DANSKAMMER
ENERGY, LLC

August 12, 2020

To: New York Independent System Operator
Analysis Group
Burns & McDonnell

From: Danskammer Energy, LLC

Subject: Comments on: NYISO's *Proposed NYISO Installed Capacity Demand Curves for the 2021-2022 Capability Year and Annual Update Methodology and Inputs for the 2022-2023, 2023-2024, 2024-2025 Capability Years – Draft Report – dated August 2020 (the "NYISO Report")* and *Analysis Group's - Independent Consultant Study to Establish New York ICAP Demand Curve Parameters for the 2021/2022 through 2024/2025 Capability Years – Interim Final Draft Report dated August 5, 2020 (the "AG Report")*

To Whom It May Concern:

Danskammer Energy, LLC ("Danskammer") appreciates the opportunity to provide written comments on the reports referenced in the subject line prepared by Analysis Group and Burns & McDonnell ("AG" and "B&M," respectively, and collectively, the "Consultants"). Danskammer's comments are in relation to specific line items of the Estimated Capital and O&M Costs table provided in Appendix A of the AG Report for the *1x0 GE 7HA.02 tuned to emit 25ppm Dual Fuel with SCR, Capital Costs*. Danskammer's comments and proposals are based on its actual experience to date in relation to its Article 10 application to the New York State Department of Public Service ("NYSDPS") Board of Electric Generation Siting and the Environment (the "Siting Board") and its application to modify its Title V operating permit submitted to the New York State Department of Environmental Conservation ("NYSDEC") (collectively the "A10 Process"), for the proposed redevelopment of the Danskammer Energy site.

The existing Danskammer facility consists of four steam turbine units, commissioned between 1951 and 1967, with a cumulative nameplate capacity of 532MWs. Danskammer's management team has been actively working since March of 2018 to redevelop Danskammer and replace the existing facility with a state of the art combined cycle generation turbine with a nameplate capacity of 600 MWs (the "Redevelopment Project"). Danskammer is one of only two proposed fossil generation facilities currently in the A10 Process and has first-hand experience of its costs and time requirements, with particular focus on Orange County and the Lower Hudson Valley.

Danskammer contends that line items of the Consultants' preliminary recommendations underestimate the net Cost of New Entry ("Net CONE") for the reference plant as outlined in the Estimated Capital and O&M Costs table provided in Appendix A of the AG Report. Danskammer contests the cost assumptions used in the following areas:

Capital Costs - Owner's Cost Allowances - Line Item - Owner's Project Development:

The assumed Owner's Project Development costs included in the AG Report ranges from $370,000 to $480,000 and Permitting and Licensing Fees range from $1,000,000 to $1,300,000 for a total range of $1,370,000 to $1,780,000. Based on Danskammer's first-hand experience, this figure materially under represents the total cost to successfully progress a new greenfield or redevelopment project through the A10 Process. Danskammer estimates that from inception to completion, its entire process will take approximately 3.7 years and cost approximately $9.8 million *(please see Table 3 below)*.

Danskammer commenced its Redevelopment Project in March of 2018 and is currently awaiting final approval from the Siting Board as it relates to deeming its Article 10 Application (the "A10 Application") complete, which is expected in either late August or early September of 2020. Once an applicant's A10 Application is deemed complete, it commences a 365-day review process by the Siting Board. Under the A10 Process, an application must fully evaluate the impact of the proposed project on environmental and public health under all applicable laws, including applicable NYSDEC and the New York State Department of Health ("NYSDOH") regulations.

