

STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION

At a session of the Public Service  
Commission held in the City of  
Albany on December 19, 2013

COMMISSIONERS PRESENT:

Audrey Zibelman, Chair  
Patricia L. Acampora  
Garry A. Brown  
Gregg C. Sayre  
Diane X. Burman

CASE 10-M-0457 - In the Matter of the System Benefits Charge IV.

ORDER APPROVING THE ALLOCATION OF FUNDS FOR A  
POWER ELECTRONICS MANUFACTURING CONSORTIUM

(Issued and Effective December 20, 2013)

BY THE COMMISSION:

INTRODUCTION

In this order, the Commission approves the allocation of \$7.5 million in uncommitted System Benefits Charge (SBC) funds by the New York State Energy Research and Development Authority (NYSERDA) to support a Power Electronics Manufacturing Consortium (PEMC) initiative.

BACKGROUND

Funding for New York State energy efficiency programs using the SBC was initiated in 1998 and further extended for five year terms in 2001 and 2006. The last of those extensions was originally scheduled to expire on June 30, 2011. By order issued on December 30, 2010, the Commission extended again the SBC funded programs, referred to as SBC III, for a six month

period through the end of 2011.<sup>1</sup> The order also directed NYSERDA to prepare a new Technology and Market Development (T&MD) portfolio to "accelerate energy innovation through support for scientific research and market analysis, investment in technology development and demonstration, promotion of a clean energy economy through business and market development, acceleration of adoption of clean energy technologies and practices, and the incorporation of more rigorous energy-use standards in codes and industry best practices".<sup>2</sup>

By order issued October 24, 2011, the Commission approved NYSERDA's portfolio of three T&MD categories: (1) Power Supply and Delivery, (2) Building Systems, and (3) Clean Energy Infrastructure, for a five-year period from January 1, 2012 through December 31, 2016.<sup>3</sup> The order also established a process for determining the appropriate disposition of SBC III funds that were uncommitted as of December 31, 2011, or would become uncommitted. The Commission directed NYSERDA to submit a full accounting of all uncommitted SBC III funds as of December 31, 2011, and invited the Authority to propose beneficial projects to be supported by those funds, and any additional SBC III funds that may become uncommitted in the future.

On March 9, 2012, NYSERDA filed the required accounting report and on March 30, 2012, filed a proposal to support an effort by the Brookhaven National Laboratory (BNL) to secure United States Department of Energy (U.S. DOE) funding for a New York Energy Storage Innovation Hub. By order dated

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<sup>1</sup> Cases 10-M-0457 , In the Matter of the System Benefits Charge IV, Order Continuing Systems Benefit Charge Funded Programs (issued December 30, 2010).

<sup>2</sup> Id., p. 2.

<sup>3</sup> Case 10-M-0457, supra, Order Continuing the System Benefits Charge and Approving an Operating Plan for a Technology and Market Development Portfolio of System Benefits Charge Funded Programs (issued October 24, 2011).

September 13, 2012,<sup>4</sup> the Commission approved, among other allocations, NYSERDA's request to make available \$7.5 million to support the application to the U.S. DOE. The Commission directed NYSERDA to notify the Director of the Office of Energy Efficiency and the Environment (OEEE) and to file an alternative proposal for approval if the New York Energy Storage Innovation Hub application proved unsuccessful. On December 5, 2012, NYSERDA notified the Director of OEEE that the Energy Storage Innovation Hub application was not approved and that it would provide a proposal to the Commission after considering other uses for the \$7.5 million.

NYSERDA's CURRENT PROPOSAL

On September 5, 2013, NYSERDA filed a petition requesting to reallocate the \$7.5 million in uncommitted SBC funds to support the Power Electronics Manufacturing Consortium (PEMC) proposal developed in response to a U.S. DOE Solicitation.<sup>5</sup> According to NYSERDA's petition, the U.S. DOE issued a Funding Opportunity Announcement as part of its National Manufacturing Innovation Initiative to create regional manufacturing innovation centers including one focused on clean energy manufacturing, the subject of the New York PEMC proposal. The proposed PEMC represents a public-private partnership.<sup>6</sup>

NYSERDA states that, as proposed, the PEMC will be headquartered in New York, and will also include two research

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<sup>4</sup> Case 10-M-0457, *supra*, Order Authorizing the Reallocation of Uncommitted System Benefits Charge III Funds (issued September 13, 2012).

<sup>5</sup> U.S. DOE Funding Opportunity No. DE-FOA-0000683

<sup>6</sup> The Research Foundation of the State University of New York, on behalf of the College of Nanoscale Science and Engineering, is the prime applicant to DOE, along with many key academia, government, and industry groups, including NYSERDA. In total, in excess of \$0.5 billion will be contributed from over sixty organizations for the first five years of the PEMC.

and development hubs, one to be located in New York and the other in Massachusetts. The New York hub will focus on design and development of efficient power electronic devices and systems and will host a pilot fabrication line, post-fabrication packaging, and reliability centers. NYSERDA anticipates that the PEMC will attract additional private funding by stimulating interest and industry investment within New York - increasing the leverage of the \$7.5 million in funding it requests.

