

MINUTES OF THE ONE HUNDRED NINETY-NINTH MEETING OF THE
PROGRAM PLANNING COMMITTEE
HELD ON JUNE 26, 2017

Pursuant to a Notice and Agenda dated June 15, 2017, a copy of which is annexed hereto, the ninety-ninth (99th) meeting of the Program Planning Committee (“Committee”) of the NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY (“Authority”) was convened at 1:00 p.m. on Monday, June 26, 2017, in the Authority’s Albany Office located at 17 Columbia Circle, Albany, New York, and in the Authority’s New York City Office located at 1359 Broadway, 19th floor, New York, New York, and at New York State’s Center of Excellence for Environmental and Energy Systems (conference room 203), Syracuse University, 727 East Washington Street, Syracuse, New York 13244.

The following Members of the Committee were present:

Richard Kauffman, Chair of the Authority
Sherburne Abbott
Charles “Chuck” Bell
Ken Daly
Jay Koh
John McAvoy
Gil Quiniones

Also present in either Albany or New York City were: Janet Joseph, Acting President and CEO for the Authority; Noah Shaw, General Counsel; Kevin Kelly, Director, Operational Transformation and Lean; Peter Mahar, Controller and Assistant Treasurer; Valerie S. Milonovich, Senior Counsel and Secretary to the Committee; and various other members of the Authority staff.

Mr. Kauffman called the meeting to order, noted the presence of a quorum, and stated that a Notice of the meeting was mailed to Committee Members on June 15, 2017 and to the press on June 20, 2017.

Approval of April 27, 2017 Minutes

The first agenda item concerned the approval of the minutes of the 98th meeting of the Committee held on April 27, 2017. Upon motion duly made and seconded, and by unanimous voice vote, the minutes of the 98th meeting of the Committee were approved.

Report on Clean Energy Fund Progress

The Committee received a report presented by Jennifer Meissner, Director Performance Management, on the progress of the Authority's Clean Energy Fund (CEF) portfolio and activities. Ms. Meissner presented information on the CEF portfolio target alignment, comparing expected investments against targets and the current performance results for each of the Authority's major initiatives, which are: NY-Sun, NY Green Bank, Market Development, and Innovation and Research.

The presentation reported on progress that encompasses one year of the implementation of the portfolio and featured a more detailed description of a few specific program areas. On a portfolio basis, Ms. Meissner reported that approximately 40% of the budgets have been committed and at least 40% of the targets have been met. Therefore, the development of the portfolio as a whole is on track in the context of its 10-year horizon. Ms. Meissner also reported that the annual progress in some areas has been greater than the minimum projected benefits, such as with the industrial and electric vehicle programs. She added that the large-scale renewables, NY-Sun, and NY Green Bank portfolios all show excellent progress, and Staff is confident that this level of benefits will continue.

In response to an inquiry by Mr. Daly regarding the possibility of building upon the success of the gas efficiency savings, Ms. Meissner stated that while gas efficiency is an important element of the full effort, Authority Staff is always analyzing ways to best balance the portfolio as a whole.

With regard to an inquiry by Mr. Daly about low commodity prices, Ms. Meissner stated that the presented projections are current and acknowledged that updated price information will be sought, as warranted.

In response to an inquiry by Mr. Kauffman regarding gauging certain segments of the portfolio given the mix of annual and lifetime targets, Ms. Meissner suggested that a comparison of the approved budget against measured progress for any one initiative would provide a fairly accurate indication of performance. She added that, should funding outweigh measured performance, Staff would likely pursue modifications to that initiative. Using that guideline, in response to an inquiry by Mr. Daly as to the current status of the NY-Sun program, Ms. Meissner suggested that Authority Staff is confident that the current budget and performance will become increasingly aligned given the design of the declining megawatt (MW) block approach. Ms. Joseph added that, with the recent establishment of the Value of Distributed Resources (VDER) tariff by the New York State Public Service Commission, she anticipates NY-Sun program optimization over the next six months to ensure increased alignment.

In response to an inquiry by Mr. Kauffman, Ms. Meissner reported that the NY Green Bank effort is showing good overall progress, stating that it has significantly exceeded goals to commit investments, attract opportunities, and to mobilize private capital and that, overall, the NY Green Bank is reaching its milestones earlier than anticipated. Mr. Daly added that the profitability of the NY Green Bank at this point in time is a good sign.

Ms. Meissner explained that the cost per ton of carbon reduction is one measurement used to track the success of each CEF initiative in determining how each individual effort is faring, as well as how any one new initiative may impact the cost-effectiveness of the overall portfolio. Ms. Meissner provided clarifying information in response to an inquiry by Mr. Kauffman regarding what the targeted costs and benefits are likely to be for the transitional (or, “legacy”) programs. Ms. Joseph added that because the transition programs provide more direct interventions and they are more costly on a dollar per ton of carbon basis. This contrasts to the newer, CEF initiatives that focus on more indirect, market transformation initiatives and show a lower cost per ton for reduction. This leads to greater overall carbon reduction achievements for a lower cost on a portfolio basis, going forward.