The Siting Board appoints Presiding Examiners to oversee the public hearing process, which allows the applicant and intervenors to cross-examine witnesses on their expert testimony about the project. The applicant and intervenors submit post-hearing briefs and the Presiding Examiners make a recommendation to the Siting Board as whether or not to grant the proposed project a Certificate of Public Convenience and Necessity ("CPCN"). If a project is granted its CPCN it will likely require an additional 1 to 2 months to finalize all documentation prior to the commencement of construction. Danskammer's Repowering Project case docket Matter Master: 18-01253/18-F-0325, with the NYSDPS is located at the following link:

http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?Mattercaseno=18-F-0325

Danskammer caveats that larger developers may have larger staffs and more internal resources to progress through the A10 Process, however, major components of the A10 Application require specialized areas of expertise. Irrespective, the owner's development costs for a project should account for the time and materials expended either internally or externally and would likely not deviate materially from Danskammer's first-hand experience. The Consultants assumptions of $480,000 at the high end, results in a material under estimation of the Net CONE costs that would need to be recovered for a project through the capacity markets.

There are primarily four distinct phases to progress through the A10 Process, which we have outlined below: Phase 1, Public Involvement Program; Phase 2, Preliminary Scoping Statement; Phase 3, A10 Application; and Phase 4, Public Hearings, review and decision rendering. Danskammer is nearing completion of Phase 3.

Public Involvement Program Plan ("PIP"):

The first requirement for an applicant is to prepare and submit a PIP to NYSDPS staff. Pursuant to Article 10 of the Public Service Law ("PSL") and the rules of the Siting Board, applicants proposing to submit an application to construct an electric generating facility with a nameplate generating

capacity of 25 megawatts ("MW") or more must submit a PIP for review by NYSDPS staff. The PIP is designed to encourage public participation in the planning, pre-application, certification, compliance, and implementation process, and to ensure that the Siting Board is made aware of stakeholder concerns about the proposed project throughout the application review process. As required by 16 NYCRR § 1000.4, the PIP for the Danskammer Repowering included the following elements:

1) Consultation with the affected agencies and other stakeholders;
2) Pre-application activities to encourage stakeholders to participate at the earliest opportunity;
3) Activities designed to educate the public as to the specific proposal and the Article 10 review process, including the availability of funding for municipal and local parties;
4) Establishment of a website to disseminate information to the public;
5) Notifications; and,
6) Activities designed to encourage participation by stakeholders in the certification and compliance process.

The PIP must be submitted to NYSDPS Staff for review at least 150 days prior to filing a Preliminary Scoping Statement, which provides a detailed description of the proposed project and the range of potential environmental and health impacts from its construction and operation (among other required items). In addition, the applicant must establish a public office, with staffing during work hours to interface with the public throughout the entire duration of the application process. In Table 1 below, we have outlined the costs, time incurred, and categories of advisors and consultants used by Danskammer to prepare and submit its PIP.

TABLE 1: PIP - Time and Cost Summary

Description	Experienced Result
Time	
Time to Prepare PIP	84 Days: Mar-1-18 to May-24-18
Time to Receive Comments from NYSDPS Staff	32 Days: May-24-18 to Jun-25-18
Revision of PIP and Re-Submission	30 Days: Jun-25-18 to Jul-25-18
Total: Inception to Finalized PIP	***146 Days / 0.4 Years***
Costs	
3rd Party Costs Incurred[1]	~$125,000
Advisors and Consultants Required	
• Legal and environmental	

Notes:

1. Excludes Danskammer management staff development cost allocation, covered separately.

Preliminary Scoping Statement ("PSS"):

This PSS document sets forth reasonably available information that meets the requirements of 16 NYCRR §1000.5(l), including, among other things, a description of the proposed project and the project site, the existing environment conditions, and an identification of the proposed methodology or scope of the studies that will be conducted in support of each Exhibit of the A10 Application. In addition, each component of the PSS is subject to a stipulation process with regulatory bodies such as the NYSDPS and NYSDEC, stakeholders and intervenors who, seek to

modify or expand each exhibit of the A10 Application beyond the baseline requirements as outlined in the PSL.

Of particular note, Danskammer would like to make the Consultants and NYISO aware that a mandatory intervenor funding requirement of $200,000 must be submitted to the NYSDPS in conjunction with the filing of the PSS. Any registered intervenors will submit requests to receive allocations of the intervenor funds to pay for consultants and or studies to represent their interests in the overall A10 Process. Any unused portions, of which the likelihood is low, will be used to offset the intervenor funding obligations related to the filing of the Article 10 final application, discussed below. In Table 2 below we have outlined the costs, time incurred and categories of advisors and consultants used by Danskammer to prepare and submit its PSS. In addition, many intervenors commonly request time extensions to file comments in relation to the PSS, causing further process delays.

