January 16, 2018

Rob Klee
Commissioner
Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Re: Procurement of Clean Energy and Renewable Resources Pursuant to Public Acts 13-303, 15-107 and 17-144

Dear Commissioner Klee:

The Northeast Clean Energy Council (NECEC) and the Energy Storage Association (ESA) commend the Department of Energy and Environmental Protection (DEEP or Department) for issuing on December 15 the draft request for proposals (RFP) for clean energy and renewable resources pursuant to Public Acts 13-303, 15-107 and 17-144.[1] We strongly support the solicitation of bids from offshore wind, fuel cells, and anaerobic digestion, all of which are and will be important resource types for Connecticut's future energy mix and that of the region at large. NECEC and ESA previously submitted comments on December 12 to urge the Department to use its statutory authority to additionally solicit proposals for energy storage. While we are pleased to see that the draft RFP contemplates bids from energy storage systems co-located with other qualified resource types, we renew our call for DEEP to further accommodate project bids from standalone energy storage systems. Adding energy storage as a solicited resource will make the final RFP a significant driver of innovative, cost-effective technologies in Connecticut, unlocking a tremendous opportunity for ratepayers, adopting customers, and the electricity system. Finally, NECEC also submits comments below regarding the structure of the fuel cell solicitation, which we recommend be amended.

NECEC is a clean energy business, policy, and innovation organization whose mission is to create a world-class clean energy hub in the Northeast, delivering global impact with economic, energy and environmental solutions. NECEC is the only organization in the Northeast that covers all of the clean energy market segments, representing the business perspectives of investors and clean energy companies across every stage of development. NECEC members span the broad spectrum of the clean energy industry, including energy efficiency, wind, solar, energy storage, microgrids, fuel cells, demand response, and advanced and "smart" technologies. Many of our members are already doing business in Connecticut, and many more are interested in doing so in the near future.

ESA was established 27 years ago to foster development and commercialization of energy storage technologies. Since then, its mission has been the promotion, development and commercialization of competitive and reliable energy storage delivery systems for use by electricity suppliers and their customers across the United States. ESA members represent a diverse group of entities, including electric utilities, energy service companies, independent power producers, project developers, technology manufacturers and component suppliers.

[1] Available online at http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/c5b302de4d16dcdc852581f70059cdbd?OpenDocument.

Energy Storage

Based on the draft RFP, NECEC and ESA understand that DEEP currently plans to incorporate energy storage proposals primarily or exclusively through energy storage systems co-located with offshore wind, fuel cells, and anaerobic digestion resources. Energy storage is defined as "… for the purpose of this RFP, Energy Storage System as defined in Section 16-1 of the Connecticut General Statutes ("General Statutes"), that shall be Paired and Co-located with Incremental Class I Qualified Clean Energy sources ("Paired and Co-located Energy Storage")." There is great value to reap from opening up the solicitation to co-located project configurations of this type, and the market is prepared to offer bids for such solutions, as evidenced by the co-located energy storage and offshore wind bids in the recent Massachusetts procurements.[2] However, Connecticut can and should strive to go a step further and accept bids from standalone energy storage systems in the final version of the RFP, legislative authority for which has already been granted to DEEP. Doing so carries the potential to provide immense additional economic, environmental, and grid benefits for the State of Connecticut as officials work to procure cost-effective resources for residents and businesses in the state.

As we said in previous comments, energy storage technologies are a unique resource type requiring careful consideration when being incorporated into a solicitation process with other renewable energy resources. Our organizations and the members we represent who conduct business in Connecticut would again welcome the opportunity to contribute to the refinement of the solicitation process to ensure that fair access is provided to energy storage systems. We remain confident that the proper inclusion of energy storage systems in the solicitation of Class I resources will reveal a robust and diverse pool of energy storage developers and solution providers ready to deliver value to the Connecticut grid and its customers, offering a broad variety of standalone energy storage systems, systems co-located with other eligible resources, and portfolios of distributed, behind-the-meter (BTM) installations.

Modifying the draft RFP to accept proposals from energy storage systems will be very valuable for Connecticut. DEEP stands to gain considerable insight into the availability and competitiveness of energy storage solutions designed to meet Connecticut's needs, and the Department will of course be under no obligation to select storage proposals it finds are not in the best interest of ratepayers. Even as Connecticut is still in the early stages of engaging with energy storage and determining the role that it will play in the future, recent experiences with the distribution companies' grid-side enhancement proposals[3] suggest that DEEP should actively seek information from a wider variety of storage proposals, particularly those that will be third-party-owned/developed and those that will be customer-facing/BTM. The bids received should be seen as a substantial learning opportunity as officials augment their familiarity with and understanding of diverse energy storage opportunities for Connecticut.

