

MINUTES OF THE ONE HUNDRED TENTH MEETING OF THE
PROGRAM PLANNING COMMITTEE
HELD ON JUNE 23, 2020

Pursuant to a notice and agenda dated June 10, 2020, a copy of which is annexed hereto, the one hundred tenth (110th) meeting of the Program Planning Committee (the “Committee”) of the NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY (the “Authority”) was convened at 12:30 p.m. on Tuesday, June 23, 2020, by videoconference.

The following members of the Committee were present:

Mark Willis, *Committee Chair*
Richard Kauffman, *Chair of the Authority*
Sherburne Abbott
Charles Bell
Ken Daly
Marie Therese Dominguez
Kate Fish
Jay Koh
Gil Quiniones

Also present were Alicia Barton, President and CEO; Janet Joseph, Senior Vice President for Strategy and Market Development; John Williams, Vice President for Policy and Regulatory Affairs; Jeffrey J. Pitkin, Treasurer; Peter J. Costello, General Counsel; Sara L. LeCain, Senior Counsel and Secretary to the Committee; and various other staff of the Authority.

Mr. Willis called the meeting to order. The meeting notice and agenda were forwarded to the Committee Members and the press on June 10, 2020. The meeting was held via videoconference and the Mr. Willis asked Sara LeCain, to conduct a roll call. Each Member indicated their presence and Ms. LeCain confirmed a quorum was present.

Mr. Willis indicated that the first item on the agenda concerned the approval of the minutes of the one hundred ninth (109th) meeting of the Committee, held on January 28, 2020.

Whereafter, upon motion duly made and seconded, and by unanimous voice vote of the Committee members, the minutes of the hundred ninth (109th) meeting of the Committee, held on January 28, 2020 were approved.

Mr. Willis indicated that the next item on the agenda was the review and approval of the Program Planning Committee Charter. This item was presented by the Authority's General Counsel Peter Costello.

Mr. Costello stated that pursuant to the Public Authorities Accountability Act of 2005, each of the Authority's Committees adopted charters setting forth each Committee's responsibilities. One of those responsibilities is to periodically review its charter and determine what if any amendments need to be made. Those recommendations are then presented to the full Board for approval. Management did not recommend any substantive changes to the Program Planning Committee Charter.

Mr. Costello noted that in reviewing the Charter prior to the meeting, he noticed a discrepancy between the number of members composed in the Committee and the Bylaws. He recommended that they align such that the composition of the Committee is no fewer than three, no more than ten as the Bylaws do state.

Mr. Willis then stated that they do encourage all Members of the Board to attend whether or not they are PPC Members because that allows the PPC to have a full discussion without having to repeat all that discussion for the full Board.

Mr. Willis then called for a motion recommending approval of the Program Planning Committee Charter, with the modifications, as suggested by Mr. Costello.

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

Resolution

RESOLVED, that the Charter of the Authority's Program Planning Committee as presented to the Members for consideration at this June 23, 2020 meeting, with such non-substantive, editorial changes and grammatical changes as the President and Chief Executive Officer, in her discretion, may deem necessary or appropriate, are recommended for adoption and approval by the Board.

Mr. Willis indicated that the next item on the agenda was an update on new directions for clean energy programs under the Climate Leadership and Community Protection Act ("CLCPA") and the response to COVID-19. The Authority's Senior Vice President for Strategy and Market Development Janet Joseph stated that the presentation was focused on future directions and emerging issues for the major clean energy programs at the Authority. She explained that 2020 is a big year for clean energy programs. Specifically, there is the first triennial review of the Clean Energy Fund ("CEF"), the goals for NY Sun are being substantially increased, and there is a whole new chapter of renewable resource development in New York State.

Ms. Joseph highlighted the performance to date for the CEF. The CEF is comprised of four major portfolios that work together to meet ambitious clean energy and climate goals in New York State. She noted that the market development portfolio is the largest portfolio at \$2.7 billion. That portfolio is focused on decarbonizing buildings with a heavy focus on energy efficiency and electrification, while supporting initiatives that benefit low- and moderate-income households. Next, the innovation and research portfolio is a little under \$1 billion. It provides direct investments in research and development and clean technology startup companies, as well as support to build the innovation capacity in New York State in support of a clean energy economy. Third, the \$1 billion NY Green Bank focuses on increasing confidence in financing for clean energy technologies. Lastly, there is the recently expanded NY Sun.

