matter of Modernizing New Jersey's
Interconnection Rules, Processes, and Metrics**

Dear Acting Secretary Diaz:

FuelCell Energy, Inc. submits these comments to the New Jersey Board of Public Utilities (“BPU”) in response to its proposed changes to New Jersey’s process for interconnecting distributed generation resources to the electric grid. FuelCell Energy appreciates the opportunity to provide these comments and thanks the BPU for continuing to allow stakeholders like FuelCell Energy to participate in efforts stemming from the Grid Modernization proceeding.

FuelCell Energy is proud to be among the companies that have been dedicated to clean energy innovations since our inception five decades ago. The company was founded in the United States in 1969, by two scientists devoted to pursuing technological innovations that address a wide variety of energy priorities through patent-protected U.S. innovation, compound combinations that produce and use energy in ways that are smarter and cleaner. It is important to note that the strength of FuelCell Energy’s technologies is that they can be combined in ways to achieve multiple objectives and to provide a myriad of benefits.

As examples, our current product portfolio includes two dynamic electrochemical platforms: molten carbonate and solid oxide. The platforms are similar in many ways, but they also have unique capabilities. Importantly, both can support power generation and combined heat and power applications from a variety of fuels, including natural gas, renewable biogas, or hydrogen.

These fuel cells react with fuel electrochemically, without combusting the fuel, which avoids emissions produced by fuel combustion such as oxides of nitrogen, oxides of sulfur, and particulate emissions. As you know, these are emissions that impact air quality in communities in real time. In the electrochemical process, fuel and air are reacted in separate chambers in the fuel cell stack. As a result, the reactions producing CO₂ happen before the fuel is mixed with air while the CO₂ remains concentrated and easy to remove. Both molten carbonate and solid oxide fuel cell systems can benefit from this unique feature, with modifications enabling the capture of their own CO₂ for use or sequestration before it is emitted into the air. FuelCell Energy’s molten carbonate fuel cell is unique in its ability to also capture CO₂ from an external source, such as a power plant or an industrial boiler just to name a couple. Our solid oxide fuel cell can operate on pure hydrogen as a feedstock, emitting zero CO₂, which will become increasingly important as the uses of hydrogen for fuel become more widely adopted, and which complements the nation’s current emphasis on

deploying technology that enables hydrogen-based energy storage, and which also complements New Jersey's current emphasis on incentivizing investment in clean energy storage. We are also currently commercializing a solid oxide electrolyzer that will produce hydrogen from power and water, which will be well suited to partner with renewable energy projects and hydrogen storage infrastructure.

At the outset, FuelCell Energy wishes to thank the BPU for the time, effort, and expertise it has dedicated to analyzing and revising New Jersey's interconnection processes and integrating distributed generation resources into its grid. FuelCell Energy appreciates how receptive the Board has been to stakeholder feedback, both during the Webinar hosted on February 10, 2023, and through this comment solicitation process. The Board's approach to implementing the nine recommendations identified within the Grid Modernization Study is well-suited to effectuate meaningful change, both in the short- and long-term.

Though FuelCell Energy recognizes that this portion of the Interconnection Rules Update is tailored towards implementing the first four Findings and Recommendations from the Grid Modernization Study, FuelCell Energy hopes that the Board remains mindful of Findings and Recommendations 5-9 as it weighs these initial updates. By way of example, the proposed revisions to net metering add necessary updates to improve the net metering process as a whole, but by limiting the application of net metering to class I renewable fuels, these revisions may stunt later efforts to incorporate emerging technologies the way that Finding and Recommendation 9 suggests. Under New Jersey's existing regulatory and legislative framework, hydrogen and natural gas are considered non-renewable fuel sources, but as the Grid Modernization Study aptly notes, they are "cleaner than the current fuel (carbon, oil etc.)."¹ By incorporating the existing framework into these Interconnection Rules, New Jersey's ability to realize the benefits of emerging technologies like hydrogen fuel cells will be delayed. Though FuelCell Energy recognizes that this rulemaking is the first of several coordinated efforts by the Board to modernize the grid, we hope that these proposed revisions are aimed at complementing later efforts to incorporate non-renewable fuels, rather than to exclude them.

Given the Board's apt recognition that the current methods for capacity calculations do not account for the unique capabilities of smart inverters and other devices, FuelCell Energy appreciates the thoughtful drafting and inclusion of Section 14:8-5.2(b). Allowing for export-limiting devices to become part of the capacity calculations provides a mechanism to recognize the unique aspects of emerging technologies and to realize the benefits they can provide to the interconnection process. In our estimation, external devices are better suited to perform this role, and this approach aligns with California preparing to allow RTAC device and relay to accomplish power limiting. Given the unique challenges and benefits of various technologies that can accomplish export-limiting, FuelCell Energy supports any detailed review that might lead to more flexibility in incorporating such technologies.

FuelCell Energy further supports the proposed definition of "Non-exporting technology" within Section 14:8-5.1. The Board's inclusion of this definition is well-suited for this Rules Update as it

¹ [Grid Modernization Study](#), p. 92.

allows use of directional relay to limit power, which is the preferred method to accomplish this if needed. Because the definition encompasses both non-export and export-limiting technologies, FuelCell Energy respectfully suggests that the Board consider re-phrasing the term accordingly, such as by using the including the term “export-limiting” as an alternative term for the definition.

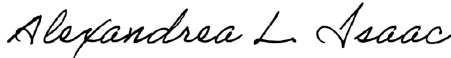
The remaining definitions proposed with Section 14:8-4.2 are likewise well suited for this Rules Update, but FuelCell Energy hopes that the focus on renewable policy will continue to pave the way for inclusion of new and/or clean technologies. Because of the limitation identified above with respect to class I renewables, there exists an opportunity to more expansively define these terms to provide greater flexibility for new and emerging technologies that provide benefits commensurate with renewables even if they do not fit squarely within the definitions currently provided for class I renewables. In addition, FuelCell Energy supports any approach that standardizes or otherwise provides for equipment capability requirements to be similar from one project to the next. This will allow for greater investment in New Jersey’s grid and ensure that efforts to improve interconnection can be meaningfully achieved and more easily replicated.

Conclusion

At FuelCell Energy, we are particularly proud of our history as an energy technology innovator and we celebrate the men and women who have, for decades, been driven to create and share new technologies that produce multiple value streams for our customers worldwide. We are also proud to purchase the vast majority of our technical manufacturing equipment (i.e., the equipment we use daily that we have not invented) almost exclusively from U.S. based manufacturers across the country.

We thank you for the opportunity to submit these comments and appreciate your willingness to consider our recommendations. Should you need any additional information, please contact the undersigned using the information below.

Sincerely,



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