

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 244th Meeting of the Authority, duly held on October 8, 2019.

IN WITNESS WHEREOF, I have hereunto set my hand and the seal of the Authority
this 10th day of January, 2020.



Jeffrey J. Pitkin
Acting Secretary

SEAL

NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY

Minutes of the 244th Meeting

Held on October 8, 2019

Pursuant to a notice and agenda dated September 24, 2019 of the New York State Energy Research and Development Authority (“Authority”) a meeting was convened on October 8, 2019 at 2:00 p.m., at the Authority’s Albany office located at 17 Columbia Circle, Albany, New York and the Authority’s New York City office located at 1359 Broadway, 19th Floor, New York, New York. The two locations were connected by videoconference.

The following Members of the Authority were present:

Richard Kauffman, *Chair of the Authority*

Sherburne Abbott

Charles Bell

Kenneth Daly

Kate Fish

Gil Quiniones

John Rhodes

Mark Willis

Members Jay Koh, Basil Seggos, and Marie Therese Dominguez 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 and Acting Secretary; Peter Costello, Esq., Acting General Counsel; Sara LeCain, Senior Counsel; and various other staff of the Authority.

Mr. Kauffman called the meeting to order and noted the presence of a quorum. The meeting notice and agenda were forwarded to the Board members on September 24, 2019 and the press on September 26, 2019.

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. Ms. Barton highlighted new members of the management team that will have a key role in the implementation of the Climate Leadership and Community Protection Act, as well as bringing valuable skills and knowledge to the existing team of the Authority.

Following Ms. Barton's status report, Mr. Kauffman noted that the first item on the agenda was a report on items discussed by the Audit and Finance Committee. Jay Koh, Chair of the Audit and Finance Committee was unable to attend the meeting, therefore Mr. Kauffman provided the report. The Committee received a report from Mary Peck, Director of Internal Audit, on her recent activities. The Committee was able to ask questions and was satisfied with the discussion.

The next item considered by the Audit and Finance Committee was the appointment of bond counsel for the Authority. The Authority's Financial Services Guidelines require that the Authority issue an RFP for bond counsel services every five years. In August 2019, the Authority issued a competitive solicitation for Bond Counsel Services. Following the submission of proposals, a scoring committee met and recommended two be presented to the Members for approval: Hawkins Delafield & Wood, LLP and Nixon Peabody LLP. The Authority will enter into agreements with each firm through December 31, 2024. The Committee unanimously recommended the appointment of Hawkins and Nixon Peabody as bond counsel to the Authority.

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

Resolution No. 1573

RESOLVED, that the President and CEO is authorized to engage the firms of Hawkins Delafield & Wood, LLP and Nixon Peabody LLP to serve as bond counsel for the Authority on its financings, and provide legal advice and counsel as may be necessary or desirable on matters involving trusts and other financial related services, as the President and CEO may determine is required from time to time.

The next item considered by the Audit and Finance Committee was the appointment of underwriters to the Authority. The Committee received a report from Jeff Pitkin on the

appointment of Samuel A. Ramirez & Co., Inc. ("Ramirez") as bond underwriter for bonds issued by the Authority associated with the Green Jobs-Green New York ("GJGNY") Program or for other clean energy financing program activities through its Clean Energy Fund. The firm was competitively selected and will provide investment banking and bond underwriting services for a period of up to five years. The firm's underwriting obligations and compensation will be contained in a bond purchase agreement to be executed for each bond issue, the terms of which will be approved by the Members prior to the issuance. The Committee unanimously recommended the appointment of Ramirez as underwriters for the Authority.

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

Resolution No. 1574

RESOLVED, that the Members approve the selection of the firm of Samuel A. Ramirez & Co., Inc to serve as bond underwriters for the Authority related to its financings.

Mr. Kauffman indicated that the next item on the agenda was a report on the items considered by the Program Planning Committee from the Committee's Chair, Mark Willis.

Mr. Willis stated that the Committee received a report from the President and CEO, Alicia Barton, on the Authority's activities resulting from the passage of the Climate Leadership and Community Protection Act. The CLCPA has led to the development of new initiatives as well as the expansion of existing initiatives.