TABLE 2: PSS - Time and Cost Summary	
Description	**Experienced Result**
Time	
Time from Submission of PIP to PSS	198 Days: Jul-25-18 to Feb-8-19
Time to Receive Comments from NYSDPS Staff	49 Days: Feb-8-19 to Mar-29-19
Responses to PSS Comments Filed[1]	21 Days: Mar-29-19 to Apr-19-19
Proposed Stipulations Filed	140 Days: Apr-19-19 to Sep-6-19
Total: Submission of PSS to Filing of Proposed Stipulations	***408 Days / 1.1 Years***
Costs	
3rd Party Costs Incurred[2,3]	~$800,000
Advisors and Consultants Required	
• Legal, environmental, engineering, market consultants, EPC contractors, and specialized sub-contractors (noise, land surveying, geotechnical, economists).	

Notes:

1. No further comments received from NYSDPS Staff.
2. Includes $200,000 of intervenor mandatory funding requirement.
3. Excludes Danskammer management staff cost allocation, covered separately.

Article 10 Application:

The final component of the physical Article 10 Application submission process consists of submitting the final A10 Application, which consists of up to 41 required exhibits *(please see Exhibit A for a listing of the exhibits)*, which may have been modified pursuant to the stipulation process discussed above. The exhibits are highly detailed assessments of the project and in many cases need to be prepared by experts, who may or may not be required to testify during the public hearing process.

A large portion of this work related to the preparation of the exhibits was done in parallel with multiple 3rd party advisors / consultants and sub-contractors while undertaking the stipulation process in relation to the PSS submission. The A10 Application exhibits are meant to provide a fulsome evaluation of the proposed project and to allow for robust stakeholder involvement and evaluation of the merits and impacts from the proposed project.

Of particular note, Danskammer would like to make the Consultants and the NYISO aware that a mandatory intervenor funding requirement of $400,000 must be submitted to the NYSDPS in conjunction with the filing of the A10 Application. Any registered intervenors will submit requests to receive allocations of the intervenor funds to pay for consultants and or studies to represent their interests in the overall Article 10 Process. Any unused portions, of which the likelihood is low, will be returned to the applicant. Notably, the combined intervenor costs of $600,000 alone equal nearly half of the Consultants'/NYISO's low end assumed project development costs of $1.37M.

Danskammer submitted its A10 Application on December 11, 2019. Following review by NYSDPS Staff, Danskammer was issued an application deficiency letter on February 10, 2020, which is common place for most A10 applicants to date. Due to the complexity of the response to one deficiency the final A10 Application resubmission was further delayed until July 8, 2020, upon which Danskammer submitted its last deficiency response. As of the date of this letter, Danskammer is still awaiting final approval of its A10 Application from the Siting Board, which is anticipated in either late August or early September of 2020. Danskammer's final A10 Application was approximately 5,000+ pages.

In Table 3 below we have outlined the costs, time incurred and categories of advisors and consultants used by Danskammer to prepare and submit its A10 Application. These costs represent Danskammer's total redevelopment related expenditures incurred from inception through the date of this letter and for avoidance of doubt are inclusive of the PIP and PSS costs discussed above in Tables 1 and 2. To date, Danskammer has incurred costs that are more than 500% greater than the costs assumed by the Consultants and supported by the NYISO. When complete, estimated costs are likely to be 575% greater than what is being proposed.

