MINUTES OF THE ONE HUNDRED THIRD MEETING OF THE PROGRAM PLANNING COMMITTEE HELD ON JUNE 26, 2018

Pursuant to a Notice and Agenda dated June 15, 2018, a copy of which is annexed hereto, the one hundred third (103rd) 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 Tuesday, June 26, 2018, 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.

The following Members of the Committee were present:

Mark Willis, Committee Chair

Richard Kauffman, Chair of the Authority

Sherburne Abbott

Charles "Chuck" Bell

Kate Fish

John McAvoy

Gil Quiniones

Also present in either Albany or New York City were: Alicia Barton, President and CEO of NYSERDA; Janet Joseph, Senior Vice President for Strategy and Market Development; Jeffrey J. Pitkin, Treasurer; Noah Shaw, General Counsel; Valerie S. Milonovich, Senior Counsel and Secretary to the Committee; and various other members of the Authority staff.

Mr. Willis called the meeting to order, noted the presence of a quorum, and stated that a Notice of the meeting was mailed to Committee Members and to the press on June 15, 2018.

The first agenda item concerned the approval of the minutes of the 102^{nd} meeting of the Committee held on April 17, 2018. Upon motion duly made and seconded, and by unanimous voice vote, the minutes of the 102^{nd} meeting of the Committee were approved.

Janet Joseph, Senior Vice President for Strategy and Market Development provided an overview of the *New Efficiency: New York White Paper* that was released in April 2018 when Governor Cuomo announced an ambitious acceleration of energy efficiency activity in New York. The White Paper includes a comprehensive plan to achieve a new target for significant greenhouse gas emission reductions, a decrease in consumer energy costs, and the creation of additional job opportunities. Meeting the new energy efficiency target will deliver nearly one-third of the reductions needed to meet New York's climate goal of a 40 percent reduction in greenhouse gas emissions by 2030.

Ms. Joseph provided the Committee with a host of information on the new effort, including a portfolio overview; the underlying principles; utility-leveraged and market enabling actions; activities that support low-to-moderate income and deeper energy efficiency savings; building codes and appliance standards; and leading by example through the acceleration of energy efficiency in State facilities. Ms. Joseph concluded the presentation by describing the path forward toward meeting the overall energy efficiency target and comprehensive strategy. She described the effort as directionally-aligned with the State's ambitious and comprehensive overall energy goals, as a transition model that incorporates new approaches, and as requiring a marked increase in utility energy efficiency activity.

Mr. Willis thanked Ms. Joseph for her presentation, calling the effort impressive and acknowledging the large amount of work ahead as the team works toward implementation.

In response to an inquiry by Ms. Fish, Ms. Joseph explained the relationship between the effort presented and that of the Green Jobs/Green New York effort. Ms. Fish also offered observations regarding the value proposition in considering the "level of comfort" when designing residential energy efficiency programs. She also suggested the potential to diversify fuel sources used in certain areas of the state, such as through an increase in the use of alternative wood heat technologies. Ms. Fish also raised awareness of issues being discussed in various arenas regarding energy issues specific to cryptocurrency and data mining.

Mr. McAvoy called the energy efficiency effort exciting and offered that that this was the most comprehensive energy efficiency plan that he has seen in any forum. He is anxious to begin work on this new effort, stating that energy efficiency is always the best way to increase customer value and mitigate environmental impacts. He is in favor of the overall approach, which he described as sustainable, rather than relying on a single solution. Mr. McAvoy thanked Ms. Joseph and the team for their efforts on this White Paper.

In response to an inquiry by Mr. Kauffman about the White implications for the utility sector resulting from this plan, Mr. McAvoy stated that he believes this to be a transition, in that the utility sector should build upon their current efforts while simultaneously taking advantage of new approaches to accelerate efficiency.

Ms. Abbott stated that improving communications and outreach will immeasurably help to increase the acceleration of energy efficiency activity across the State. She added that there are tangible co-benefits that should be communicated to the general public to further increase public support and new market activity.

Mr. Quiniones stated that the team worked very hard with stakeholders and he is very excited to work on this overall effort. In response to his inquiry regarding harmonizing the targets expressed in the White Paper and those for increased electrification, Ms. Joseph explained that anticipated beneficial electrification amounts are netted out, or accounted for, for purposes of developing the goals and strategies.

In response to inquiries by Mr. Willis, Ms. Joseph and Ms. Vanessa Ulmer, Senior Advisor, Policy Development, each provided additional clarification regarding the relationship between the estimates of carbon emission reductions and the overall goal of achieving 185 trillion British thermal units of energy reduction. They also provided additional information regarding the fuel diversity and nonlinear aspects of the strategies designed to reach the overall target.

In closing, Ms. Fish added that this effort is very impressive, represents a very systematic approach and that it is very exciting.

This item was for information only.

Jason Doling, Program Manager for Energy Storage provided a report on the recently released *New York Energy Storage Roadmap* that was released on June 21, 2018. Mr. Doling provided information on the Roadmap approach, modeling and project economics, recommendations and the path forward. The Roadmap was developed jointly by Authority and New York State Department of Public Service Staff, in consultation with numerous stakeholders. The Roadmap identifies the most promising near-term policies, regulations and initiatives needed to realize the ambitious energy storage target to deploy 1,500 megawatts of energy storage by 2025 and anticipates a forthcoming 2030 target to be established by the New York State Public Service Commission. Mr. Doling concluded the presentation by describing the path forward for the remainder of 2018 as the State works toward meeting these important targets.

Regarding the energy storage target of 1,500 megawatts by 2025, Mr. Quiniones added that the Power Authority of New York State is projected to provide an additional 150 megawatts generated from pumped storage capacity to help to meet this goal.

In response to an inquiry by Mr. Quiniones regarding the assumed duration goal of the technologies expected to be put into place, Mr. Doling stated that no particular duration goal was assumed at this time, although he did provide the specific ranges of duration associated with the differing types of technologies that were considered and are likely to be deployed.

Mr. McAvoy stated that today's presentations represent two very substantive policy areas for the State that are rapidly accelerating and that he looks forward to continuing to work collaboratively on these issues.

Mr. Kauffman also added that these efforts represent new approaches toward addressing long-standing questions. In response to an inquiry by Mr. Kauffman regarding new or revised roles for the utility sector, Mr. McAvoy stated that he is supportive of the suggested approach and considers it a transition toward new approaches and strategies, rather than a wholesale shift.

He added that, in his opinion, a good strategy would be to continue to nurture the new approaches while continuing to implement successful traditional approaches. He also cautioned that being mindful of the short period of time projected to achieve significant goals will require taking advantage of all available, viable approaches and that seeking the lowest cost for the

customer is not only desired but owed to the consumer.

Mr. Quiniones added that the path for implementing both approaches, the new and the

traditional, is becoming more clear. He added that this is the time to embark on the harmonizing

and prioritizing of the options that need to occur in order to send the correct market signals.

Overall, he finds the effort one of great interest.

Mr. Willis thanked everyone for their efforts, stating that this has provided great "food

for thought" and there is much work to be accomplished. This item was for information only.

Mr. Willis 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 A. Wilonovich

Valerie S. Milonovich

Secretary to the Program Planning Committee

5