---

[2] These bids include Deepwater Wind's bid in the 83D clean energy generation RFP, available at http://dwwind.com/press/deepwater-wind-proposing-worlds-largest-offshore-wind-energy-storage-combination/; along with Orsted's bid in the 83C offshore wind RFP, available at https://orsted.com/en/Media/Newsroom/News/2017/12/Bay-State-Wind-Submits-Bid-to-Build-Massachusetts-First-Offshore-Wind-Farm. For more: https://macleanenergy.com/.

[3] http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/a91a7bfe748803d1852580ba00753f96/$FILE/2017.02.01_FINAL%2015-5%20Final%20DER%20Integration%20Demonstration%20Project%20Notice.pdf.

In refining the solicitation to ensure energy storage receives fair consideration, the Department can again look to other states that have successfully deployed energy storage systems through competitive solicitations. In addition to the California and Massachusetts examples we referenced in our previous comments, even more recent results from Colorado also offer a promising model. Xcel Energy Colorado's 2017 open-source RFP opened the door to bids from both standalone energy storage systems, priced in $/kW-month units, as well as paired/co-located resources, priced in $/MWh more typical for generation resources. Preliminary results of the bids received suggest numerous highly cost-effective offers available for procurement, with median bid prices landing at $11.30/kW-month for standalone storage systems (ranging from 25 MW to 150 MW in size) and well below $40/MWh for storage systems paired with Class I resources.[4] At a minimum, Connecticut should provide a similar opportunity for the energy storage market to demonstrate the full spectrum of what it has to offer, letting DEEP see which resources are available and at what value.

Should the Department choose to solicit standalone energy storage systems alongside other types of Class I technologies, it is imperative that the tools for evaluation and selection be developed in a way that does not bias energy storage systems by failing to capture the value the resources represent. As we have noted in prior comments, comparing all resources on a $/MWh basis tends to underestimate the value and competitiveness of energy storage. In those cases, the solicitation needs to be modified to either provide an adder for resources that are able to deliver electricity during peak hours, or alternatively only evaluate the resources during the peak hours, rather than all hours. Our organizations would welcome the opportunity to provide additional information on the methodology and efficacy of existing programs across the country.

Fuel Cells

Finally, on a separate subject, some of NECEC's members have raised concerns regarding the proposed structure of the solicitation for eligible fuel cell resources in the draft RFP. As currently drafted, the RFP divides fuel cell projects into separate categories, one for fuel cell projects using combined heat and power (CHP) technology, and another for fuel cell projects without CHP. Fuel cell projects combined with CHP are allowed to submit bids for projects of any size, while fuel cell projects that do not include CHP technology are limited to projects under 10MW, with no apparent explanation for the distinction. We would assert that it is not appropriate to assume that CHP projects are more efficient than all-electric fuel cell generation, and structuring the solicitation with limits may arbitrarily prevent cost-effective projects from competing. We would recommend that DEEP eliminate the 10MW limit by collapsing the two separate fuel cell categories into a single Class I Fuel Cell category, with no maximum nameplate size limit and an overall MWh ceiling equal to 4% of load as required by statute.

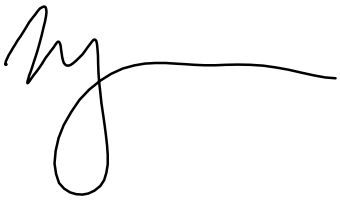
Conclusion

NECEC and ESA greatly appreciate the Department's consideration of these comments as it refines and finalizes its request for proposals pursuant to the upcoming procurement of clean energy and renewable resources. Once again, we strongly urge DEEP to further incorporate energy storage systems in the final RFP, a move that will unlock value for customers and strengthen interest in Connecticut as an early destination for energy storage deployment. We also urge DEEP to modify the solicitation requirements for eligible fuel cell resources as

[4] https://assets.documentcloud.org/documents/4340162/Xcel-Solicitation-Report.pdf.

discussed above. Please consider NECEC, ESA, and our member companies as resources as you review these and other stakeholder comments received. We very much look forward to continued dialogue surrounding the recommendations we have raised here.

Sincerely,



Janet Gail Besser
Executive Vice President
Northeast Clean Energy Council

Nitzan Goldberger
State Policy Director
Energy Storage Association

cc: DEEP.EnergyBureau@ct.gov
Mary Sotos, DEEP
Tracy Babbidge, DEEP
Jason Burwen, ESA
Jamie Dickerson, NECEC