Ms. Joseph explained that there has been significant progress under the Clean Energy Fund from its inception back in 2016 through 2019. The tenure budget was at \$5.6 billion, of that \$3.9 billion of programs have been approved and approximately \$2.7 billion worth of projects have been committed to date. This shows from a cashflow perspective, that the Authority is about four years into the tenure program, about 40% through the Clean Energy Fund from a time trajectory. The Authority has committed about 50% of the funds, a healthy trajectory in terms of moving money into the market.

Ms. Joseph continued, describing the emerging policy issues that are factored into the orientation for the CEF over the next five years. The CLCPA is a significant driver in how programs will be formulated going forward. It has raised the bar for the level of ambition that is needed to deliver in the CEF. The CLCPA places an increased emphasis on serving disadvantaged communities and the low-income consumers and highlights the need to create quality jobs in the green economy.

Ms. Joseph explained that the policy objectives in the CLCPA will be considered significantly for the CEF investments going forward, which is a major driver at both State and local levels. Additionally, there are enabling opportunities that will help to achieve the clean energy goals, including the action in New York City with Local Law 97 and the Climate Mobilization Act, which set ambitious greenhouse gas goals. Ms. Joseph noted that one milestone in 2020 was 300 clean energy communities across New York State which was achieved despite the pandemic.

Ms. Joseph indicated that the State is in the midst of a transition from dependence on natural gas and this transition needs to be accelerated in light of the CLCPA requirements and also in light of the ground natural gas supply and its demand constraints. With New Efficiency New York, utilities will be investing substantially in energy efficiency and in some cases doubling and tripling their budgets.

Ms. Joseph explained that there are regions of New York State where the utility investment in energy efficiency will dwarf what the Authority has available for investments. She stated that 20,000 jobs in the clean energy sector in New York State have been lost. These jobs will need to be built back to achieve the ambitious, clean energy goals.

In response to an inquiry from Mr. Willis, Ms. Joseph stated that the 20,000 figure is for the totality of the clean energy industry. It includes solar and energy efficiency, as well as the rest of the clean energy industry. Most of the job loss is on the consumer facing side. There are less laborers to deliver on the programs and has decreased over the past few months, but she noted that the Authority is in the early days of tracking this data.

Next, Ms. Joseph stated that 2020 is the first triennial review of the CEF since it was established. The review will include a public comment on the annual CEF performance report. The Authority will produce a synthesis and a summary report of the CEF market impacts. Some of the issues that will be deliberated in the program review include the evaluation of the financial collection schedule, revision of performance metrics and goals, and analysis of the requirements regarding disadvantaged communities under the CLCPA. The review will be completed across all four of the CEF portfolios.

In response to an inquiry from Mr. Daly, Ms. Joseph indicated that the analysis and framework for ensuring customers have the head room and the programs are conducted in an organized manner is part of the deliberations of the Climate Action Council.

In response to an inquiry from Mr. Kauffman, Ms. Joseph explained that within the market development portfolio, the focus is on advancing electrification solutions as alternatives to fossil-based heating. Looking for alternative solutions for heating and cooling will be part of the plans in different aspects of the CEF.

Ms. Joseph explained that to build an inclusive, clean energy economy to support the economic recession calls for programming to maximize job creation and stimulate the green economy. Workforce development investments will be used to help build the labor market

position, the market for success and strategically focus on disadvantaged populations and priority populations, which is a focus of future workforce development investments.

In response to an inquiry from Mr. Willis, Ms. Joseph indicated that the Authority works closely with the New York State Department of Labor and State University of New York to design the Authority's workforce development initiatives.

Continuing the presentation, Ms. Joseph indicated that another big issue that will be considered as part of the review is the return on investment that the Authority could deliver that was identified during the development of the CEF in 2015. Initial estimates put savings at 10%-15%. However, going forward, the Authority will need to deliver good projects that have great customer returns on investments.

Ms. Joseph stated that the Authority is going to need to have reference cases and business models that can demonstrate how to get to net zero carbon buildings. It will need to figure out how to optimize building systems for indoor health, as well as a carbon constrained world. The movement toward buildings has been rising slowly in the green buildings field, and COVID has accelerated that more. Real estate owners and property managers are all trying to understand the interplay between their energy management systems, their heating, cooling, and ventilation systems and indoor health. This is an issue for a few years and something that needs to be considered in future programming.

