CERTIFICATE AS TO MINUTES

The undersigned, Secretary to the New York State Energy Research and Development Authority ("Authority"), hereby certifies that attached hereto is a complete and accurate copy of the minutes of the 240th Meeting of the Authority, duly held on September 18, 2018.

IN WITNESS WHEREOF, I have hereunto set my hand and the seal of the Authority this 20th day of November, 2018.

Noah C. Shaw
Secretary

SEAL

NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY

Minutes of the 240th Meeting

Held on September 18, 2018

Pursuant to a notice and agenda dated September 4, 2018 of the New York State Energy Research and Development Authority ("Authority") was convened on September 18, 2018 at 2:00 p.m., in the Authority's Albany Office at 17 Columbia Circle, Albany, New York, and in the Authority's New York City Office at 1359 Broadway, New York by videoconference.

The following Members of the Authority were present:

Richard Kauffman, Chair
Sherburne Abbott
Charles Bell
Kenneth Daly
Kate Fish
John McAvoy (by videoconference in New York City)
Gil Quiniones (by videoconference in New York City)
John Rhodes
Mark Willis

Members Jay Koh and Basil Seggos were unable to attend.

Also present were Alicia Barton, President and CEO; Janet Joseph, Senior Vice President for Strategy and Market Development; Jeffrey Pitkin, Treasurer; Noah Shaw, Esq., General Counsel and Secretary; Sara LeCain, Senior Counsel; and various other staff of the Authority.

Before turning to the formal agenda, the Chair asked the Authority's President and CEO, Alicia Barton to provide the Members with an update on the Authority's recent activities.

Mr. Kauffman indicated that the first item on the agenda was a report on the items discussed by the Program Planning Committee ("PPC") pertaining to the approval of revisions of the Clean Air Interstate Rule ("CAIR") Program Plan. He asked Mark Willis, Chair of the PPC, to address the Members. Mr. Willis stated that the PPC had met earlier and received a report on the Authority's strategic Outlook entitled *Toward a Clean Energy Future: A Strategic Outlook 2019-2022*. The Strategic Outlook identifies the Authority's current mission, vision, and targeted mission outcomes. Mr. Willis explained that the team of presenters discussed some changes that will be presented in this year's Strategic Outlook, including ways to frame the Authority's programs around the high-level State policy goals associated with renewable energy, energy efficiency, a clean energy economy, greenhouse gas reductions, and creating a resilient and distributed energy system. The PPC received presentations on Net Zero Energy Buildings and Workforce Development. The team also presented anticipated areas of focus in the following year's Strategic Outlook, which included resiliency and transportation.

Mr. Willis continued, stating that the PPC received a report from Richard Bourgeois, Senior Project Manager for Renewable Optimization and Energy Storage Innovation on the Offshore Wind ("OSW") Research and Development ("R&D") Consortium, which is being funded with a large federal grant, the Authority's support, and private sector cost-sharing. Mr. Bourgeois indicated that the OSW R&D Consortium is focused on reducing the levelized cost of electricity with a goal of 10% reduction for approximately $100 million annual savings in New York by 2030. The PPC will continue to receive updates on the OSW R&D Consortium's progress.

Lastly, PPC received a report and recommendation from Jason Doling, Program Manager for Energy Storage on the NY-Battery and Energy Storage Technology Consortium ("NY-BEST") and proposed revisions to the Clean Air Interstate Rule ("CAIR") Program Plan, through which the Authority has provided financial support to NY-BEST. Mr. Doling requested that the PPC consider a request to add interest earnings and reallocate unspent research and development ("R&D") funds. This shows the redirected focus of the industry in New York State from technology development to economic growth and market expansion. Specifically, $1,147,365 would be allocated to the economic development initiatives of the energy storage sector and $1,008,000 in unspent R&D funds would be reallocated. Additionally, the Authority's budget for the administration of the CAIR Program would be increased by $89,000, but this is offset by $80,000 in the New York State Cost Recovery fee and $40,000 of program evaluation costs that were under budget, for a net decrease of $31,000.

The PPC unanimously recommended that the Members adopt the resolution approving the reallocation of funds for the CAIR Program plan as provided.