TABLE 3: A10 Application Process - Time and Cost Summary	
Description	**Experienced Result**
Time	
Inception to Filing of A10 Application	650 Days: Mar-1-18 to Dec-11-19
Receipt of A10 Application Deficiency Letter from NYSDPS[1]	61 Days: Dec-11-19 to Feb-10-20
Resubmission of A10 Application by Danskammer	149 Days: Feb-10-20 to Jul-8-20
Estimated Time to Deemed Completeness of A10 Application	60 Days: Jul-8-20 to Sep-6-20
Siting Board Review	365 Days: Sep-6-20 to Sep-6-21
Additional Finalizations Prior to Commencement of Construction if Granted CPCN	60 Days: Sep-6-21 to Nov-5-21
Total: Inception to Estimated Commencement of Construction	1,345 Days / 3.7 Years
Costs - Total Application Process - Actual Into Estimates	
3rd Party Costs Incurred - Inception to Date	~$5,600,000
3rd Party Costs Incurred - Estimated Cost to Completion	~$1,500,000
Danskammer Development Team Cost Allocation[2] - Inception to Date	~$2,000,000
Danskammer Development Team Cost Allocation[2] - Estimated Cost to Completion	~$700,000
Total: Actual Into Estimated Costs to Complete	**~$9,800,000**
Advisors and Consultants Required	
• Legal, environmental, engineering, market consultants, EPC contractors, and specialized sub-contractors (noise, land surveying, geotechnical, economists).	

Notes:

1. From date of submission of A10 Application.
2. The Danskammer Redevelopment Project, consists of a brownfield redevelopment, figures represent partial allocation of managerial costs.

Capital Costs - Owner's Cost Allowances - Line Item - Water Supply Infrastructure:

Danskammer questions why there are no costs allocated to this area outside of the Zone J – NYC unit. Based on our understanding, the assumption is that plants outside of NYC will use drilled wells or rain water collection to supply water to the facility. The fact that there are no costs to evaluate the water table, underlying geotechnical aspects of the site, well drilling costs, purchase of pumps and holding tanks outside of NYC seems to understate the true cost of providing potable water to the facility.

In many cases plants may be eligible to interconnect to local municipalities water systems. If this was the case then interconnection costs would need to be accounted for as well as ongoing property taxes for the respective water district.

Capital Costs - Owner's Cost Allowances - Line Item - Owner's Engineer:

Owner's Engineer costs are stated to range from $1,020,000 to $1,330,000. Danskammer would like to request the back-up for these costs and whether any other engineering costs are embedded within other line items of the capital cost work up. Overall, Danskammer believes that the assumed costs seem very low in the context of developing a new facility. Danskammer estimates that the combination of detailed and owner related engineering for its Repowering Project will range from $12,000,000 to $15,000,000.

Capital Costs - AFUDC - Line Item – EPC Portion and Non-EPC Portion:

It is unclear if debt related interest during construction costs include debt underwriting fees and related 3rd party consultant and legal fees required to execute a successful debt financing. All new build projects will require the following: Market Consultant Report with reliance for lenders, Engineers Report with reliance for lenders, Environmental Assessment – minimum Phase I and potentially Phase II. On average each report will cost between $200,000 to $300,000 due to the requirement for reliance for debt investors.

Term Loan A underwriting fees are currently in the range of 2.25% to 2.375% with additional Lead Arranger fees of 1.00% to 1.125% against total commitments from lenders. Resulting all in upfront fees would be in the 3.25% to 3.50% area. In addition, during construction, most lenders will charge approximately 0.50% on undrawn commitment balances. It is unclear as to how and if these costs are included within the AFUDC costs.

Legal counsel fees for project style covenant packages loan agreements with detailed depository agreement requirements and waterfall mechanics will cost on average between $400,000 to $600,000 and can reach almost $1,000,000 for complex transactions with high real estate due diligence requirements.

Most projects will require the posting of collateral through letters of credit during construction and through the life of the project. It is unclear based on written commentary and figures within the AG Report if any allocation of costs has been included for these costs. Letter of credit fees will be based on the face value of letters of credit outstanding and charged at the drawn spread for the debt financing.

The funding sequence of debt first versus equity first versus pro-rata contribution is not disclosed. This can have a material impact on AFUDC and overall project returns. In the event equity is contributed last, additional costs will need to be included likely in the form of an irrevocable letter or credit or parent guarantee to satisfy debt lenders.

Administrative Agent, Depository Agent and Collateral Agent costs will average between $150,000 and $175,000 per year during the duration of the loan agreement.