Following Ms. Barton's presentation, Mr. Willis stated that the Committee received a presentation on the Authority's Offshore Wind activities from Vice President for Large Scale Renewables, Doreen Harris. The Committee was given an overview of how offshore wind fits within the scope of the CLCPA as well as a summary of the results of the first solicitation. Doreen discussed the next steps in the Authority's work, including public engagement activities.

The final report received by the Committee was from Nick Querques, on the Authority's Cleantech Accelerators. The mission of this work is to accelerate the pace of innovation by

making historic investments to address climate change and achieve New York State's nation-leading energy goals – and reinforce it as the best place in the world to start and scale a clean energy business.

Following the update presented by Mark Willis, Mr. Kauffman indicated that the next item on the agenda was a report from Charles Bell, Chair of the Waste and Facilities Management Committee, on items considered by the Committee.

Mr. Bell stated that Committee Members Shere Abbott and Kate Fish were thanked by Mr. Bembia for visiting the West Valley Site last month, noting that all of the Committee Members have now visited the site for a detailed tour, which will give helpful context for future updates on site decommissioning work and Phase 2 decision-making.

Mr. Bembia provided an update on the West Valley Demonstration Project (“WVDP”), waste disposal and shipping, and the State Licensed Disposal Area, beginning with the WVDP. He noted that the first two of the five actions Congress required of DOE are complete. Of the last three, two are underway and the third cannot be completed at this time because there is no federal repository to accept high level nuclear waste. Mr. Bembia provided photographs of ongoing demolition, noting that DOE's contractor has now demolished 39 of 47 facilities that they are tasked with demolishing as part of their contract.

Mr. Bembia reported on waste transportation and disposal progress and issues, noting that 26,633 cubic feet of Industrial Waste; 110,925 cubic feet of Low-Level Radioactive Waste; and 1,815 cubic feet of Mixed Low-Level Waste have been transported from this site for disposal since he reported to the Committee in June. There were no transportation issues or incidents since his last report to the Committee.

Mr. Bembia reported that HR-1138, the West Valley legislation that would require the federal Government Accountability Office to prepare a report on the volumes, sources and options for disposal for the West Valley wastes, was passed by the House in March, was recently

reported favorably out of the Senate Committee on Energy and Natural Resources, and was placed on the Senate Calendar under General Orders, Item 171 on August 16.

Mr. Bembia also noted that the Town of Ashford published an editorial seeking for DOE to drop its insistence that the West Valley waste is commercial waste, stop storing the waste in aging containers, and dispose of it at the Waste Isolation Pilot Project in New Mexico.

As to the SDA, Mr. Bembia reported that NYSERDA continues to manage the SDA safely and in compliance with all applicable regulations. This concluded Mr. Bell's report.

Mr. Kauffman then indicated that the next item on the agenda was the approval of amendments made to the Authority's By-laws. Peter Costello, the Authority's Acting General Counsel, discussed this item.

Mr. Costello stated that the Members are requested to adopt a resolution amending the Authority's By-laws. Currently, the By-laws authorize the President and CEO to delegate the disbursement authorization ability to the Controller and Assistant Treasurer and to the Chief Operating Officer of the NY Green Bank. However, the Chief Operating Officer recently left and no other member of the NYGB team is authorized to approve wire transfers drawn on NYGB accounts. Therefore, management recommends amending the By-laws to remove the Chief Operating Officer designation and add language allowing other responsible members of the NYGB team to serve in this capacity.

Accordingly, Mr. Costello recommended the amendment of the Authority's By-laws to allow the President and CEO to delegate disbursement authorization ability to NY Green Bank personnel for managing finance or operational matters, as designated by the President of NY Green Bank. In addition, Section 5 of Article VI will be amended to remove the delegation of powers to the Chief Operating Officer of NY Green Bank. This delegation is similar to other delegation authorizations in the By-laws granted to the President and CEO. It would follow the same general processes with a written delegation executed by the President and CEO, following her concurrence with a designation by the NYGB President.

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

Resolution No. 1575

RESOLVED, that the amendments to Article IV, Section 3 and Article VI, Section 5 of the Authority's By-laws as presented at this October 8, 2019 meeting, are hereby approved and adopted.

Mr. Kauffman indicated that the next item on the agenda was the periodic contracts report. Cheryl Glanton, Director of Contract Management, presented this item.