Whereafter, upon motion duly made and seconded, and by voice vote of the Members present, the following resolution was adopted.

Resolution No. 1539

> RESOLVED, that revisions to the "Clean Air Interstate Rule (CAIR)/New York Battery and Energy Storage Technology Consortium™ (NY-BEST) Program Plan" presented to the Members for consideration at this September 18, 2018 meeting, with such non-substantive, editorial changes and supplementary schedules as the President and Chief Executive Officer, in her discretion, may deem necessary or appropriate, are adopted and approved;
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> AND BE IT FURTHER RESOLVED, that the Members direct the President and Chief Executive Officer to develop a revised program plan incorporating such revisions as soon as reasonably possible.

Mr. Kauffman stated that the next item on the agenda would be a report from Charles Bell, Chair of the Waste and Facilities Management Committee ("W&FMC") on items covered by the W&FMC during their meeting.

Mr. Bell highlighted a report given at the W&FMC by Alyse Peterson, Senior Project Manager for Data and Markets, regarding nuclear coordination activities. Ms. Peterson reported that the Authority successfully met its statutory requirement under the Low-Level Radioactive Waste Management Act again this year, submitting a report to the Governor covering low-level waste generated in calendar year 2017 for 196 facilities, including all six nuclear power plants.

Mr. Bell indicated that Ms. Peterson is the State's representative to, and the current Chair of, the national Low-Level Waste Forum, a national organization of state, federal, and other representatives that facilitates implementation of the federal Low-Level Radioactive Waste Policy Act. Ms. Peterson will soon be facilitating a Forum working group with the National Regulatory Commission ("NRC") to focus on NRC initiatives in waste-related areas such as power plant decommissioning, radioactive source security, and land disposal requirements.

Next, Mr. Bell indicated that the W&FMC received a status report from the Director of the West Valley Site Management Program activities, Paul Bembia. Mr. Bembia provided an update on the Phase 1 decommissioning work, hazardous waste shipping, the Supplemental Environmental Impact Statement, the State licensed disposal area ("SDA"), and Mr. Shaw's testimony before the House Committee on Energy and Commerce Subcommittee on the Environment to express the Authority's and the State of New York's support for the reauthorization of cleanup funding for the WVDP and to present the Committee with facts regarding the defense origin of the West Valley nuclear waste.

Mr. Bell stated that the last item considered by the W&FMC was the proposed approval of a lease to the Town of Ashford for the development of a community solar installation on the Authority's property. The lease would be below market value for $1 per year. Authority staff commissioned an appraisal of the parcel, and the market lease value was determined to be $4,960 per year. The project would benefit the Town of Ashford's residents and neighbors, which has hosted the 3300-acre, tax-exempt site for over 50 years and is squarely aligned with the mission of the Authority. The Town has partnered with BQ-Energy, LLC, to develop the 10-megawatt project.

Mr. Bell reported that under the approach laid out by Mr. Shaw, the W&FMC found that the requirements under the Public Authorities Accountability Act ("PAAA") needed to lease a 53-acre parcel of land to the Town, have been met. Specifically, the transferee is a government entity, the ownership and use of the asset will remain with the government, the purpose of the transfer is within the Authority's purpose, mission, or governing statute, and the necessary factors required by the PAAA are provided to Members and the public.

In response to Mr. McAvoy's inquiry as to whether this case could be used as model for similar requests in the future, Mr. Shaw noted that the lease for the parcel in the Town of Ashford is a unique circumstance. The Town of Ashford came to the Authority some time ago to discuss this as being an appropriate reuse of the former nuclear waste site. Substantial aerial radiation testing and other testing has been done on this parcel to ensure that there is no contamination of the land. The below market lease for this land was determined by multiple factors, but there is no specific formula on how to make these types of determinations. Instead it is done on a case-by-case basis.

In response to inquiry from Mr. McAvoy, Mr. Shaw indicated that the State has paid a payment-in-lieu-of-taxes ("PILOT") to the Town. The PILOT has been the same amount for approximately 25 years, but was recently increased.

Mr. Bell noted that the Authority has had a long-term positive relationship with the Town of Ashford and they have been supportive and accommodating to the Authority's operations.