Ms. Meissner reported that about 80% of the CEF portfolio initiatives are on or nearly on track. She reported that about 11% are under-performing and are being actively revised, or plan to be. She provided examples of initiatives that fell into each status category.

In response to an inquiry by Mr. McAvoy regarding the success of the Low-to-Moderate Income (LMI) effort, Ms. Meissner confirmed that the demand between the two sectors, low and moderate, was fairly evenly distributed. In response to an inquiry by Mr. Daly as to additional tools and devices that could be provided to LMI customers for bill management, Ms. Joseph identified solar technologies as one potential strategy that is being explored.

In response to an inquiry by Mr. Quiniones, Ms. Meissner suggested that should the federal Weatherization Assistance Program end, it may increase the demand for the Authority's LMI program offerings.

In response to an inquiry by Mr. Kauffman regarding the premise and scale-ability of the On-Site Manager initiative, Ms. Meissner confirmed that the underlying hypothesis is to prove the value proposition of an entity's employment of an individual tasked with managing energy consumption.

In response a presentation regarding the underlying reasons for the mixed performance of some of the commercial transition programs and the ensuing revisions that have been undertaken, Mr. Daly stated that this provides a good example of the successful migration of and Authority-utility collaboration regarding certain programs.

No action was taken on this item.

Presentation on Distributed Energy Resource Integration Efforts

A presentation was received by a panel on recent efforts toward distributed energy resource (DER) integration. The panel was comprised of Dave Crudele, Project Manager, Smart Grid Systems and Distributed Energy Integration from the Authority, Chris Kelly, Senior Vice President Electric Process and Engineering at National Grid and Damian Sciano, Director Distributed Resource Integration at Consolidated Edison.

As DER integration is fundamental to achieving the State's REV goals, the Panel described the substantive progress made on the development of a framework, resources, enhanced technical leadership, and ongoing collaborative work being implemented to address the robust increase in

project applications. It was reported that many stakeholders are working diligently in several forums and working groups to address the challenges and barriers (technical, physical, and financial) for both interconnection and the integration of various DER technologies, including peak demand and energy storage technologies.

Mr. Crudele reported that, in 2014, there was a dramatic increase in DER activity owing to changes in State and federal policies, the availability of incentives, and a newly energized market. The goals are to increase the State's knowledge base, and to examine and improve the culture of the engineering and standards to preserve safety and reliability while encouraging necessary technical changes. A technical working group, led by New York State Department of Public Service (DPS) and Authority Staff, and including utility and project developer representatives has been very successful, as has a policy working group that solves issues and interpretations on standard interconnection requirements. A systematic approach has been adopted that provides a single point of contact at each utility, as well as at each of the involved entities, to answer questions and provide structure for hundreds of ongoing conversations; to solve common themes and challenges, and to elevate issues to the respective working groups. A grid modernization advisory committee has also been established.

Mr. Kelly described the recent challenges in this area from the perspective of National Grid, which included addressing a large increase in DER applications and a large back log of interconnection requests. Working in the collaborative arena, National Grid was successful in improving transparency and decreasing technical costs through innovation and fully addressed its application back log in one year's time. Mr. Kelly stated that resolving issues that once posed a great challenge has now made National Grid a contemporary in this field and the one-year turn-around that was made possible through policy changes, acceptance of inverter technologies, and by eliminating certain costs. Mr. Kelly stated that this progressive approach has saved customers great expense and that the involvement of the Authority has leant credibility to the overall effort. He also described the benefits of a newly-employed cost-sharing model that allows for more equitable, pro-rated charges to developers.

Mr. Sciano described efforts involved in building a distributed system platform (DSP) and the implications for substation planning. He stated that the approach to building the DSP is to

provide the greatest opportunities for “non-wires” alternatives to address electric system needs. Mr. Sciano emphasized that the activities underway go beyond implementing information technology solutions, but also include new processes to ensure a culture change. He described the stages necessary to achieve a full buildout to achieving a modernized electricity grid that takes full advantage of challenging technologies that have beneficial environmental attributes. Ultimately, the goals are to select siting locations with the best chances of success; encourage a high transaction market where prices decrease; and develop the correct tools for operations and the success of the market. Mr. Sciano described Consolidated Edison’s experiences with solar, combined heat and power, demand response efforts, and energy efficiency, stating that there remains much potential. Consolidated Edison is currently implementing its Advance Metering Initiative (AMI) program, Green Button Connect, and enhancing its digital customer experience and cyber security efforts. He stated that the utility’s relationship with the Authority, particularly on demonstration projects, and its work with the New York Independent System Operator (NYISO) are key to identifying the path forward.

Mr. Daly stated that collaboration has led to cost decreases, sometimes of up to 50%, thereby attracting developers to more optimal locations and allowing for the preemptive siting of necessary substations.