Ms. Glanton stated, pursuant to Procurement and Program Contracting Guidelines, the Members are requested to adopt a resolution approving certain contracts as listed in the Periodic Contracts Approval Report covering the period May 16, 2019 through August 15, 2019.

Section 1 of the report indicated that the Authority initiated or modified:

- 57 Procurement Contract actions with a period of performance in excess of one year, that total approximately \$8.5 million and represent routine contracting for goods and services,
- 19 Program Contracts competitively selected with a total value in excess of \$3 million dollars, that total approximately \$112 million, including 2 contracts from the land-based Clean Energy Standard that total approximately \$54 million.
- 1 Program Contract non-competitive action with a total value in excess of \$1 million. This modification is to add \$496k and extend the contract term for the contractor administering Downstate Strategic Fuel Reserve.

Section 2 of the report indicates that the Authority anticipates executing or modifying:

- 31 procurement contract actions with a period of performance in excess of one year that total approximately \$9.7 million and represent routine contracting for goods and services,

- 14 Program Contracts competitively selected in excess of \$3 million that total approximately \$158 million, including 9 contracts from the land-based Clean Offshore Wind solicitation, the structure and amounts are in accordance with the PSC Order and we will be issuing a full report to the PSC on the results of the solicitation within 30 days of contract execution.

The Authority is in compliance with the Guidelines in its selection of contractors.

For the Members' information, a Periodic Program Contracts Report was included. During this period 539 Program contracts were executed or modified with a value of \$204 Million. This represents more contract actions, but lower contract value than the prior period and the long-term average. Of note, there were only 2 large scale renewable contracts executed in the period with a value of approximately \$54 Million. During the period, 97% of all (Program and Procurement) contracts and 99% of the aggregate committed value were competitively selected.

Ms. Glanton highlighted some noteworthy changes from the prior period including that the Energy Storage team executed 7 retail storage contracts worth approximately \$17 million and another 14 contracts for PV + Storage worth approximately \$39 million; the Renewables Optimization team contracted the first \$5 million for the Offshore Wind Research and Development Consortium among other projects; and the Workforce Development team executed \$2.1 million of contracts from the Building & Operation Training and another \$660k from the Workforce Development Capacity Building solicitation

Ms. Glanton stated that the Members are requested to adopt a resolution approving the updates to the Procurement and Program Contracts Guidelines, Operative Policy and Instructions, June 2019 (the "Guidelines"), to align the guidelines with updates to New York State Law, as the new laws are enacted.

Ms. Glanton continued, stating that in July Governor Cuomo signed into law the reauthorization of the MWBE program for five more years to ensure ongoing and meaningful participation of MWBEs to participate in and benefit from the program. The new terms include

increasing agency and authority discretionary purchasing threshold from \$200,000 to \$500,000 without a formal competitive process. The changes shall apply to any contracts executed and entered into on or after January 1, 2020.

To align NYSERDA's Guidelines with this law, the discretionary threshold for MWBE contracts will be updated to the new amount of \$500,000. To accommodate the effective dates of statutes and the periodic nature of Board meetings, NYSERDA is requesting approval that when a statute changes, NYSERDA is approved to update the Guidelines to align with the new or revised statute without additional approval.

In response to an inquiry from Mr. Daly, Ms. Glanton explained that these changes are only with respect to sections that need to be made to be consistent with State and Federal law. The Members will be provided information in the Annual Report that is presented in June that describe the changes and will be able to make adjustments if they feel the changes need to be stricter.

Following Ms. Glanton's report, Mr. Kauffman stated that Counsel's office had compared the lists provided by the 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 Periodic Contracts Report. Counsel's office reports no potential conflicts.

Mr. Kauffman then called for a motion approving the periodic procurement contracts report.

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

Resolution No. 1576

RESOLVED, that the Periodic Contracts Report, covering the period May 16, 2019 through August 15, 2019, as presented at this meeting, including but not limited to the contracts identified therein which have been, or are expected to be, executed and which do have, or are expected to have, a period of performance in

excess of one year, is hereby approved in accordance with Public Authorities Law Section 2879.

BE IT FURTHER RESOLVED, that the Members authorize the President and CEO to make such changes to the "Procurement and Program Contract Guidelines, Operative Policy and Instructions (June 2019)" that are consistent with legislation enacted by the State of New York without needing further approval of the Members.