Mr. Shaw added that it is not only the Authority's positive relationship with the Town, but also the objective that is so squarely and appropriately mission aligned that when combined make this policy rationale for moving forward with the below market lease.

Mr. Bell noted that the W&FMC unanimously recommended that the Members adopt the resolution approving the lease with the Town of Ashford.

Whereafter, upon motion duly made and seconded, and by unanimous voice vote, the Members adopted the following resolution.

Resolution No. 1540

RESOLVED, that the Members find that there is no reasonable alternative to the proposed below market transfer of an approximately 53-acre parcel to the Town of Ashford for the purpose of a community solar development that would achieve the same purpose of such transfer, that purpose being to promote the development of clean energy in New York State, and to support the Town of Ashford as host to the Western New York Nuclear Service Center in its efforts to reduce its greenhouse gas emissions; it is therefore

RESOLVED that the transfer agreement between the Town of Ashford and the New York State Energy Research and Development Authority for a lease of approximately 53 acres, as submitted to the Members for consideration at this meeting of September 18, 2018, is approved. The President and Chief Executive Officer or her designee is hereby authorized to perform the Authority's obligations set forth in the transfer agreement and to make such changes thereto as may be necessary and appropriate, provided such changes do not substantially increase the Authority's obligations thereunder, and execute it.

Mr. Kauffman indicated that the next item on the agenda was a report on items discussed by the Audit and Finance Committee ("A&FC"). Jay Koh, Chair of the A&FC was unable to attend the meetings, therefore Mr. Kauffman provided the report in his place.

Mr. Kauffman began his report by stating that the A&FC meeting was held just before the Board meeting and that a quorum was present throughout.

During the meeting, the A&FC received a report from the Authority's Director of Internal Audit, Mary Peck, on revisions to the Authority's Internal Audit Plan for fiscal year 2018-2019. Following a discussion, the A&FC voted to approve the revisions to the Internal Audit Plan.

Mr. Kauffman explained that the A&FC received a second report from Ms. Peck regarding recent audit activities. During this report Ms. Peck discussed the results of one completed audit and the status of ongoing audits. The A&FC followed this report with a discussion and was pleased with the results of the audit.

There being no questions and no formal action required, Mr. Kauffman indicated the next item on the agenda was the approval of the Real Property Acquisition Policy Guidelines. Noah Shaw, the Authority's General Counsel and Secretary, presented the item and explained that the Members were requested to adopt a resolution approving the Guidelines. Mr. Shaw noted that Section 2824 of the New York Public Authorities Law requires the Board to establish written policies for the "acquisition of real property" and to approve those written policies annually. Mr. Shaw indicated that Management was not recommending any changes to the policy guidelines at this time. Mr. Shaw stated that in the future, this annual review will be completed during the June Annual Meeting along with the Authority's other annual reports and guideline reviews.

Whereafter, upon motion duly made and seconded, and by unanimous voice vote, the Members adopted the following resolution.

Resolution No. 1541

RESOLVED, that the Real Property Acquisition Policy Guidelines, as presented at this September 18, 2018 meeting, is hereby adopted and approved by the Board.

Mr. Kauffman stated that the next item on the agenda was the periodic contracts report and asked the Authority's Director of Contract Management, Cheryl Glanton, to present the item. Ms. Glanton stated that pursuant to the Procurement and Program Contract Guidelines ("Contract Guidelines"), the Members were requested to adopt a resolution approving certain contracts as listed in the Periodic Contracts Approval Report ("Approval Report") covering the period May 16, 2018 through August 15, 2018.

Ms. Glanton explained that, Section 1 of the Approval Report indicated that the Authority initiated or modified certain contracts, which require board approval under the Authority's Contracting Guidelines. These contracts include 50 procurement contract actions with a period of performance in excess of one year, that total approximately $14 million and represent routine contracting for goods and services; 18 competitively selected Program Contracts with a total value in excess of $3 million, that total approximately $719 million, the majority of which are Clean Energy Standard ("CES") contracts from the 2017 procurement for large scale renewables; and 1 non-competitive program contract action to manage the Fuel NY Downstate Strategic Gasoline Reserve in excess of $1 million, which is being modified to include a 1-year term extension and to add $516,000 that was not included in the original competitive selection.