NYSERDA indicates that the U.S. DOE solicitation may provide up to \$70 million to revitalize clean energy manufacturing and support manufacturing competitiveness by driving innovation, and developing and accelerating the adoption of the next generation of technologies that will increase energy productivity, improve product quality, and reduce cost, waste or pollution. NYSERDA further states the PEMC proposes to overcome important technical barriers for power conversion by applying dramatic new advances in wide bandgap (WBG) technology.<sup>7</sup> It claims these new advances offer a major gain in efficient electrical distribution with corresponding cost savings.

NYSERDA asserts that investment in the PEMC is consistent with its T&MD portfolio, in particular its Smart Grid and Electric Vehicle Infrastructure Initiatives, and will be a significant program addition with benefits that will accrue across all T&MD portfolio categories. It claims that approval of the proposal will lead to improved efficiency of power systems across New York, reasoning that power electronics are widespread in the modern electricity grid and wide bandgap materials offer potential performance improvements to a number

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<sup>7</sup> Wide bandgap materials are semiconductors that offer advantages including reduced resistance, higher operating frequencies, and higher operating temperatures, which can lead to higher efficiencies, reduced size or footprint, and reduced cooling requirements.

of applications including alternating current (AC) transmission control and regulation, direct current (DC) to AC conversion for high-voltage direct current (HVDC) transmission cables, variable speed drives for motors, inverters for energy storage and distributed generation resources, and electric and hybrid vehicle drive systems.

In addition, NYSERDA states that the focus of the PEMC on these areas directly supports advancement of the Governor's Energy Highway Initiative to apply advanced technologies to further improve power flows through the electric transmission and distribution system and contribute to a more environmentally sustainable power sector. NYSERDA states that additional benefits of supporting the PEMC include increased technical viability of new power electronics technologies, increased strength and viability of the New York power electronics industry, likely leading to the creation of new businesses and product sales along with potential energy savings and concomitant pollutant emissions reductions.

#### NOTICE OF PROPOSED RULEMAKING

A Notice of Proposed Rulemaking concerning the Petition for Allocation of Uncommitted System Benefits Charge III Funds for Power Electronics Manufacturing Consortium (PEMC) Initiative was published in the State Register on September 25, 2013 [SAPA 10-M-0457SP6]. The minimum time period for the receipt of comments pursuant to the State Administrative Procedure Act (SAPA) regarding this notice expired on November 12, 2013. There were no comments received.

#### DISCUSSION

NYSERDA's request to reallocate \$7.5 million in uncommitted SBC III funds to support the PEMC is approved. As

suggested in our December 30, 2010 order in this case, when selecting programs to be funded through the SBC, it is important to encourage programs and efforts leveraged by other private and public investment sources. The PEMC initiative, if selected by U.S. DOE, involves industry leaders from government, private industry and academia and if successful, promises to solidify New York's already strong clean energy leadership. The research and development efforts to understand and better apply advanced wide bandgap materials are in the public interest because they are likely to lead to improvements in the performance and efficiency of a wide variety of power electronics equipment for the power industry in general and specifically for smart grid, advanced buildings and electric vehicle infrastructure. If the PEMC proposal is not successful in acquiring U.S. DOE funding, NYSERDA is directed to notify the Director of OEEE and file an alternative proposal for Commission review and approval. Any such proposal should consider a mechanism for providing NYSERDA a measure of flexibility to meet its future grant objectives.

#### CONCLUSION

With the condition discussed above, NYSERDA's request to reallocate \$7.5 million in uncommitted SBC III funds to support the PEMC initiative is approved.

#### The Commission orders:

1. The New York State Energy Research and Development Authority (NYSERDA) is authorized to allocate and expend \$7.5 million of System Benefits Charge III (SBC III) funds in its possession that were not committed for expenditure as of December 31, 2011 to provide cost-sharing support for an application for United States Department of Energy (U.S. DOE)

funding to establish a Power Electronics Manufacturing Consortium (PEMC) within New York.

2. Within 60 days following the issuance of this order, NYSERDA shall file a supplemental revision to its T&MD Operating Plan incorporating the initiative funded by this order.

3. Within seven days after learning the outcome of New York's proposal for a PEMC supported by funds authorized by this order, NYSERDA shall notify the Director of the Office of Energy Efficiency and Environment (OEEE) of such outcome. If the proposal was not, or will not be approved for funding by the U. S. DOE, within 60 days of providing the required notice to the Director of OEEE, NYSERDA shall file a petition with the Secretary for Commission consideration proposing an alternative use for the \$7.5 million allocated for support of the PEMC initiative.

4. The Secretary in her sole discretion may extend the deadlines set forth in this order, provided the request for such extension is in writing, including a justification for the extension, and filed on a timely basis, which should be on at least one day's notice prior to any affected deadline.

5. This proceeding is continued.

By the Commission

KATHLEEN H. BURGESS  
Secretary