



New York Battery and Energy Storage Technology Consortium, Inc.

VIA ELECTRONIC FILING

May 20, 2019

Ona Papageorgiou, P.E.
Environmental Engineer
Bureau of Air Quality Planning, Division of Air Resources
Department of Environmental Conservation
625 Broadway
Albany, New York 12233-3251

Re: Proposed Part 227-3 Regulations

Dear Ms. Papageorgiou:

The New York Battery and Energy Storage Technology Consortium (“NY-BEST”) appreciates the opportunity to provide comments on NYS Department of Environmental Conservation’s proposed Part 227-3 regulations. For purposes of ensuring a complete record, we have also attached our comments on the pre-proposal stakeholder draft rule outline.

Background

The New York Battery and Energy Storage Technology Consortium (“NY-BEST”) is a not-for-profit industry trade association that serves as the voice of the energy storage industry for more than 170 member organizations on matters related to advanced batteries and energy storage technologies. Our membership covers the full span of activities related to research, development, production and deployment of energy storage devices, and currently includes technology developers ranging in size from small start-up companies to global corporations, leading energy storage and renewable energy companies, research institutions and universities, national labs and numerous companies involved in the electricity and transportation sectors.

Established in 2010, NY-BEST’s mission is to catalyze and grow the energy storage industry and establish New York State as a global leader in energy storage. We do this by:

- (1) Acting as an authoritative resource on energy storage, proactively communicating energy storage related news and information, and facilitating connections amongst stakeholders;*

- (2) Advancing and accelerating the commercialization process for energy storage technologies, from research and development, to products and widespread deployment;*
- (3) Educating policymakers and stakeholders about energy storage and advocating on behalf of the energy storage industry; and*
- (4) Promoting New York's world-class intellectual and manufacturing capabilities and providing access to markets to grow the energy storage industry in New York.*

NY-BEST strongly supports that State's goals to reduce greenhouse gas emissions by 80 percent by 2050 and 40 percent by 2030, as well as the State's clean energy standard mandating that 50 percent of the state's energy come from renewable sources by 2030. Energy storage as a key enabling technology to achieve these goals and as a result, NY-BEST has been working to ensure its adoption in a number of legislative and regulatory venues. NY-BEST has been actively participating in the State's Reforming the Energy Vision (REV) initiative, a Department of Public Service (DPS) led effort to modernize and transform the State's electric grid to a cleaner, more efficient, resilient and consumer-oriented system. We have also actively participated in the development of the State's Energy Storage Roadmap¹ and the PSC Energy Storage Order² establishing energy storage deployment goals of 1,500 MW by 2025 and 3,000 MW by 2030 and implementing a number of initiatives to cost-effectively deploy energy storage to the benefit of the State's electric grid.

New York Energy Storage Roadmap and Order – Context for the Proposed Rule

NY-BEST provides the following information as important context for the proposed rules to reduce NOx emission on peaking generators.

The New York State Energy Storage Roadmap ("Roadmap") prepared by NYSEDA and DPS staff and released on June 21, 2018, includes a series of near-term policies, regulations and initiatives to achieve the 1,500 MW by 2025 energy storage deployment target. The Roadmap includes a lengthy discussion on the role for energy storage in "cleaning the peak" supply of electricity.³ Notably, the Roadmap includes a detailed discussion and high-level screening analysis of downstate peaking units. The Roadmap states:

"...there are over 3,000 MW of conventional generation units in Zone J and Zone K (i.e., New York City and Long Island) that have low utilization (generating electricity less than 5 percent of the year); are approaching an average of 50 years of age; and are generally used for meeting periods of

¹ New York State Energy Storage Roadmap, June 2018

<http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7b2A1BFBC9-85B4-4DAE-BCAE-164B21B0DC3D%7d>

² ORDER ESTABLISHING ENERGY STORAGE GOAL AND DEPLOYMENT POLICY, NYS PSC December 2018,

<http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7bfDE2C318-277F-4701-B7D6-C70FCE0C6266%7d>

³ Energy Storage Roadmap, p.63

high electric demand or for reliability purposes. These units primarily provide “peaker” services: capacity to meet NYISO locational and system capacity requirements, and other, more local (i.e., utility-level) reliability-based services such as contingency reserves.”