Danskammer would appreciate if the underlying assumptions supporting the AFUDC cost estimates would be disclosed along with ongoing finance related costs included within the O&M ongoing cost estimates. Similar costs would need to be incurred at any refinancing of the debt facilities post maturity, which will usually range from 5 to 7 years post commissioning of the facility.

O&M Costs – Line Item - Property Insurance Allowance:

In order to receive debt financing, lenders will require the facility to carry additional lines of insurance beyond property. These insurance lines will include: automobile, general liability, general liability excess, cyber and directors and officers. Depending on the limits and deductibles that lenders will require through the loan documentation, the cost based on Danskammer's experience for these programs would range between: $80,000 to $120,000 per year. In addition the plant may be required to carry both pollution and pollution excess policies, which is not included in the above range of costs.

Energy Margin Hedging Costs and Debt Sizing:

It is difficult to understand how the cost of energy margin hedging is reflected within the WACC as stated by the Consultants. For all new natural gas facilities constructed in NYS recently, lenders required the placement of Revenue Puts for the entire tenor of the debt facilities. Granted, these facilities were combined cycle facilities with very high capacity factors. Revenue Puts represent a material upfront funding requirement and require a forward start, which will coincide with the commissioning of the facility. Hedge providers need to imbed, and equity needs to absorb the cost, of carrying the energy margin hedge over the entire timeframe of the construction period from financial close. It is difficult to assign a price tag to the upfront cost of the hedge due to the peaking characteristics of the reference unit, but the cost could easily be in the $5 to $15 million range.

Drawn spreads for term loans will also include step ups at conversion from construction to a term facility, rates will step up on average 12.5 to 25.0 basis points and a similar amount at year 4 of the term loan.

In addition it is worth noting that many lenders when sizing the debt capacity of a project will undertake material haircuts to future capacity pricing as provided by a 3rd party market consultant. Lender's commonly haircut future capacity pricing when evaluating potential levels of outstanding debt at maturity and may commonly use a defined downside scenario. Based on Danskammer's discussions with lenders, targeted debt balances under downside stress scenarios will need to be at or around $350/kW. Debt amortization will consist of two components: a 5%

mandatory amortization annually and a targeted excess cash flow sweep. Based upon the debt sizing profiles established with lenders, excess cash flow sweeps will generally need to be 100% of available cash until such targeted outstanding debt levels are reached. If a project fails to meet those levels, it will not be able to distribute dividends to equity. Based on discussions with lenders, if a project receives rest of state capacity prices rather than the G-J Locality prices, minimal credit may be given to winter capacity revenue given the latest clearing prices.

We appreciate your attention to the matters addressed herein.

This concludes Danskammer Energy, LLC's comments.

Exhibit A: Article 10 Required Exhibits

1. General Requirements	22. Terrestrial, Ecology and Wetlands
2. Overview and Public Involvement	23. Water Resources and Aquatic Ecology
3. Location of Facilities	24. Visual Impacts
4. Land Use	25. Effect on Transportation
5. Electric System Effects	26. Effect on Communication
6. Wind Power Facilities	27. Socioeconomic Effects
7. Natural Gas Power Facilities	28. Environmental Justice
8. Electric System Production Modeling	29. Site Restoration and Decommissioning
9. Alternatives	30. Nuclear Facilities
10. Consistency with Energy Planning Objectives	31. Local Laws and Ordinances
11. Preliminary Design Drawings	32. State Laws and Regulations
12. Construction	33. Other Applications and Filings
13. Real Property	34. Electric Interconnection
14. Cost of Facilities	35. Electric and Magnetic Fields
15. Public Health and Safety	36. Gas Interconnection
16. Pollution Control Facilities	37. Back-Up Fuel
17. Air Emissions	38. Water Interconnection
18. Safety and Security	39. Wastewater Interconnection
19. Noise and Vibration	40. Telecommunications Interconnection
20. Cultural Resources	41. Applications to Modify or Build Adjacent
21. Geology, Seismology and Soils	