Mr. Kauffman indicated that the next item on the agenda concerned an executive session to discuss the employment history of a particular person.

Mr. Kauffman then called for a motion to enter into executive session to discuss the employment history of a particular person.

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

Resolution No. 1577

RESOLVED, that pursuant to Section 108 of the Public Officers Law, the Members shall convene in executive session on October 8, 2019 for the purpose of discussing the employment history of a particular person.

Mr. Kauffman then asked everyone except the Members to leave the room.

Following the executive session, Mr. Kauffman stated that the meeting was reconvening in open session. No formal action was taken during the executive session.

Mr. Kauffman indicated that the next item on the agenda was a status report on NY Green Bank activities from its President, Alfred Griffin.

Mr. Griffin reported on some of the highlights of what NYGB has accomplished in the most recent quarter, beginning with the closing of \$49 Million in transactions since March of 2019, that included the first transaction in a controlled environment agriculture project. Cumulative commitments are now \$786 million as of June 2019, which amounts to approximately \$2.4 Billion of project involvement across New York State. NYGB has

maintained a strong pipeline, which remains in excess of \$500 million, continuing to be self-sufficient and has supported a number of key state priorities in the quarter, including community solar and energy efficiency. Capital deployment has had steady upward growth, with the current portfolio at \$504 Million, the difference between the \$786 and the \$504 million is due to refinancing and repayments. In terms of greenhouse gases associated with NYGB investments to date, it is estimated to be 9.55 million metric tons. The cumulative revenues associated with NYGB investments are \$65.4 million as of June 2019.

NYGB has a number of strategic priorities, including clean energy for low to moderate Income (“LMI”) consumers, energy storage, as well as energy efficiency, which remains a strong priority within the commercial and residential markets. There is a priority around large scale renewables, both onshore and offshore, closely coordinating with NYSERDA. Community Distributed Generation continues to be an area with a lot of opportunity and is expected to grow in the upcoming quarter for the NYGB. More private third-party investors are being seen stepping into the market. Clean transportation is in the early stages still, but it will be an important sector and NYGB has already been making efforts to coordinate with NYSERDA’s clean transportation team and Adam Ruder to be certain that conversations are being had with as many people as can be found. Bioenergy is another field in which there is traction being seen, in terms of anaerobic digestion, etc. These are the areas NYGB sees as its strategic priorities in addition to working on the pipeline on a daily basis.

In terms of key metrics NYGB uses to measure itself, committed funds were a little off pace for the quarter ended June 2019. There have been new RFPs put out on the legal and the engineering consulting fronts. NYGB has the most diverse pipeline transactions that they have ever had, due to the policy work being done and market participants getting the work done. This concluded Mr. Griffin’s report on the NYGB.

Mr. Kauffman indicated that the next item on the agenda was a status report on the Authority’s partnership with NYS DEC and NYS DOT as a result of the settlement with Volkswagen. Adam Ruder, Clean Transportation Manger lead the discussion.

Steve Flint, the Director of the Division of Air Resources for NYS DEC began by reporting that the Volkswagen settlement dispersed \$2.7 Billion among the states for clean transportation projects. The goal of these projects was to reduce diesel emissions by replacing or repowering older, dirtier diesel vehicles and engines with an all-electric, alternative fueled vehicles and engines. These projects are to take into consideration the statewide air quality improvement goals and prioritize those areas that are most impacted by diesel emissions including Environmental Justice neighborhoods. These plans are aimed at accelerating the transition to zero emission transportation systems by promoting greater use of all-electric vehicles, through the prioritization of diesel-to-electric replacement projects. Most of the funding is going into Class 8 Local Freight Trucks and Buses. It appears that over 13,000 diesel vehicles are being impacted, 15% of the money is allowed to be used for zero emission vehicle supply and charging equipment. It is expected that 40% of the total money will be put through NYSERDA to eligible projects.