Ms. Glanton stated that Section 2 of the Approval Report listed contracts that the Authority anticipates executing or modifying; which includes 36 procurement contract actions with a period of performance more than one year for goods and services that total approximately $7 million; and 11 competitively selected Program Contracts that are in excess of $3 million for a total of approximately $53 million, and includes the $20 million OSW Consortium discussed earlier in the meeting.

Next, Ms. Glanton discussed the Periodic Program Contracts Report which does not require approval by the Members. During this period, 570 Program Contracts were executed or modified with a value of $825 million. This was higher than the last period and is mainly due to the CES contracts executed during the reporting period.

Ms Glanton stated that during the period, 98% of all contracts (Program and Procurement) and 99% of all the aggregate committed value were competitively selected.

Mr. Kauffman indicated that Counsel's Office had compared the lists provided by Members of entities with which each Member is associated and which he or she believes may enter into contracts with the Authority to the list of contracts in the Approval Report. Counsel's office reports no potential conflicts. However, due to National Grid's past public support for a potential future involvement with the OSW R&D Consortium, Mr. Daly has indicated that he would recuse himself from the vote on any contracts associated with the OSW R&D Consortium.

Whereafter, upon motion duly made and seconded, and by unanimous voice vote, the Members adopted the following resolution. Mr. Daly abstained from the vote solely with regard to contracts involving the OSW Consortium.

Resolution No. 1542

RESOLVED, that pursuant to the Authority's Procurement and Program Contract Guidelines, Operative Policy and Instructions, the procurement and program contracts, as presented in the Periodic Contracts Approval Report at this September 18, 2018 meeting, are hereby approved.

Mr. Kauffman indicated that the next item on the agenda was a status report on New York Green Bank ("NYGB") activities given by its President, Alfred Griffin. Mr. Griffin provided the Members with a performance update, including recent investments and the active pipeline.

Mr. Griffin stated that NYGB's objectives and deliverables for fiscal year 2019 were to commit $685 million; portfolio mobilization ratio of three to one; continued self-sufficiency; contribution to Clean Energy Fund and CES objectives, and issue targeted solicitations from energy storage, solar plus storage solicitation, pay for performance, tenant improvement financing, and clean energy for low to moderate income end users.

Mr. Griffin noted that NYGB continues to move forward with the strategic initiatives announced by Governor Cuomo, to seek at least an additional $1 billion in capital from the private sector and to expand its investment activities nationally. Raising 3rd party capital will benefit New Yorkers by mobilizing more private sector capital to be invested in the State. It will also enable NYGB to invest in projects across the United States, accelerating greater scale, standardization, and diversification resulting in reduced financing costs and improved value propositions that can be offered by clean energy providers to New Yorkers. NYGB's investments are expected to remain consistent with its current mandate, as well as, within the eligible technical scope of the CEF.

Mr. Griffin concluded his report by outlining the key milestones for NYGB going forward, which include: completion of the strategic advisory scope of work related to evaluating investor structures; a revised business plan incorporating the recommended and chosen execution plan; and petitioning the New York State Public Service Commission for approval of the strategy. Any material adjustments to NYGB risk management, transaction approval, and governance will be presented to the Members.

Mr. Kauffman indicated that the next item on the agenda was a report on one of the Authority's programs. Kevin Hale, Director of Utility Affairs and Strategic Partnerships, as well as two of utility partners, Vicki Kuo from Consolidated Edison Company of New York, Inc. ("Con Ed") and Fouad Dagher from National Grid USA Service Company, Inc. ("National Grid"), provided the Members with an overview of the Pay for Performance initiative.

Mr. Hale explained that Pay for Performance is unique because the Authority is working with utility partners to procure energy savings from aggregators by providing them a direct payment to deliver the savings. This will create a path for a market for energy efficiency in New York, extending the Authority's impact. This model will enable aggregators to innovate, reduce costs, and improve value to their customers. The Pay for Performance model will encourage new business models for customer engagement and deeper savings through the removal of the barriers of limited equipment eligibility for rebates and stringent program requirements.