Ms. Joseph stressed that there is a need to adopt and pioneer the best way to protect clean energy from climate resiliency risks. These are the big policy drivers that the Authority will be thinking about as it looks to 2020 and beyond.

In response to inquiry from Mr. Kauffman, Ms. Joseph explained that in terms of the interest in bringing in health care dollars to drive some of the broader clean energy objectives, the Authority is still hoping to do that. She mentioned the Healthy Homes Pilot that was in collaboration with the New York State Department of Health. The program has been delayed

given the current health crisis, although they will still be pursuing that objective over the course of the next year.

In response to an inquiry from Commissioner Dominguez, Ms. Joseph stated that the Authority is investing billions of dollars in building out a renewable energy power system. The Authority is also investing substantial resources in green buildings, ensuring those buildings are also resilient to climate risks and other disruptions in energy systems.

With respect to indoor health, Ms. Abbott noted that some of the impediments is lack of funding for research and development. She recommended further focus in this area in the future.

Continuing, Ms. Joseph highlighted the COVID impact and the responses that were put in place for the health crisis, as well as the economic crisis in the near term and the mid- to long-term. The Authority moved quickly with a range of near-term responses to help its business partners. Changing program rules and requirements provided increased flexibility and cash flow. The Authority also provided enhanced investment in business development types of programs. Ms. Joseph noted that the Authority increased project funding caps, so that consumers get more benefit and clean energy businesses get a bigger project. It is trying to use the current crisis to challenge the industry to move forward with things like virtual and remote audits. There is a lot of room in that space and a lot of opportunity for energy efficiency businesses. Lastly, the Authority is exploring a range of programming options that can have a stimulus effect in terms of economy and jobs.

Mr. Koh commended the Authority on the emphasis and the extension of the strategic focus on climate resilience, particularly the energy system, whether it be water or economy. However, he noted that the State is in a very vulnerable position because of COVID leading to a more fragile environment both economically and from an operations healthcare and other perspective.

Mr. Daly seconded Mr. Koh's comments. He encouraged the Authority to do a lot of thinking through with respect to ratepayers and consider the effects its work will have on utility bills.

Next, David Sandbank, Vice President for Distributed Energy Resources Technology highlighted the growth of the NY Sun Program. He explained that the statewide installation is 2.4 gigawatts and the current pipeline is large and sizable at 1.5 gigawatts. When looking at the pipeline, 1.3 gigawatts are community solar projects which is most of the capacity that is being developed right now. Remote net metering projects are 90 megawatts and 100 megawatts of onsite.

In response to an inquiry from Mr. Willis, Mr. Sandbank indicated the program is hoping for more remote net metered projects and onsite projects as those projects realize the most benefits for community solar. Plus, it is a great vehicle for the reaching low income and environmental justice communities.

Mr. Sandbank noted that the photovoltaic ("PV") cap cost of a project is going down substantially, partly due to the community. Solar projects are building on economy of scale. They are larger projects than what used to be primarily a residential program. That has influenced the decrease in costs, but there has been a decrease in costs in community solar projects across the board for many different reasons.

Mr. Sandbank explained that the New York State Public Service Commission ("PSC") Order was approved on May 14, 2020 to expand from 3 gigawatts to 6 gigawatts by 2025. It went from just a NY Sun budget perspective in 3 gigawatts, to everything that is interconnected statewide in the 6-gigawatt goal. What that means is the total new incentivized capacity to reach 6 gigawatts, isn't another 3 gigawatts, it's taking into consideration what has already been built outside of NY Sun and what is suspected to be built outside of NY Sun.

Mr. Sandbank stated that the PSC Order authorized expenditures of \$230 million to come from currently uncommitted funds. The Authority will need to figure out where the remainder of

the balance is going to come from after the triennial CEF review process. \$200 million of that total \$573 million budget is going to go to environmental justice communities and low income or low to moderate income recipients. There will be a mandatory \$135 million dedicated for grants and project adders. The Authority will spend no less than \$65 million towards the same demographic from base incentives.

In response to an inquiry from Mr. Willis, Mr. Sandbank indicated that most of the community solar projects are in the National Grid and New York State Electric and Gas Corporation territories.

Mr. Sandbank noted a lot of the environmental justice communities are very much affected by COVID-19 more so than most other areas. This is more of a reason why the Authority should not only be mandated, but really feel that it is imperative, to concentrate on economic recovery within the energy community and the environmental justice communities. One is community planning and pre-development grants. There will be a press release going out that is going to talk about a \$10.6 million program that has been very successful to this point.