Lynn Weisman from NYS DOT reported on the Congestion Mitigation and Air Quality improvement project ("CMAQ") that helps to improve the air quality of the state in relation to transportation, 85% of this money is focused in the downstate area of NY. According to law, this funding can be used on activities related to travel demand management and rideshare projects, congestion reduction and traffic flow improvements, transit improvements, freight intermodal projects, pedestrian bicycle, and alternate fuel and clean vehicles. CMAQ funding eligibility is based on three basic strategies for reducing emissions: reduction of the number of single occupant vehicle trips on the highway network, reduction of idling of vehicles in traffic by improving traffic flow, and improvement of the efficiency in the operation of fleet engines through emissions reducing technology or operating practices. The funds from CMAQ are working in conjunction with the VW Settlement funds in order to reduce emissions statewide.

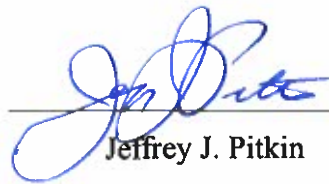
Adam Ruder followed up with his presentation, reporting that the New York Truck Voucher Incentive Program provides point of sale discounts (vouchers) to reduce the cost of all-electric (BEV) and alternative fuel commercial vehicles (AFV). The BEV and AFV

technologies are cleaner, quieter and frequently less costly to operate; vouchers reduce the upfront purchase costs and the payback period. This program has brought together vehicle manufacturers, dealers (contractors), and fleets to get cleaner trucks and buses on the road. Scrappage ensures the removal of the oldest, dirtiest diesel engines from New York State roads. In the previous version of the program there was a replacement of approximately 600 diesel vehicles with cleaner alternative fuel vehicles. The new program, which was released in September 2019, currently has approximately \$18 million in the program with the expected addition of VW settlement funds and a new maximum voucher amount per vehicle of \$185,000. The projects are now statewide, and the application process has been streamlined through the use of Salesforce. Although the eligible vehicle technologies may vary, the vast majority of the funding is for all-electric vehicles, also allowing for repowered vehicles for diesel engines.

In response to an inquiry from Chuck Bell, it was determined that the span of the VW settlement is ten years.

Mr. Kauffman indicated that the next item on the agenda was other business. He explained that at the June meeting the members requested that consent agendas be implemented in the board process. The items to be included in the consent agendas are reports and items that have been previously presented to the committees and just require board approval for submission. The members concurred with this process going forward.

There being no other business, Mr. Kauffman called for a motion to adjourn. Whereafter, upon motion duly made and seconded, and by voice vote of the members present, the meeting was adjourned.



Jeffrey J. Pitkin
Acting Secretary



NYSERDA

ANDREW M. CUOMO
Governor

RICHARD L. KAUFFMAN
Chair

ALICIA BARTON
President and CEO

NOTICE OF MEETING AND AGENDA

September 24, 2019

TO THE MEMBERS OF THE NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY:

PLEASE TAKE NOTICE that a regular Meeting (the 244th meeting) of the New York State Energy Research and Development Authority will be held in the Authority's Albany Office at 17 Columbia Circle, Albany, New York, and by webcast in the Authority's New York City Office located at 1359 Broadway, New York, New York, on Tuesday, October 8, 2019, commencing at 2:00 p.m., for the following purposes:

1. To receive a report from the Audit and Finance Committee:
 - a. to consider and act upon a resolution appointing Bond Counsel for the Authority; and
 - b. to consider and act upon a resolution appointing Underwriters for the Authority.
2. To receive a report from the Program Planning Committee.
3. To receive a report from the Waste and Facilities Management Committee.
4. To consider and act upon a resolution approving amendments to the Authority's By-Laws.
5. To consider and act upon a resolution approving certain contracts, and to receive a Periodic Program Contracts Report.
6. To consider and act upon a resolution to enter in to executive session to discuss the employment history of a particular person.
7. To receive a report on NY Green Bank activities.
8. To receive a report on one of the Authority's Programs.

New York State Energy Research and Development Authority

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9. To transact such other business as may properly come before the meeting.

Members of the public may attend the meeting at either of the above locations. Video conferencing will be used at both locations and the Authority will be posting a video of the meeting to the web within a reasonable time after the meeting. The video will be posted at <http://www.nyserda.ny.gov/About/Board-Governance/Board-and-Committee-Meetings>.

A handwritten signature in black ink, appearing to read "Jeff Pitkin", written in a cursive style.

Jeffrey J. Pitkin
Acting Secretary