The screening methodology separated downstate peaking units into three groups based on their respective observed operational characteristics:

Group 1: Peaking units that never run more than 4 hours.

Group 2: Peaking units that average less than 4 hours per start but may run more than 4 hours.

Group 3: Peaking units that always run more than 4 hours.

The Roadmap analysis found the following:

- “Many peaking units have high operating costs and run less than 4 hours per start, making them potential candidates for hybridization, repowering, and/or replacement.
- The makeup and composition of the Groups vary year-to-year, where Group 1 ranged as low as 301 MW in 2016 and high as 788 MW in 2017.
- The average characteristics of Group 1 and Group 2 peaking units remained very similar across the years included in this analysis (2017, 2016, and 2015).
- It is important to distinguish between facility-level and unit-level operations. While some facilities on an aggregate basis may often run more than 4-hours per start, individual units within those facilities often run much less.
- Group 1 and 2 peaker units produce approximately 55 percent of the NO_x and SO₂ emissions of Group 3, while only producing approximately 13 percent of the generation of Group 3 due to much higher emission rates in Group 1.
- The locations of Group 1 and Group 2 peaking units were highly correlated with Environmental Justice (EJ) areas, particularly near New York City. These units produce twice the carbon emissions and twenty times the NO_x emissions per unit of energy generated as compared to a typical thermal plant. In addition, they generally operate during extreme weather events – emitting SO_x, NO_x and particulate matter and contributing to ground-level ozone, which causes asthma and

other health impacts.”⁴

In its *Order Establishing Energy Storage Goal and Deployment Policy*, the NYS Public Service Commission noted these findings and adopted staff’s recommendation to develop a methodology for analyzing peaker operational and emission profiles on a unit-by-unit basis to determine which units are potential candidates for repowering or replacement. The Commission stated:

“there is a present need for reliability contingency plans in the event of downstate peaking power plant generating units’ retirement. The Commission expects this Peaking Unit Contingency Plan will have broad implications and will consider and report on portfolios of alternatives that could be deployed in the event that the peaking units are no longer available.”⁵

The Commission further stated it will institute a proceeding where the Peaking Unit Contingency Plan will be filed, to examine the broad reliability impacts of the proposed DEC regulations “in the near future”. The Commission required DPS staff to consult with the NYISO, NYSERDA, DEC, LIPA, and Con Edison to develop a methodology to be used in the study and file the study results produced by applying the methodology with the Commission by July 1, 2019. The Commission also required that the study include an analysis determining how many MWs of peaking units could be replaced or repowered economically with energy storage at varying durations without threatening reliability.

NY-BEST urges the Department to work closely with DPS, NYSERDA and other involved parties on this study as it is critically important to determining the future of the generators that are the subject of the proposed rule.

NY-BEST Comments on Proposed Part 227-3 Express Terms

NY-BEST supports the goal of the proposed rule to lower allowable NOx emissions from simple cycle and regenerative combustion turbines (SCCTs) during the ozone season. Lowering emissions from these sources is necessary to address Clean Air Act (CAA) requirements, ozone nonattainment and protect the health of New York State residents. NY-BEST supports establishing new lower NOx limits on SCCTs, herein also referred to as “peaking units”, that are electric generating units with a nameplate of 15 MW or greater. As referenced above, these peaking units are costly to operate, inefficient and produce significant air pollution and public health impacts in neighborhoods across New York City and parts of Long Island.

⁴ Ibid, p.64

⁵ PSC Energy Storage Order, p 89-91

Timeline

NY-BEST is disappointed that the Department did not incorporate our recommendations to implement the new NO_x limits on peaking units on a more accelerated timetable than the proposed dates of May 1, 2023 and 2025, respectively. However, NY-BEST supports the requirement for each facility containing an SCCT to submit a compliance plan by March 2020. The compliance plan is essential to ensure that these units solidify their plans to permanently reduce emissions with new controls or be replaced, repowered or shut down.