Tying the discussion back to the CEF presentation, Ms. Joseph stated that the Authority’s work on grid modernization and DER integration is one of the most significant thrusts of the R&D Innovation portfolio and one of the Authority’s largest strategic priorities.

Mr. Kauffman provided some foundational thoughts to be considered going forward, such as whether traditional Request for Proposals (RFPs) continue to be the best vehicle for procuring innovation; how to institute optimal price signals; identifying the roles and responsibilities among market participants for providing the necessary IT platforms, and the feasibility of financing soft costs. He also stated that, as these activities lead to significant savings to ratepayers, appropriate financial incentives for the utilities should be developed; otherwise the full value of DER will not be realized should utilities experience financial disincentives against the deployment of DER.

With regard to the issue of IT, Mr. Crudele reported that these efforts are at the beginning stages and a few projects are underway, particularly with regard to the level of monitoring, controls, and cybersecurity.

With regard to the issue of RFPs, Mr. Kelly agreed that the current mechanism may be a bit cumbersome and designing potential solutions could benefit from additional discussion. On the issue of IT platforms, he added that one issue worth exploring is how to collapse communications systems for multiple uses so as to not create overlapping or duplicative systems.

Mr. Kelly identified the issue of increasing voltage on the transmission system as an important development to be monitored.

Mr. Daly reported that until two or three years ago, the emphasis was solely on safety and reliability, and utilities were not provided incentives to attract new distributed generation. Working with the entire industry on this new approach, there is now an opportunity to help customers in the whole market. However, he cautioned that incentives should not replace the traditional ratemaking model that benefits from low cost debt and capital.

No action was taken on this item.

Report on the Authority's University Stakeholder Engagement Activities

The Committee heard a report on the Authority's University Stakeholder Engagement activities presented by Janet Joseph, Vice President for Innovation and Strategy. Ms. Joseph described efforts to explore potential opportunities for new partnerships within New York's academic sector and to increase its involvement in addressing major energy and climate challenges. She stated that many academic institutions would like to participate in clean energy activities and are sometimes unsure of a viable path or do not have a solid understanding of the goals to be accomplished. This effort will attempt to be to bridge the information gaps, and to learn more about this sector's energy priorities and overall agenda for research, academic and facility capabilities and needs. In addition to research and technology development, academic institutions serve an important role in training next generation of engineers and entrepreneurs. They also play

important roles as serving as the “first customer” for the adoption of certain new technologies, as community educators, and as workforce developers.

Ms. Joseph noted that the Authority Staff will be visiting with campuses across New York State over the course of the summer and fall to discuss potential collaboration and, in response to an inquiry by Mr. Kauffman, offered to report back to the Committee with initiatives that may be launched or gaps that may need to be addressed, particularly in the areas of workforce development, research and development, or campus energy management.

Mr. Quiniones suggested that the Authority continue to work with the New York Power Authority (NYPA) on these issues, given its work with the Statue University of New York (SUNY) campuses pursuant to Executive Order 88. He sees many opportunities to work together to scale-up and accelerate this initiative. Ms. Joseph added that the Authority has started some early work in this area through the REV Campus Initiative.

Ms. Abbott stated that, given the potential tectonic shift in the availability of federal R&D funding, the type of structured dialogue envisioned should further the policy discussions at all levels and guide universities in ways that leverage their available expertise and talent.

Other Business

Mr. Kauffman indicated that the last item on the agenda was other business. There being no additional business to consider, upon motion duly made and seconded, and by unanimous voice vote, the meeting was adjourned.

Respectfully submitted,



Valerie S. Milonovich
Secretary to the Program Planning Committee



NYSERDA

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Governor

RICHARD L. KAUFFMAN
Chair

JOHN B. RHODES
President and CEO

NOTICE OF MEETING AND AGENDA

June 15, 2017

TO THE MEMBERS OF THE PROGRAM PLANNING COMMITTEE:

PLEASE TAKE NOTICE that a meeting of the Program Planning Committee (the 99th meeting) of the New York State Energy Research and Development Authority will be held in the Authority's Albany Office located at 17 Columbia Circle, Albany, New York, and in the Authority's New York City Office located at 1359 Broadway, 19th floor, New York, New York, and at New York State's Center of Excellence for Environmental and Energy Systems (conference room 203), Syracuse University, 727 East Washington Street, Syracuse, New York 13244, on Monday, June 26, 2017, commencing at 1:00 p.m., for the following purposes:

1. To consider and act upon the Minutes of the 98th meeting held on April 27, 2017.
2. To receive a report on the Clean Energy Fund progress.
3. To receive a report on Distributed Energy Resource Integration efforts.
4. To receive a report on the Authority's University Stakeholder Engagement activities.
5. To transact such other business as may properly come before the Committee.

Members of the public may attend the meeting at any of the above locations. Video conferencing will be used at all 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>.

Valerie S. Milonovich
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