Mr. Sandbank stated that the Authority was required to file a COVID report based on the PSC's Order of the 6-gigawatt expansion. The COVID report was submitted on June 15, 2020. The residential solar market was affected the most out of all the solar markets, more difficult especially for rooftop and community solar, because they rely on door-to-door and in person meetings to adopt customers for projects. Customer acquisition was paused as much as the construction market was paused. Thousands of employees were laid off and there was uncertainty about the rate of recovery. There is increased uncertainty and possibly higher interest rates.

In response to an inquiry from Mr. Bell, Mr. Sandbank explained that the breakout is mass market subscribers and solar recipients and not income based. The program tries to maintain a balanced approach so that it is not totally reliant on community solar. This would include using the Green Jobs – Green New York Loan Program.

In response to an inquiry from Mr. Kauffman, Mr. Sandbank explained that if the goal is ten years to reach three gigawatts and two years to reach six gigawatts, there has to be some momentum to achieve those goals. He explained that going to six gigawatts will give more time to dramatically lower soft costs as well as increase regulatory improvements.

Next, Doreen Harris, Vice President for Large Scale Renewables, discussed the developments in her program area. Specifically, she detailed how the Authority will achieve its large scale renewable goals, which was the topic of a recent white paper.

With respect to renewables, Ms. Harris stated that in 2030 there is an expected New York state load of 151,000 gigawatt hours. The Authority has run many competitive solicitations successfully for both land-based and offshore wind, all of which will expect to contribute to the 2030 goal. In addition, it sets forth, future procurement targets, to add to that volume, notably an estimate of a procurement of about a gigawatt of offshore wind, annually between now and 2027. The real increase in advancement of land-based renewables on the order of about a 40% increase over historic procurement. Looking forward, it is seen that the option when policy advances beyond 2030 to the full nine gigawatts by 2035 goal. This sets forth a clear pathway to get from here to there.

Ms. Harris continued, stating that the white paper does analyze the costs and benefits of these procurements. The big headline is the levelized bill impact of the program for tier one, which is land-based renewables and offshore, which is about 1.4%. However, when the carbon benefits alone are added, there is a combined net societal benefit of over \$11 billion over the life of these projects. In addition to carbon, there are many other societal benefits that are not quantified in this analysis.

In response to an inquiry from Mr. Kauffman, Ms. Harris explained that the analysis was conducted in accordance with the PSC's benefit cost analysis framework order from 2016, which essentially takes account of electricity electric system values as well as carbon externalities. It does note the other pollutant benefits, as positive health benefits, but are not part of the framework.

Ms. Harris explained that the Authority has proposed a tier four with specific conditions for power resources as a potential flexible resource that could bring in significant renewables into this downstate market. There are several other elements of this proposal, including a repowering proposal, which would allow existing renewables as they reached the end of their useful life to be repowered and delivered to New York.

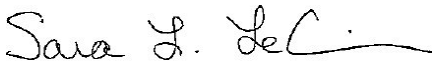
Ms. Harris also noted that there is a program under consideration by the PSC for the support of the baseline renewables known as tier two. The CLCPA is now going to be subject to a notice and comment process. All of this activity will address the various elements of the white paper A technical conference together with PSC Orders will address the various elements identified in the white paper.

Mr. Willis indicated that the last item on the agenda was other business. There being no other business, Mr. Willis opened the floor to the Members to ask questions about the prior presentation.

In response to an inquiry from Mr. Koh, Ms. Harris explained that large infrastructure projects are a driver of economic activity around the State. It is true that during the COVID pandemic, the time was not right to issue the 2020 solicitations until such time as the work could safely continue and people could do their work effectively. There are land-based solicitations pending for this year and offshore wind. Coupled with a commitment from the governor in port investment for offshore wind as well of at least \$200 million. The markers are improving to the point where the conditions are much different than they were a couple of months ago to move those solicitations forward.

Mr. Willis then called for a motion to adjourn the meeting. Whereafter, upon motion duly made and seconded, and by voice vote of the Members present, the meeting was adjourned.

Respectfully Submitted,

A handwritten signature in black ink that reads "Sara L. LeCain". The signature is written in a cursive style with a long horizontal flourish at the end.

Sara L. LeCain

Secretary to the Committee