Facility Averaging

NY-BEST supports the proposed rule's phase-out of system averaging. However, we are concerned that the proposed rule still allows SCCTs to average with other SCCTs at the facility level. Given that the proposed rule provides alternative compliance options using renewables and energy storage to offset SCCT emissions, facility level averaging should not be permitted to meet the new NO_x limits. Imposing the NO_x limits at the SCCT unit level would also ensure the reduction of harmful air emissions from each SCCT. Considering the age of the units and the negative impacts of their emissions on public health and the environment, combined with the fact that the proposed new limits have been well known, discussed with generators for several months and the rule's flexible compliance options, we believe that the eliminating facility level averaging is a reasonable approach.

Alternative Compliance Options

Regarding the Alternative Compliance options presented in the proposed rule (227-3.5), NY-BEST supports Option (a) "Ozone season stop" whereby the owner or operator of an SCCT may opt to comply by not operating during ozone season and this condition will be explicitly included as an enforceable condition in the permit for the SCCT.

NY-BEST also generally supports the concept incorporated in Compliance Option (b) "electrical and renewable energy resources" allowing electric storage and renewable energy resources to be averaged with the SCCT unit to meet emissions limits. However, we are concerned that as proposed the conditions and formula set forth in Option b are insufficient to ensure the emissions limits will be achieved from peaking units during high ozone days. NY-BEST has two specific areas of concern and recommendations to address this deficiency:

- 1) We are concerned with the provision Compliance Option (b) (2) ii, stating that the renewable generation resource and/or the electric storage resource (i) must be directly connected to the same physical substation as the SCCT with which it is being averaged; or (ii) within one-half mile radius of the SCCT with which it is being averaged. The half-mile radius requirement is not well-supported and while it may be intended to ensure the emission reductions occur locally, in fact, the mere proximity of the storage/renewable device to the SCCT may be

irrelevant to the resultant impacts to local air quality. We recommend instead that this provision be amended to require that the energy storage or renewable energy resource be connected through the electric grid system in such a way as to demonstrate that the operation of the storage/renewable device is physically able to offset the operation of the SCCT and provide service to the same part of the electric grid system as the SCCT.

- 2) NY-BEST's second major concern is with the "Effective Emission Rate" calculation proposed under Compliance option (b) (3) and (b) (4) and the proposal to allow for daily averaging. Specifically, we are concerned that allowing for all energy injected daily into the grid from the storage/renewable device to be used in calculating the effective emission rate and/or in the Actual Mix Fuel Rate will not accurately account for the impact of the storage or renewable energy device on reducing emissions from the SCCT, especially during peak high ozone periods. For example, it is plausible that in a single day the storage/renewable device could operate during the morning and evening hours and the SCCT could still operate during the peak ozone afternoon hours, effectively complying with the NO_x emissions limits but producing no demonstrable improvement in air quality at the times it is most needed.

To address this, NY-BEST strongly recommends that the calculation be revised such that only electrical energy storage and renewables delivered or injected during peak periods be factored into the calculation. Specifically, we suggest that MWhST and MWhRE and GenR and GenS be revised to account for only electrical energy delivered or injected during the "Peak Load Window"⁶, as defined by the NYISO, rather than over the entire day. In this way, the rule will allow for flexibility in meeting the NO_x limits while also achieving the goal of the rule to improve air quality and public health.

Conclusion

NY-BEST supports the Department moving forward with new rules to reduce NO_x emissions from peaking units and we encourage the Department to incorporate our recommendations to revise and strengthen the rule in the final version. We appreciate the Department's recognition of energy storage as a tool to achieve emissions reductions and modernize the state's grid.

We stand ready to work with DEC, other state agencies and stakeholders to ensure a clean, reliable, affordable electricity system for all New Yorkers.

⁶ NYISO DER Roadmap and Expanded Capacity Eligibility

<https://www.nyiso.com/documents/20142/5375692/Expanding%20Capacity%20Eligibility%20030719.pdf/19c4ea0d-4827-2e7e-3c32-cf7e36e6e34a>, p. 11

If you have any questions about energy storage or the information provided above, please contact us at 518-694-8474.

Sincerely,

A handwritten signature in black ink, appearing to read "William Acker". The signature is fluid and cursive, with a long horizontal stroke at the end.

Dr. William Acker
Executive Director, NY-BEST

Attachment