Mr. Hale indicated that Pay for Performance will seek a market value for energy efficiency by having aggregators present portfolios of projects together with a price the aggregators plan to be paid over a five-year period. Mr. Hale indicated that from a customer perspective, Pay for Performance will provide a broader solution-based approach rather than a specific measure-based approach. Aggregators will be given more flexibility to design packages and services based on customer needs. From the utility perspective, the model will shift the risk out to the marketplace and it will start elevating energy efficiency as a utility resource.

Mr. Hale stated that Pay for Performance will have approximately $56 million in funding over the course of three phases through 2021. Each phase will have an annual request for proposals ("RFP") . Most of the Authority funding will be used to stimulate aggregator payments, while some will be used for the software platform that will calculate the savings. The initial phase of Pay for Performance will be conducted with Con Ed and National Grid and will be launched in the first quarter of 2019. Each additional phase will involve different utility partners, geographies, and sectors of the marketplace. The ultimate goal is to hand this off to the utilities.

Ms. Kuo explained that the Con Ed Phase One will be in the Westchester County and Staten Island areas, with a focus on small community businesses. The Pay for Performance model relies a lot on data, the more granular data you have, the more accuracy, as a result these two areas were chosen. Small businesses represent 25% of commercial usage in the chosen areas with approximately 70,000 small businesses located in these areas.

Mr. Dagher indicated that National Grid will be offering Pay for Performance to their single-family residential customers in the Central New York region: Onondaga, Oneida and Oswego counties. This initiative will attract new businesses to the area, while creating monetary value to the utilities. The Pay for Performance model also has the potential to decrease administrative, implementation, and marketing costs. Finally, Pay for Performance has the potential to create new jobs in machine learning and base analytics, particularly in artificial intelligence.

Mr. Hale concluded the report by stating that two very well attended stakeholder meetings were held to get the initial framework and design parameters out to the market. There will be additional stakeholder meetings in the fall of 2018 on a more detailed program design and discussing how the bidding and compensation process. The expectation is to have final design elements and the solicitation documentation completed in either November or December 2018. Pay for Performance will engage the market in the first quarter of 2019 through issuance of aggregator RFPs for both the National Grid and Con Ed partnerships. In the second quarter of 2019, aggregator contracts will be awarded, and marketplace engagement and delivery of services will take place. The Authority will work with aggregators on enrollment and getting the payments aligned. In late 2019, Pay for Performance will begin Phase Two with possible additional utilities.

In response to an inquiry from Mr. Kauffman, Mr. Dagher from National Grid clarified that the "target customer" addressed in the presentation was representative of the consumer, and the aggregators are viewed as a partner to the utilities in helping to deliver the services to the customer. It is the expectation that the aggregators will have their own outreach and market engagement, but there will be discussions about how to better market this initiative to existing customers. The market partner is being viewed as a customer, in that the utilities and the Authority are looking to make sure that their needs are met in order for them to be successful.

In response to an inquiry from Mr. Kauffman, Mr. Dagher explained that the Pay for Performance will be an avenue for the utilities to make additional revenue rather than relying on traditional energy efficiency programs. The additional revenue will be generated through referrals or an incentive. Ms. Kuo added that this initiative is seen as a low-cost way to access more customers and increase participation from existing customers.

In response to Mr. Willis, Mr. Hale explained that Pay for Performance will issue an RFP asking companies to originate a portfolio of customers' energy use over a period of time. Then, the aggregators will factor in weather during the same period to determine the baseline. The baseline will be used to show available energy savings, and to determine compensation. Participants will be expected to identify the services and business models they will be offering to their customers, and Authority staff will work with them to ensure that those will be a success. Ms. Joseph added that Pay for Performance will not be prescribing what solution the aggregator must deliver to the customer, which will leave open the possibility for innovation that has not been available in the energy efficiency marketplace.

Mr. Kauffman stated that the last item on the agenda was other business.

Whereafter, there being no other business, upon motion duly made and seconded, and by unanimous voice vote of the Members, the meeting was adjourned.

Noah C. Shaw
Secretary